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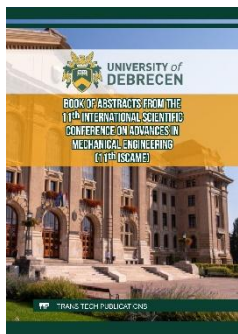
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Book of Abstracts from the 11th International Scientific Conference on Advances in Mechanical Engineering (11th ISCAME)

Volume in the series: 14

Edited by: Mihály Csüllög and Dr. Tamás Mankovits

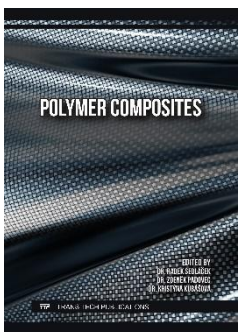
The 11th International Scientific Conference on Advances in Mechanical Engineering organized by the Department of Mechanical Engineering, Faculty of Engineering of the University of Debrecen, the Working Commission of Mechanical Engineering (Specialized Committee in Engineering, Regional Committee in Debrecen, Hungarian Academy of Sciences) and the Scientific Association for Mechanical Engineering. The ISCAME is part of the 11 Mechanical Engineering Days. The main goal of ISCAME is to yearly bring together engineers working on research, development and practical application in the field of mechanical engineering. Furthermore, the purpose of this Conference is to provide opportunities for scientists and engineers to meet and to discuss current research, new concepts and ideas and establish possibilities for future collaborations in all aspects of mechanical engineering.

Topics: Bioscience and Medicine, Building Materials, Civil Engineering, Construction, Electronics, General Engineering, Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Agricultural Engineering, Alloy, Artificial Intelligence, Biomaterials, Ceramics, Composite, Condition Monitoring, Construction, Engineering Management, Failure Analysis, Fluid Mechanics, Foam Materials, Food Chemistry, Functional Materials, Hydrogen Production, Maintenance, Manufacturing Engineering, Materials Processing, Mechanical Engineering, Mechanical Properties, Mechatronics, Polymer, Renewable Energy, Steel, Thermal Engineering, Tribology

Prices: Print: **US\$ 195.00 / EUR 195.00** Print: 978-3-0364-0922-1
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Polymer Composites

Volume in the series: 382

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Radek Sedláček, Dr. Zdeněk Padovec and Dr. Kristýna Kubášová

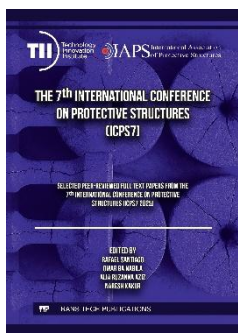
This special issue contains full-text peer-reviewed articles based on the research results presented at the Polymer Composites 2025 conference (PC 2025, 27-28 May 2025, Tábor, Czech Republic). The scope of this special issue includes, but is not limited by, such topics as materials development and their properties, processing technologies, nanocomposites, innovative applications, design and computations.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Biocomposite, Bonding, Carbon Fiber Reinforced Polymer, Composite, Cutting, Delamination, Drilling, Mechanical Properties, Natural Fibre, Polymer, Polymer Composite, Polymer Matrix, Thermoplastic Composite

Prices: Print: **US\$ 95.00 / EUR 95.00** Print: 978-3-0364-0609-1
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 eBook Multi-User: **US\$ 166.00 / EUR 166.00** 108 pages, 2025

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The 7th International Conference on Protective Structures (ICPS7)

Volume in the series: 171

Selected peer-reviewed full text papers from the 7th International Conference on Protective Structures (ICPS7 2025), May 12-15, 2025, Abu Dhabi, United Arab Emirates

Edited by: Dr. Rafael Santiago, Omar Ba Nabila, Dr. Alia Ruzanna Aziz and Naresh Kakur

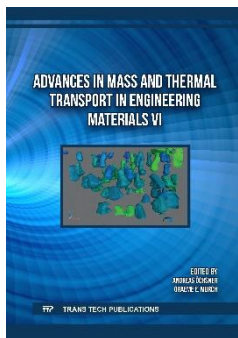
This edition presents peer-reviewed papers from the 7th International Conference on Protective Structures (ICPS7), held in Abu Dhabi, United Arab Emirates, from May 12 to 15, 2025. The conference focused on discussing recent advancements in the field of protective structures. Contributions covered a wide range of topics, including structural performance under extreme loading conditions, blast and impact resistance, advanced materials, design innovations, retrofitting techniques, and both experimental and computational approaches. The articles collected in this edition reflect current trends, challenges, and emerging solutions aimed at improving the resilience and safety of structures across civil, military, and infrastructure applications.

Topics: Building Materials, Civil Engineering, Construction, Materials Science, Mechanical Engineering, Mechanics

Keywords: Impact Engineering, Explosive Load, Ballistics, Ballistic Protection, Mechanical Properties, Impact Resistance, Projectile, Penetration, Repeated Loading, Collapse Assessment, Low Velocity Impact Load, High Strain Rate, Polymer, Composite, Shape Memory Alloy, Ceramics, Concrete, Structural Unit, Structure, Metamaterials, 3D Printing, Natural Disaster

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Advances in Mass and Thermal Transport in Engineering Materials VI

Volume in the series: 445

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Andreas Öchsner and Prof. Graeme E. Murch

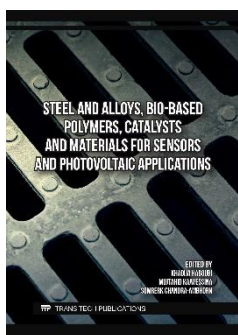
In this special edition, "Advances in Mass and Thermal Transport in Engineering Materials VI", diffusion mechanisms and results of their action in solids, liquids and gaseous phases, with a special focus on the evaluation of heat transfer, mass diffusion processes and corresponding experimental, analytical and numerical research methods are addressed. The current topical volume presents a comprehensive overview of recent progress in these and related fields of research, and the range of topics covered is accordingly extensive.

Topics: General Engineering, Materials Science, Mechanics, Nanoscience

Keywords: Experimental Investigation, Heat Transfer, Mass Diffusion, Nanotechnology, Numerical Modelling, Technological Processes

Prices: Print: **US\$ 295.00 / EUR 295.00** Print: 978-3-0364-0921-4
 eBook Single-User: **US\$ 198.00 / EUR 198.00** eBook: 978-3-0364-1921-3
 eBook Multi-User: **US\$ 347.00 / EUR 347.00** 306 pages, 2025

<https://www.scientific.net/978-3-0364-0921-4/book>



Steel and Alloys, Bio-Based Polymers, Catalysts and Materials for Sensors and Photovoltaic Applications

Volume in the series: 1173

Special topic volume with invited peer-reviewed papers only

Edited by: Khadija Haboubi, Dr. Mujtahid Kaavessina and Prof. Somrerak Chandra-ambhorn

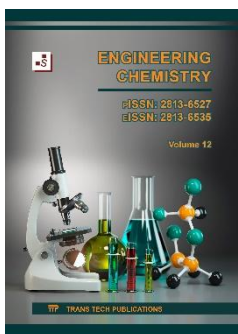
This special edition presents a collection of contemporary research results across key areas of materials science, with a focus on structural metals, bio-based polymers, functional materials for sensing and photovoltaics, and catalytic materials and processes. The edition is intended to serve as a valuable resource for researchers, engineers, and students seeking insight into innovative approaches to materials development, sustainable technologies, and their functional applications across diverse fields.

Topics: Electronics, Manufacturing, Materials Science, Mechanics

Keywords: Alloy, Biopolymer, Biosensor, Catalyst, Cellulose, Forming, Laser Cladding, Mechanical Properties, Photovoltaics, Selective Laser Melting, Steel

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-2025-7
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Engineering Chemistry Vol. 12

Volume in the series: 12

Edited by: Prof. Patrizia Bocchetta, Prof. Citlalli Gaona-Tiburcio and Dr. Noel Peter Tan

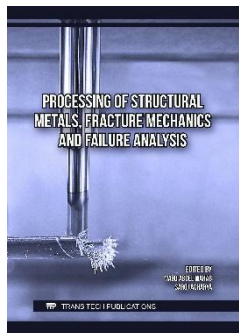
The 12th volume of the journal Engineering Chemistry features articles based on research results in materials and chemical technologies related to the treatment of crude oil-polluted water, biomass processing in biofuel production, and analysis of mechanical and physical properties of concrete prepared by incorporating various metal oxide nanoparticles into cement. This journal's volume will be beneficial for many specialists in ecological engineering, biotechnologies and building materials.

Topics: Building Materials, Manufacturing, Materials Science, Nanoscience

Keywords: Absorbent, Biodiesel, Biogas, Biotechnology, Biowaste, Catalyst, Cement, Esterification, Mechanical Properties, Nanoparticles, Water Treatment

Prices: Print: **US\$ 75.00 / EUR 75.00** Print: 978-3-0364-2024-0
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Processing of Structural Metals, Fracture Mechanics and Failure Analysis

Volume in the series: 1036

Special topic volume with invited peer-reviewed papers only

Edited by: Magd Abdel Wahab and Saroj Acharya

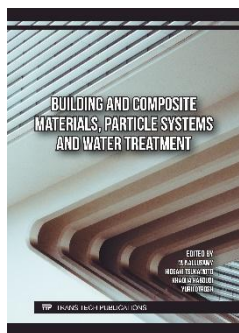
This special edition presents a series of explorations in the two foundational areas: materials and structural integrity of engineering objects — fields that continue to define the strength, reliability, and performance of modern engineering systems. The edition is designed to serve as both a scholarly reference and a practical guide for engineers, researchers, and students seeking a deeper understanding of material behaviour, processing, and failure mechanisms

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Additive Manufacturing, Alloy, Composite, Corrosion, Delamination, Electro Discharge Machining, Fracture Mechanics, Friction Stir Processing, High Entropy Alloy, Mechanical Properties, Stress-Strain State Analysis, Structural Integrity, Superalloy

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-2006-6
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 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 190 pages, 202

<https://www.scientific.net/978-3-0364-2006-6/book>



Building and Composite Materials, Particle Systems and Water Treatment

Volume in the series: 1172

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. M. Nallusamy, Prof. Hideaki Tsukamoto, Khadija Haboubi and Yurii Otrosh

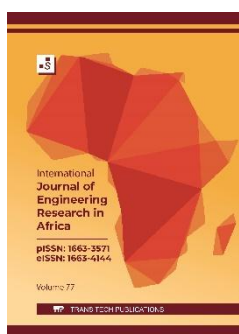
This special edition contains articles based on current research results and technological advances across vital areas of materials science and engineering, with a focus on composite materials, environmental recovering technologies, construction materials and technologies, etc. and intended as a useful reference for researchers, engineers, and students seeking to deepen their understanding of materials science and its practical significance.

Topics: Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Nanoscience

Keywords: Bentonite, Building Materials, Burnt Clay Brick, Composite, Concrete, Epoxy Composite, Mechanical Properties, Mineral Particles, Nano Silica, Natural Fibre, Osmosis, Polymer Matrix, Water Treatment

Prices: Print: **US\$ 120.00 / EUR 120.00** Print: 978-3-0364-2017-2
 eBook Single-User: **US\$ 120.00 / EUR 120.00** eBook: 978-3-0364-3017-1
 eBook Multi-User: **US\$ 210.00 / EUR 210.00** 154 pages, 202

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International Journal of Engineering Research in Africa Vol. 77

Volume in the series: 77

Edited by: Prof. Akii Okonigbon Akaehomen Ibhadode

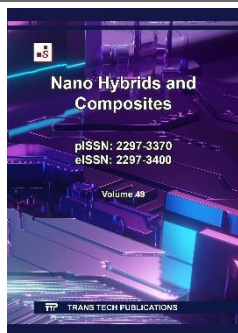
The 77th volume of the journal is dedicated to actual engineering decisions in biofuel production, the design of machines for processing recycled aluminium, geotechnics, road construction, and building materials, as well as monitoring seasonal variations in water quality and optimising photovoltaic system protection. The presented research results will be useful to a wide range of specialists in the fields of chemical production, construction, ecology and power engineering

Topics: Building Materials, Construction, General Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Biofuel, Blast Furnace Slag, DAM, Fatty Acid Methyl Esters, Geotechnics, Grid-Connected Photovoltaic System, Hardfill Materials, Mechanical Properties, Quarry Waste Sand, Real-Time Detection, Recycled Concrete Sand, Road Construction, Steel-Reinforced Concrete, Transesterification, Tunnel Water Inflow, Voltage Dip, Water Atomization Machine, Water Quality Monitoring

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Nano Hybrids and Composites Vol. 49

Volume in the series: 49

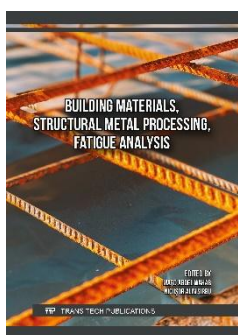
Edited by: Dr. Chiam Chel Ken and Kamal Amghar

This volume comprises articles focused on the analysis of the structure, properties, and synthesis techniques of a diverse range of nanoscale materials suitable for industrial applications across various industries, including electronics, oil refining, and construction materials. It will be helpful for many engineers from these industrial areas.

Topics: Building Materials, Materials Science, Mechanics, Nanoscience
Keywords: Ceramics, Crude Oil Emulsion, Dehydration, Hybrid Nanofluid, Metal Foam, Nanomaterials, Oil Recovery, Phase Change Material, Surfactant Foam System

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Building Materials, Structural Metal Processing, Fatigue Analysis

Volume in the series: 1035

Special topic volume with invited peer-reviewed papers only

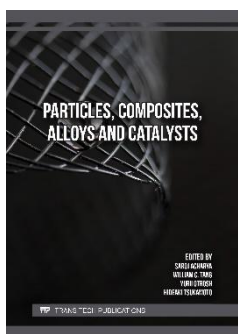
Edited by: Magd Abdel Wahab and Dr. Nicușor-Alin Sîrbu

This special edition presents an overview of recent advancements in materials science and engineering, covering key themes such as the processing of structural metals, fatigue analysis critical for enhancing durability and safety, and innovative building materials and construction technologies aimed at sustainable development. This edition serves as a valuable resource for researchers and practitioners in materials engineering, machinery and construction.

Topics: Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanics
Keywords: Bitumen, Cement, Fatigue Analysis, Fatigue Life, Laser Shock Processing, Mechanical Properties, Metal Plating, Metal Processing, Mortar, Seismic Monitoring, Steel, Superalloy, Vibration

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Particles, Composites, Alloys and Catalysts

Volume in the series: 1171

Special topic volume with invited peer-reviewed papers only

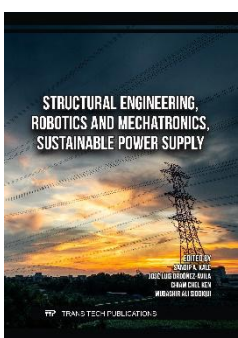
Edited by: Saroj Acharya, Prof. William C. Tang, Yurii Otrosh and Prof. Hideaki Tsukamoto

This special edition presents a collection of contemporary research and technological developments across several key areas of materials science and engineering. The four chapters of this edition highlight both fundamental studies and innovative approaches that drive modern advancements in composites, metallic materials, catalysis for environmental engineering, and particle system behaviour. The edition can serve as a valuable resource for researchers, engineers, and students seeking to deepen their understanding of materials development, their processing strategies, and the functional application.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience
Keywords: Alloy, Biofibre Reinforcing, Catalyst, Composite, Manganese Oxide, Mechanical Properties, Metal Matrix Composite, Nanohybrid Catalyst, Particle System Mechanics, Pollutant Removal, Rolling

Prices: Print: **US\$ 105.00 / EUR 105.00** Print: 978-3-0364-2010-3
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Structural Engineering, Robotics and Mechatronics, Sustainable Power Supply

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Edited by: Dr. Sandip A. Kale, José Luis Ordóñez-Ávila, Dr. Chiam Chel Ken and Mubashir Ali Siddiqui

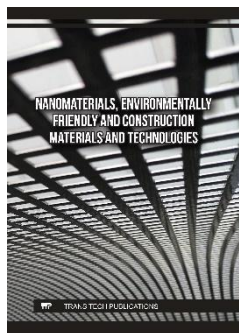
This special edition presents a multidisciplinary collection of research and developments across various engineering fields that shape modern industrial technology, infrastructure development, and sustainable power supply practices. The research results offer a broad and coherent overview of current trends and emerging directions in engineering research and practice. This special edition is designed as a valuable resource for students, researchers, and professionals seeking to understand modern production issues.

Topics: Civil Engineering, Construction, Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Buried Pipelines, Engineering Management, Failure Analysis, Mechanics, Mechatronics, Renewable Energy, Robotics, Seismic Analysis, Structural Engineering, Sustainable Power Supply

Prices: Print: **US\$ 185.00 / EUR 185.00** Print: 978-3-0364-2007-3
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<https://www.scientific.net/978-3-0364-2007-3/book>



Nanomaterials, Environmentally Friendly and Construction Materials and Technologies

Volume in the series: 1185

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Alan Kin Tak Lau

This special edition presents recent research and technological solutions in areas of modern materials science and construction engineering. The articles offer a comprehensive and cohesive perspective on the scientific and engineering advancements that drive sustainability, innovation implementation, and enhanced production effectiveness. This edition is designed to serve as a valuable resource for researchers, engineers, and students involved in the development and application of modern materials and technologies.

Topics: Building Materials, Civil Engineering, Construction, Materials Science, Mechanics, Nanoscience

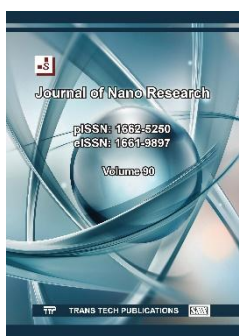
Keywords: Biomass Treatment, Corrosion, Geopolymer Concrete, Nanocomposite, Nanomaterials, Photocatalytic Properties, Polymer Composite, Pyrolysis, Solar Drying, Steel, Titanium Dioxide, Yttrium Oxide

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Journal of Nano Research Vol. 90

Volume in the series: 90

Edited by: Prof. Efstathios I. Meletis

The 90th volume of the journal features peer-reviewed articles dedicated to recent research results in nanomaterials and applied nanotechnologies across a broad spectrum of potential applications, including microelectronics, optoelectronics, photovoltaics, wastewater treatment, energy storage, pharmaceuticals, and high-performance coatings for machine parts. The presented volume will be helpful for a wide range of readers whose activities are related to the development and applications of nanoscale materials and technologies.

Topics: Bioscience and Medicine, Electronics, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Antioxidant Properties, Coating, Electrical Properties, Electrocatalytic Synthesis, Electrode Materials, Green Synthesis, Molybdenum Disulfide, Nanocomposite, Nanomaterials, Nanoparticles, Optical Properties, Photoluminescence Analysis, Pollutants Degradation, Semiconductor, Silicon Carbide, Supercapacitor, Thin Films, Titanium Dioxide, Transition Metal Dichalcogenide, Tribological Properties, Zinc Oxide

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Advanced Research, Technologies and Development in Materials Science

Volume in the series: 1034

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. William C. Tang, Dr. Nicușor-Alin Sirbu, Dr. Josef Kasl and Yves Marcel

This special edition presents recent research results and engineering solutions in materials science and treatment technologies, with an emphasis on innovative processing techniques, the development of technological tools, and emerging applications in modern industries and aims to serve as a valuable reference for researchers and engineers seeking insights into the latest trends and technologies shaping modern materials science.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

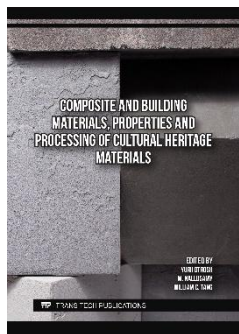
Keywords: Alloy, Correlative Microscopy, Cutting Tool, Forming, Laser Engraving, Mechanical Properties, Reactive Magnetron Sputtering, Silicon Carbide, Stamping, Steel, Support System, Thin Films, Tuning, Ultrasonic Bonding, X-Ray Diffraction Analysis

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eBook Multi-User: **US\$ 236.00 / EUR 236.00** 144 pages, 2025

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Composite and Building Materials, Properties and Processing of Cultural Heritage Materials

Volume in the series: 1170

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh, Dr. M. Nallusamy and Prof. William C. Tang

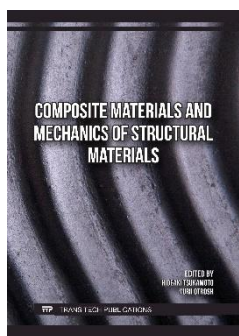
The evolution of materials science shapes the modern world, transforming production technologies and industries. This special edition offers a comprehensive overview of diverse research findings and engineering solutions in the fields of advanced composites, cultural heritage preservation, and building materials. The collected articles present relationships between innovation, tradition, technology, and sustainability, aiming to inspire interdisciplinary research and inform its application across engineering, construction, architecture, and culture.

Topics: Building Materials, Civil Engineering, Construction, Materials Science

Keywords: Asphalt Concrete, Biocomposite, Building Materials, Composite, Dolomite Brick, Mechanical Properties, Pavement, Porcelain

Prices: Print: **US\$ 115.00 / EUR 115.00** Print: 978-3-0364-2009-7
 eBook Single-User: **US\$ 115.00 / EUR 115.00** eBook: 978-3-0364-3009-6
 eBook Multi-User: **US\$ 201.00 / EUR 201.00** 122 pages, 2025

<https://www.scientific.net/978-3-0364-2009-7/book>



Composite Materials and Mechanics of Structural Materials

Volume in the series: 381

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Hideaki Tsukamoto and Yurii Otrosh

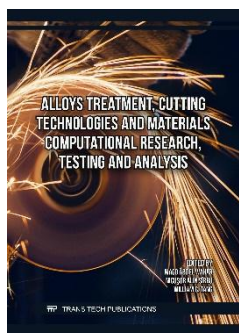
The special edition offers an overview of contemporary challenges and innovative solutions in the development of functional composites and structural materials, serving as a valuable resource for researchers and engineers working with high-performance materials in mechanical engineering and construction.

Topics: Building Materials, Manufacturing, Materials Science, Mechanics

Keywords: Composite, Concrete, Fiber Reinforcing, Mechanical Properties, Mechanics of Materials, Polymer, Steel

Prices: Print: **US\$ 85.00 / EUR 85.00** Print: 978-3-0364-2002-8
 eBook Single-User: **US\$ 85.00 / EUR 85.00** eBook: 978-3-0364-3002-7
 eBook Multi-User: **US\$ 149.00 / EUR 149.00** 92 pages, 2025

<https://www.scientific.net/978-3-0364-2002-8/book>



Alloys Treatment, Cutting Technologies and Materials Computational Research, Testing and Analysis

Volume in the series: 1033

Special topic volume with invited peer-reviewed papers only

Edited by: Magd Abdel Wahab, Dr. Nicușor-Alin Sirbu and Prof. William C. Tang

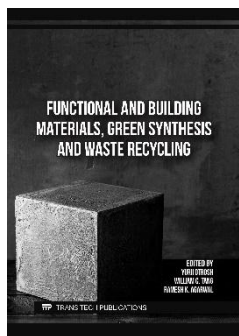
This special edition presents a focused examination of significant topics in materials science and engineering, emphasising practical applications of research results. The presented achievements provide valuable information for researchers and engineers seeking to advance material performance and manufacturing processes through integrated approaches.

Topics: Building Materials, Information Technologies, Manufacturing, Materials Science, Mechanics

Keywords: Alloy, Chemical Analysis, Composite, Computational Research, Cutting Parameters, Earthen Elements, Heat Treatment, Mechanical Properties, Mechanics of Materials, Non-Destructive Testing, Steel

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0978-8
 eBook Single-User: **US\$ 125.00 / EUR 125.00** eBook: 978-3-0364-1978-7
 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 160 pages, 2025

<https://www.scientific.net/978-3-0364-0978-8/book>



Functional and Building Materials, Green Synthesis and Waste Recycling

Volume in the series: 1169

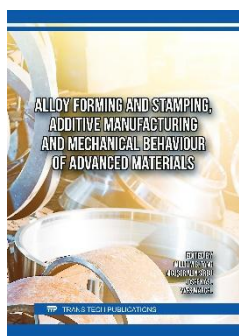
Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh, Prof. William C. Tang and Prof. Ramesh K. Agarwal

The special edition showcases the latest advancements in sustainable materials science and innovative technologies thanks to the application of green practices, innovative biotechnologies, and principles of the circular economy. The presented articles provide valuable practical information for researchers and engineers.

Topics: Bioscience and Medicine, Building Materials, Materials Science, Mechanics, Nanoscience
Keywords: Anthracene, Bioleaching, Biomass Processing, Biotechnology, Building Materials, Composite, Dielectric Properties, Foam Materials, Gold Nanoparticles, Green Concrete, Green Synthesis, Ion Battery, Kaolin, Mechanical Properties, Nanomaterials, Photocatalyst, Porous Materials, Single Crystal, Titanium Alloy, Titanium Dioxide, Waste Recycling

Prices: Print: **US\$ 130.00 / EUR 130.00** Print: 978-3-0364-0979-5
 eBook Single-User: **US\$ 130.00 / EUR 130.00** eBook: 978-3-0364-1979-4
 eBook Multi-User: **US\$ 228.00 / EUR 228.00** 148 pages, 2025
<https://www.scientific.net/978-3-0364-0979-5/book>



Alloy Forming and Stamping, Additive Manufacturing and Mechanical Behaviour of Advanced Materials

Volume in the series: 1032

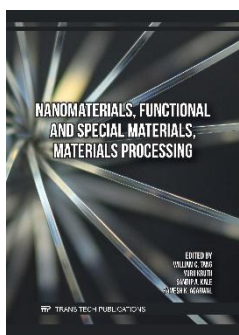
Special topic volume with invited peer-reviewed papers only

Edited by: Prof. William C. Tang, Dr. Nicușor-Alin Sirbu, Dr. Josef Kasl and Yves Marcel

The ongoing development of mechanical engineering relies on engineers' ability to design, shape, and adapt materials for demanding industrial and external conditions of use. The special edition presents a collection of studies that explore innovative materials manufacturing and treatment processes, modelling, and performance analysis of their properties and behaviour in different conditions and is a valuable resource for researchers and engineers involved in developing advanced materials and innovative processing technologies.

Topics: Manufacturing, Materials Science, Mechanics
Keywords: Environment, Mechanical Properties, Thermal Protection, Tool Steel, Ultrasonic Welding, Additive Manufacturing, Ageing, Alloy, Composite, Dissimilar Metals, Fatigue Life, Forming, Marine Atmospheric

Prices: Print: **US\$ 130.00 / EUR 130.00** Print: 978-3-0364-0953-5
 eBook Single-User: **US\$ 130.00 / EUR 130.00** eBook: 978-3-0364-1953-4
 eBook Multi-User: **US\$ 228.00 / EUR 228.00** 152 pages, 2025
<https://www.scientific.net/978-3-0364-0953-5/book>



Nanomaterials, Functional and Special Materials, Materials Processing

Volume in the series: 1168

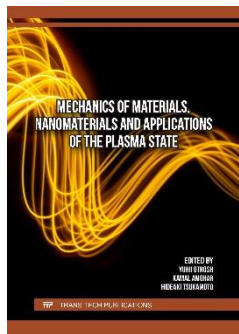
Special topic volume with invited peer-reviewed papers only

Edited by: Prof. William C. Tang, Yurii Krutii, Dr. Sandip A. Kale and Prof. Ramesh K. Agarwal

The special edition provides a comprehensive examination of key domains in modern materials science and engineering, serving as a valuable resource for researchers and engineers seeking to apply the latest developments toward sustainable and high-performance solutions.

Topics: Bioscience and Medicine, Building Materials, Civil Engineering, Information Technologies, Manufacturing, Materials Science, Mechanics, Nanoscience
Keywords: Steel, Polymer, Composite, Mechanical Properties, Fused Deposition Modelling, Shot Blasting, Cutting, Nanomaterials, Nanotechnologies, Nanocomposite, Machine Learning, Magnetic Spinel Ferrites, Tribo-Corrosion, Biomedical Materials, Concrete

Prices: Print: **US\$ 130.00 / EUR 130.00** Print: 978-3-0364-0964-1
 eBook Single-User: **US\$ 130.00 / EUR 130.00** eBook: 978-3-0364-1964-0
 eBook Multi-User: **US\$ 228.00 / EUR 228.00** 148 pages, 2025
<https://www.scientific.net/978-3-0364-0964-1/book>



Mechanics of Materials, Nanomaterials and Applications of the Plasma State

Volume in the series: 380

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh, Kamal Amghar and Prof. Hideaki Tsukamoto

The special edition illustrates how modern materials science, plasma engineering, and structural mechanics contribute to the development of contemporary engineering capabilities, and aims to provide valuable insights for researchers, engineers, and students working at the forefront of materials innovation.

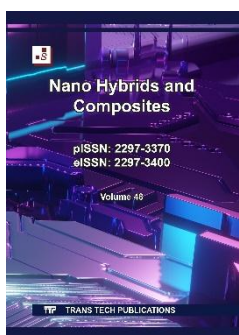
Topics: Building Materials, Construction, Electronics, Materials Science, Mechanics, Nanoscience

Keywords: Composite, Mechanical Properties, Mechanics of Materials, Nanomaterials, Nanoparticles, Plasma, Structural Mechanics, Thin Films

Prices: Print: **US\$ 80.00 / EUR 80.00**
 eBook Single-User: **US\$ 80.00 / EUR 80.00**
 eBook Multi-User: **US\$ 140.00 / EUR 140.00**

Print: 978-3-0364-2003-5
 eBook: 978-3-0364-3003-4
 118 pages, 2025

<https://www.scientific.net/978-3-0364-2003-5/book>



Nano Hybrids and Composites Vol. 48

Volume in the series: 48

Edited by: Dr. Amir Al-Ahmed and Prof. Yun-Hae Kim

The articles from this journal's volume are devoted to analysis of functional properties of some nanoscale metal oxides (zinc oxides and titanium dioxide) and hybrid nanomaterials on their base. The catalytic degradation of the organic dyes in the presence of the multiphase titanium dioxide and hematite and gold nanocomposites, preparation of high-performance antimonene thermoelectric composites doped with graphene and the strong potential of cyclodextrin metal-organic frameworks as versatile and effective carriers for the essential oil components across pharmaceutical, cosmetic, and food industries are also subjects of this edition. The volume will be helpful for many chemical engineers and researchers in nanomaterials.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Antimonene, Catalytic Degradation, Cyclodextrin Metal-Organic Framework, Graphene, Hybrid Nanomaterial, Metal Oxide, Nanocomposite, Nanoparticles, Organic Dye

Prices: Print: **US\$ 75.00 / EUR 75.00**
 eBook Single-User: **US\$ 75.00 / EUR 75.00**
 eBook Multi-User: **US\$ 131.00 / EUR 131.00**

Print: 978-3-0364-0970-2
 eBook: 978-3-0364-1970-1
 78 pages, 2025

<https://www.scientific.net/978-3-0364-0970-2/book>



Journal of Metastable and Nanocrystalline Materials Vol. 42

Volume in the series: 42

Edited by: Dr. Retno Asih, Dr. Konstantinos Georgarakis and Prof. Nadezhda L. Voropaeva

The 42nd volume of the Journal of Metastable and Nanocrystalline Materials presents articles that analyse properties and functional possibilities of nanoscaled semiconductors, nanomaterials used for solar energy harvesting, microelectronics, and for biomedical applications. This volume will be of great assistance to many specialists whose work is related to the applications of nanomaterials and nanotechnologies.

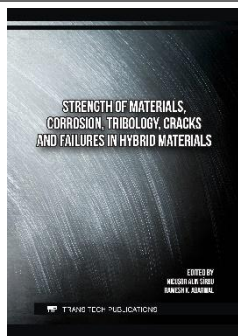
Topics: Bioscience and Medicine, Electronics, Materials Science, Nanoscience

Keywords: Anti-Cancer Agent, Composite, Conductive Polymer, Dislocation Density, Doping, Drug Delivery, Gold Nanoparticles, Imidazole Derivatives, Nanocomposite, Nanodrugs, Nanoparticles, Zinc Oxide, Zircon

Prices: Print: **US\$ 80.00 / EUR 80.00**
 eBook Single-User: **US\$ 80.00 / EUR 80.00**
 eBook Multi-User: **US\$ 140.00 / EUR 140.00**

Print: 978-3-0364-0967-2
 eBook: 978-3-0364-1967-1
 80 pages, 2025

<https://www.scientific.net/978-3-0364-0967-2/book>



Strength of Materials, Corrosion, Tribology, Cracks and Failures in Hybrid Materials

Volume in the series: 1031

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Nicușor-Alin Sîrbu and Prof. Ramesh K. Agarwal

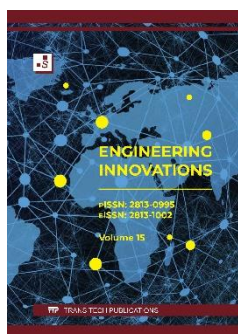
Understanding how materials perform under stress, degrade over time, and interact with their environment is at the heart of modern mechanical engineering, etc. This special edition unites studies devoted to the mechanical behaviour, durability, and surface performance of advanced structural materials - highlighting both fundamental principles and practical ways for analysis and structural protection that support safety and durability, and will be helpful for engineers and researchers seeking to advance the strength, safety, and sustainability of modern structural materials.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Alloy, Cavitation Erosion, Composite, Corrosion, Crack, Fatigue, Friction, Laminate, Mechanics of Materials, Steel, Tribology, Wear Behaviour, Welded Joint

Prices: Print: **US\$ 115.00 / EUR 115.00** Print: 978-3-0364-0952-8
 eBook Single-User: **US\$ 115.00 / EUR 115.00** eBook: 978-3-0364-1952-7
 eBook Multi-User: **US\$ 201.00 / EUR 201.00** 132 pages, 2025

<https://www.scientific.net/978-3-0364-0952-8/book>



Engineering Innovations Vol. 15

Volume in the series: 15

Edited by: Dr. Retno Asih, Mubashir Ali Siddiqui and Levan Chkhatishvili

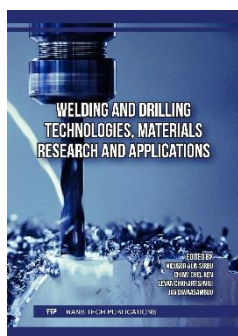
The 15th volume of the journal Engineering Innovations includes articles focused on research results in modern high-entropy alloys, detection methods of food components in the food industry and the faults in the work spur gears based on vibration signal, applications of IOT in the system of smart home and smart grid and the Impact of artificial intelligence on management control processes. The presented edition will be useful for a wide circle of engineers and researchers.

Topics: General Engineering, Information Technologies, Materials Science, Mechanical Engineering

Keywords: Artificial Intelligence, Fault Detection, High-Entropy Alloy, Internet of Things, Management Control, Physical Properties, Smart Grid, Smart Home, Spectrophotometer, Spur Gears, Vibration Signal Analysis

Prices: Print: **US\$ 75.00 / EUR 75.00** Print: 978-3-0364-0968-9
 eBook Single-User: **US\$ 0.00 / EUR 0.00** eBook: 978-3-0364-1968-8
 eBook Multi-User: **US\$ 0.00 / EUR 0.00** 72 pages, 2025

<https://www.scientific.net/978-3-0364-0968-9/book>



Welding and Drilling Technologies, Materials Research and Applications

Volume in the series: 1030

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Nicușor-Alin Sîrbu, Dr. Chiam Chel Ken, Levan Chkhatishvili and Jav Davaasambuu

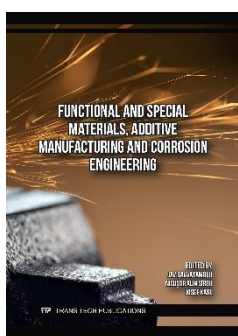
Modern engineering is based on the integration of materials, technological processes, and intelligent systems that enable innovations, efficiency and precision of production. This special edition brings together research from various fields of engineering, including welding processes, drilling fluid development, machine design practices, and sensing technologies, to provide practical information for researchers and engineers seeking to advance industrial innovation.

Topics: Electronics, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Alloy, Brazing, Drilling Mud, Machine Design, Mechanical Properties, Notification System, Sensor, Steel, Welded Joints, Welding

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0951-1
 eBook Single-User: **US\$ 125.00 / EUR 125.00** eBook: 978-3-0364-1951-0
 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 142 pages, 2025

<https://www.scientific.net/978-3-0364-0951-1/book>



Functional and Special Materials, Additive Manufacturing and Corrosion Engineering

Volume in the series: 1167

Special topic volume with invited peer-reviewed papers only

Edited by: Jav Davaasambuu, Dr. Nicușor-Alin Sîrbu and Dr. Josef Kasl

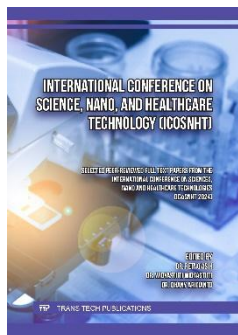
This special edition reflects advancements in materials engineering, with a focus on additive manufacturing, corrosion engineering, and functional materials, serving as an insightful reference for scientists and engineers seeking to advance the next generation of high-performance and sustainable materials.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Alkali-Activated Paste, Alloy, Carbon Aerogel, Corrosion, Dezincification, Exfoliation, Mechanical Properties, Nano Sheet, Polymer, Pond Ashes, Printing Parameters, Silicon, Steel, Transition Metal Dichalcogenides, Ultrasonication

Prices: Print: **US\$ 120.00 / EUR 120.00** Print: 978-3-0364-0963-4
 eBook Single-User: **US\$ 120.00 / EUR 120.00** eBook: 978-3-0364-1963-3
 eBook Multi-User: **US\$ 210.00 / EUR 210.00** 134 pages, 2025

<https://www.scientific.net/978-3-0364-0963-4/book>



International Conference on Science, Nano, and Healthcare Technology (ICOSNHT)

Volume in the series: 29

Selected peer-reviewed full text papers from the International Conference on Sciences, Nano and Healthcare Technologies (ICoSNHT 2024), October 15-16, 2024, Surabaya, Indonesia

Edited by: Dr. Retno Asih, Dr. Widyastuti Widyastuti and Dr. Dhany Arifianto

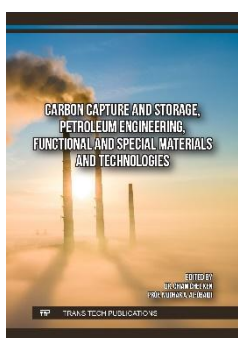
The collected papers were presented at the International Conference on Science, Nano, and Healthcare Technology (ICOSNHT 2024), which focused on the intersection of fundamental and engineering sciences, as well as digital innovations for universal healthcare applications. The edition will be relevant for specialists in biomedical engineering and healthcare.

Topics: Bioscience and Medicine, Electronics, General Engineering, Information Technologies, Mechanical Engineering, Mechanics

Keywords: Artificial Intelligence, Biomechanics, Biomedical Engineering, Biosensors, Blood-Pressure Monitoring, Electroencephalography, Emotion Recognition, Healthcare Technology, Multi-Agent Medical Diagnosis System, Skin Disease Detection, Sleep Quality

Prices: Print: **US\$ 75.00 / EUR 75.00** Print: 978-3-0364-0965-8
 eBook Single-User: **US\$ 75.00 / EUR 75.00** eBook: 978-3-0364-1965-7
 eBook Multi-User: **US\$ 131.00 / EUR 131.00** 86 pages, 2025

<https://www.scientific.net/978-3-0364-0965-8/book>



Carbon Capture and Storage, Petroleum Engineering, Functional and Special Materials and Technologies

Volume in the series: 1184

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Chiam Chel Ken and Prof. Mudhar A. Al-Obaidi

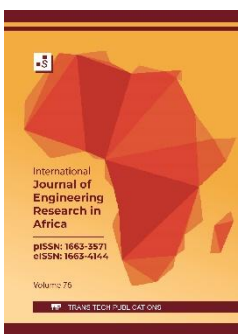
This special edition highlights the latest research across a diverse spectrum of applied materials science and technologies. The presented research results provide a comprehensive overview of interdisciplinary approaches and technological innovations essential for addressing the challenges of modern production, making this special edition an invaluable resource for researchers and engineers committed to sustainable development and technological progress.

Topics: Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Nanoscience

Keywords: Biodiesel, Biotechnology, Carbon Capture, Carbon Storage, Conductive Film, Fire-Retardant System, Green Building Materials, Green Concrete, Intumescent, Petroleum Engineering, Sand Consolidation, Zinc Oxide

Prices: Print: **US\$ 115.00 / EUR 115.00** Print: 978-3-0364-0976-4
 eBook Single-User: **US\$ 115.00 / EUR 115.00** eBook: 978-3-0364-1976-3
 eBook Multi-User: **US\$ 201.00 / EUR 201.00** 176 pages, 2025

<https://www.scientific.net/978-3-0364-0976-4/book>



International Journal of Engineering Research in Africa Vol. 76

Volume in the series: 76

Edited by: Prof. Akii Okonigbon Akaehomen Ibhado

The 76th volume, compiled from articles devoted to the latest engineering solutions in high-entropy alloys, machinery, power engineering, and construction, ranging from geotechnics to structural mechanics. This journal issue will be of particular relevance to specialists in machinery, energy, and construction.

Topics: Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Ambient Temperature Affect, Distributed Generators, Geotechnics, Green Concrete, High Voltage Direct Current, Line Commutated Converter, Mechanical Properties, Renewable Energy, Soil Stabilisation, Solar Panel, Steel, Structural Mechanics, Welding

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0974-0
 eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1974-9
 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 192 pages, 2025

<https://www.scientific.net/978-3-0364-0974-0/book>



The International Conference "Problems of Emergency Situations" (PES 2025)

Volume in the series: 170

Selected peer-reviewed full text papers from the International Scientific Applied Conference "Problems of Emergency Situations" (PES 2025), May 14, 2025, Kharkiv, Ukraine

Edited by: Dr. Alexey Vasilchenko, Andrii Kondratiev, Evgeniy Rybka, Mykola Surianinov, Dr. Nina Rashkevich and Yurii Otrosh

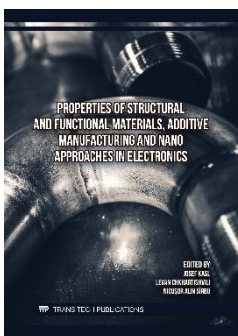
The annual International Scientific Applied Conference "Problems of Emergency Situations" (PES 2025, May 14, 2025, Ukraine) was organised by the National University of Civil Defence of Ukraine. As a partner, the Odessa State Academy of Civil Engineering and Architecture (Ukraine, Odessa) was involved. The purpose of the conference was to discuss issues related to the problems and prospects of introducing the latest developments and technologies aimed at preventing emergencies and minimising their consequences in the field of civil defence.

Topics: Bioscience and Medicine, Building Materials, Environmental Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Aircraft Shelter, Anthropogenic Load, Computational Research, Conductometry, Dangerous Gases, Explosion Hazard Monitoring System, Fire Resistance, Fire-Retardant, Gas Explosion, Gases Neutralisation, High-Intensity Dynamic Load, Monolithic Reinforced Concrete, Non-Destructive Testing, Protective Wall, Structural Mechanics

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-0966-5
 eBook Single-User: **US\$ 145.00 / EUR 145.00** eBook: 978-3-0364-1966-4
 eBook Multi-User: **US\$ 254.00 / EUR 254.00** 190 pages, 2025

<https://www.scientific.net/978-3-0364-0966-5/book>



Properties of Structural and Functional Materials, Additive Manufacturing and Nano Approaches in Electronics

Volume in the series: 1166

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Josef Kasl, Levan Chkhartishvili and Dr. Nicușor-Alin Sîrbu

The special edition presents a comprehensive review of four areas of materials science development that define its current landscape. The presented investigations bridge traditional metallurgy with cutting-edge nanoscience and additive manufacturing, providing readers with essential engineering information. This special edition is intended for researchers, engineers, educators, and students seeking authoritative guidance in the rapidly evolving field of materials science.

Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Ballistic Steel, Cavitation Damage, Current Carriers, Drop Epitaxy, Electronic Structure, Gallium Nitride, Graphene Oxide, Hydrogen Embrittlement, Mechanical Properties, Metallographic Analysis, Nanocrystal, Nanomaterials, Pipeline Steel, Quantum Dot, Silicon, Silicon Dioxide, Steel, Zinc Oxide

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0962-7
 eBook Single-User: **US\$ 125.00 / EUR 125.00** eBook: 978-3-0364-1962-6
 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 130 pages, 2025

<https://www.scientific.net/978-3-0364-0962-7/book>



Computational Research and Modeling in Materials Science and Materials Application

Volume in the series: 1029

Special topic volume with invited peer-reviewed papers only

Edited by: Jav Davaasambu, Levan Chkhartishvili, Yurii Otrosh and Prof. Takashige Omatsu

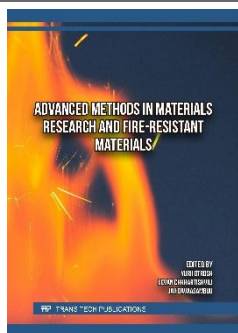
This special edition presents a collection of studies dedicated to the computational modelling, simulation, and functional properties analysis of advanced materials across various engineering domains and scientific research. The contributions illustrate how computational tools, numerical methods, and theoretical approaches contribute to materials design, their processing optimisation, and performance evaluation. The special edition aims to serve as a valuable reference for researchers, engineers, and students engaged in computational materials science, applied physics, and engineering technologies.

Topics: Bioscience and Medicine, Materials Science, Mechanics, Nanoscience

Keywords: Acoustic Pressure, Alloy, Cancer Treatment, Composite, Computational Materials Science, Drug Delivery, First Principle Study, Nanomaterials, Numerical Modelling, Particle Behaviour, Structural Optimisation, Wave Function

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-0950-4
 eBook Single-User: **US\$ 145.00 / EUR 145.00** eBook: 978-3-0364-1950-3
 eBook Multi-User: **US\$ 254.00 / EUR 254.00** 166 pages, 2025

<https://www.scientific.net/978-3-0364-0950-4/book>



Advanced Methods in Materials Research and Fire-Resistant Materials

Volume in the series: 1165

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh, Levan Chkhartishvili and Jav Davaasambuu

The special edition offers a focused examination of significant domains in contemporary materials science and engineering. The compiled articles provide readers with a comprehensive foundation for understanding both the practical applications and scientific methodologies that drive progress in modern materials technology. This special collection is designed to serve researchers, engineers, and students seeking authoritative knowledge in the rapidly advancing fields mentioned.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Ceramics, Coating, Composite, Electron Microscopy, Fire Resistance, Fire Retardant Coating, Flammable Liquids, Fullerene, Graphene, Mechanical Properties, Multichamber Detonation Spraying, Nanoclay, Spectroscopy, Surface Plasmon Resonance

Prices: Print: **US\$ 140.00 / EUR 140.00** Print: 978-3-0364-0961-0
 eBook Single-User: **US\$ 140.00 / EUR 140.00** eBook: 978-3-0364-1961-9
 eBook Multi-User: **US\$ 245.00 / EUR 245.00** 160 pages, 2025

<https://www.scientific.net/978-3-0364-0961-0/book>



International Engineering Conference on Sustainable Emerging Innovations and Technological Advancements Tagged (UNAM IEC)

Volume in the series: 28

Selected peer-reviewed full text papers from the UNAM International Engineering Conference on Sustainable Emerging Innovations and Technological Advancements (UNAM-IEC-2024), December 02-04, 2024, Jose Eduardo Dos Santos (JEDS) Ongwediva Engineering Campus

Edited by: Prof. Chinwuba Arum, Prof. Md Azree Othuman Mydin, Prof. Innocent E. Davidson and Prof. Paul Kah

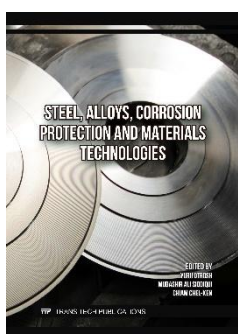
This book presents the transactions of the first University of Namibia (UNAM) International Engineering Conference on Sustainable Emerging Innovations and Technological Advancements, tagged "UNAM IEC-2024", which was held on 02 - 04 December 2024 at the Jose Eduardo Dos Santos (JEDS) Ongwediva Engineering Campus of the University of Namibia. It contains articles based on results of cutting-edge research and technological advancements in sustainable engineering, focusing on emerging innovations that address actual challenges in energy, infrastructure development, wood and industry and wood waste management, water supply, engineering design and deep learning. Ultimately, the book serves as a valuable resource for academics and engineers seeking to integrate sustainability into industrial and technological development.

Topics: Civil Engineering, Environmental Engineering, General Engineering, Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Transportation

Keywords: Artificial Intelligence, Harvesting Machine, HYDROLOGY, Infrastructure Management, LiDAR, Machine Learning, Sign Language Translation, Smart Grid, Ultrasonic Sensor, Water Resources Management, Water Supply, Wind Energy Generation, Wood, Wood Waste

Prices: Print: **US\$ 140.00 / EUR 140.00** Print: 978-3-0364-0947-4
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Steel, Alloys, Corrosion Protection and Materials Technologies

Volume in the series: 1164

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh, Mubashir Ali Siddiqui and Dr. Chiam Chel Ken

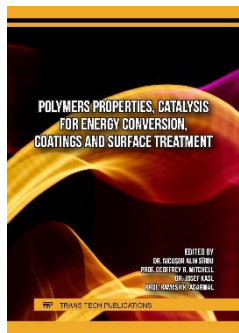
This special edition presents a concise yet comprehensive exploration of key advancements and solutions in contemporary materials science and engineering, aiming to provide essential scientific and engineering information that fosters a deeper understanding of the complex interplay between materials, technologies, and the features of their applications.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Chemical Synthesis, Coating, Composite, Corrosion Protection, Friction Stir Welding, Functional Materials, Inhibitor, Insulating Material, Mechanical Properties, Polymer, Pyrotechnic Mixture, Silver Nanoparticles, Steel, Welding

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-0960-3
 eBook Single-User: **US\$ 145.00 / EUR 145.00** eBook: 978-3-0364-1960-2
 eBook Multi-User: **US\$ 254.00 / EUR 254.00** 196 pages, 2025

<https://www.scientific.net/978-3-0364-0960-3/book>



Polymers Properties, Catalysis for Energy Conversion, Coatings and Surface Treatment

Volume in the series: 379

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Nicușor-Alin Sîrbu, Prof. Geoffrey R. Mitchell, Dr. Josef Kasl and Prof. Ramesh K. Agarwal

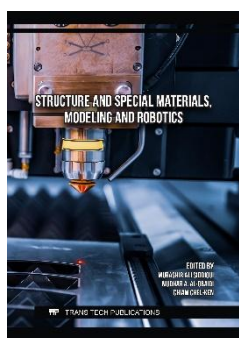
This special edition compiles recent solutions and research findings in materials science, with a particular focus on polymers, surface engineering, and catalytic processes for sustainable energy applications. The collected articles are a valuable information resource for researchers and engineers, inspiring further innovation in the development of advanced and sustainable materials and technologies.

Topics: Manufacturing, Materials Science, Nanoscience

Keywords: Coating, Composite, Electrocatalysis, Energy Conversion, Film, Hardfacing, Mechanical Properties, Photocatalysis, Polymer, Solar Cell, Steel, Thermal Spraying

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<https://www.scientific.net/978-3-0364-0956-6/book>



Structure and Special Materials, Modeling and Robotics

Volume in the series: 928

Special topic volume with invited peer-reviewed papers only

Edited by: Mubashir Ali Siddiqui, Prof. Mudhar A. Al-Obaidi and Dr. Chiam Chel Ken

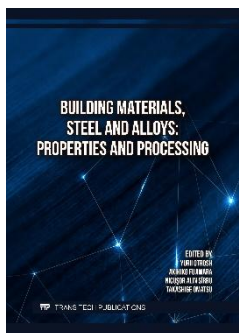
This special edition encompasses vital themes shaping the future of engineering and technology. The presented articles provide a comprehensive overview of the current state of developments in materials, energy, robotics and automation, serving as a valuable resource for researchers, engineers, and practitioners dedicated to advancing sustainable and innovative engineering solutions.

Topics: General Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Alloy, Bending, Control, Electrochemical Machining, Electrolyte Materials, Laser Cutting, Magnetic Abrasive Finishing, Mechanical Engineering, Robotics, Solid Oxide Fuel Cells, Steel

Prices: Print: **US\$ 100.00 / EUR 100.00** Print: 978-3-0364-0975-7
 eBook Single-User: **US\$ 100.00 / EUR 100.00** eBook: 978-3-0364-1975-6
 eBook Multi-User: **US\$ 175.00 / EUR 175.00** 138 pages, 2025

<https://www.scientific.net/978-3-0364-0975-7/book>



Building Materials, Steel and Alloys: Properties and Processing

Volume in the series: 1163

Special topic volume with invited peer-reviewed papers only

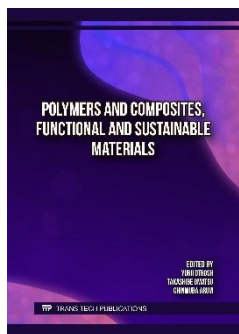
Edited by: Yurii Otrosh, Prof. Akihiko Fujiwara, Dr. Nicușor-Alin Sîrbu and Prof. Takashige Omatsu

This special edition features an overview of studies that span the analysis properties of structural materials and innovative technologies of their synthesis, processing and methods of effective application in machinery and construction. The edition provides valuable insights for researchers, engineers, and practitioners involved in developing stronger and more efficient structural materials and sustainable technologies for treatment.

Topics: Building Materials, Civil Engineering, Manufacturing, Materials Science, Mechanics

Keywords: Alloy, Building Materials, Casting, Composite, Concrete, Cutting, Deep Penetrating Sealer, Friction Stir Processing, Mechanical Properties, Nitriding, Recycled Glass, Steel, Welding

Prices: Print: **US\$ 140.00 / EUR 140.00** Print: 978-3-0364-0959-7
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 eBook Multi-User: **US\$ 245.00 / EUR 245.00** 148 pages, 2025



Polymers and Composites, Functional and Sustainable Materials

Volume in the series: 1162

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh, Prof. Takashige Omatsu and Prof. Chinwuba Arum

This special edition brings together studies that highlight the versatility of polymers and composite materials, the innovation behind functional materials, and the growing significance of sustainability in the production of building materials and aims to inform readers about the results of modern research in these fields.

Topics: Building Materials, Civil Engineering, Materials Science, Mechanics

Keywords: Composite, Glass, Green Concrete, Mechanical Alloying, Mechanical Properties, Optical Properties, Polymer, Structure Unit, Titanium-Hydroxyapatite Composite

Prices: Print: **US\$ 110.00 / EUR 110.00**

eBook Single-User: **US\$ 110.00 / EUR 110.00**

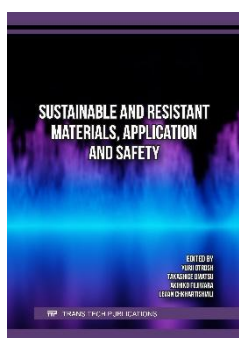
eBook Multi-User: **US\$ 193.00 / EUR 193.00**

Print: 978-3-0364-0958-0

eBook: 978-3-0364-1958-9

122 pages, 2025

<https://www.scientific.net/978-3-0364-0958-0/book>



Sustainable and Resistant Materials, Application and Safety

Volume in the series: 1028

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh, Prof. Takashige Omatsu, Prof. Akihiko Fujiwara and Levan Chkhartishvili

The special edition illustrates recent research outcomes in materials science, chemical technologies, construction, biomass processing, and nanotoxicology. The collection reflects scientists' and engineers' efforts to create solutions that meet modern environmental, technical, and health-related requirements. It is a valuable resource for researchers and engineers whose professional activity is dedicated to advancing materials science and sustainable technologies.

Topics: Bioscience and Medicine, Building Materials, Civil Engineering, Construction, Materials Science, Mechanics, Nanoscience

Keywords: Bamboo, Bearing Capacity, Biomass, Concrete, Fire-Resistance, Green Building Materials, Nanocomposite, Nanomaterials, Nanosafety, Nanotoxicology, Refractories, Steel Furnace Slag, Structural Unit, Thermal Damage

Prices: Print: **US\$ 115.00 / EUR 115.00**

eBook Single-User: **US\$ 115.00 / EUR 115.00**

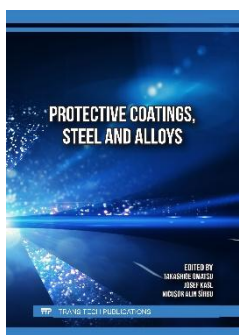
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Print: 978-3-0364-0949-8

eBook: 978-3-0364-1949-7

132 pages, 2025

<https://www.scientific.net/978-3-0364-0949-8/book>



Protective Coatings, Steel and Alloys

Volume in the series: 378

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Takashige Omatsu, Dr. Josef Kasl and Dr. Nicușor-Alin Sirbu

The development of modern engineering and manufacturing relies on materials that meet increasingly demanding performance requirements. Among these materials, steel, alloys and protective coatings of their surfaces remain central to achieving strength, durability, and resistance in extreme environments. The special edition reflects research results that are essential for advancing industrial technologies and aims to provide both technical information and an inspiration for continued innovation in materials engineering.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Alloy, Aluminum Oxide, Coating, Cold Cracking, Corrosion, High Entropy Alloy, High Temperature Oxidation, Laser Cladding, Mechanical Properties, Steel, Titanium Oxide, Welding

Prices: Print: **US\$ 100.00 / EUR 100.00**

eBook Single-User: **US\$ 100.00 / EUR 100.00**

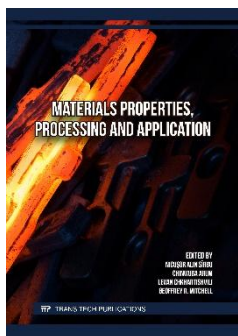
eBook Multi-User: **US\$ 175.00 / EUR 175.00**

Print: 978-3-0364-0955-9

eBook: 978-3-0364-1955-8

102 pages, 2025

<https://www.scientific.net/978-3-0364-0955-9/book>



Materials Properties, Processing and Application

Volume in the series: 1161

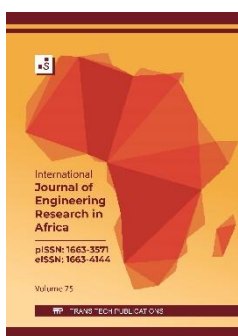
Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Nicușor-Alin Sîrbu, Prof. Chinwuba Arum, Levan Chkhartishvili and Prof. Geoffrey R. Mitchell

The evolution of materials science and other engineering sciences drives innovation across industries, from metallurgy and processing technologies to sustainable design and functional materials. This special edition presents a collection of study results that illustrate how diverse research directions converge toward a common goal - improving performance, durability, and environmental safety in the development of modern materials and technologies. It will be relevant for many specialists whose activity is related to materials and technologies in various industrial branches and healthcare.

- Topics:** Bioscience and Medicine, Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science
Keywords: Aluminum Alloy, Antibacterial Activity, Composite, Concrete, Fracture Surface Analysis, Friction Stir Processing, Mechanical Properties, Metallurgy, Mortar, Polymer, Steel, Superplasticiser
- Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0957-3
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<https://www.scientific.net/978-3-0364-0957-3/book>



International Journal of Engineering Research in Africa Vol. 75

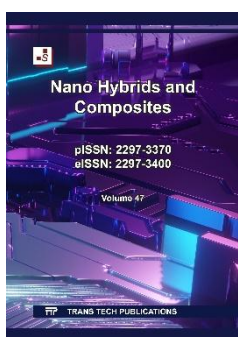
Volume in the series: 75

Edited by: Prof. Akii Okonigbon Akaehomen Ibadode

The 75th volume of the journal features articles devoted to modern issues related to the development and analysis of green building materials, including concrete and insulation materials. The energy efficiency inspection of the pump system, real-time thermodynamic analysis of gas turbines in combined cycle power plants, a pipeline anomaly and leakage detection mechanism based on deep learning, and an analysis of two tracking control systems for the photovoltaic system are also presented here. This volume will be helpful for a wide range of specialists in construction and mechanical engineering.

- Topics:** Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanical Engineering, Mechanics
Keywords: Biocomposite, Building Materials, Deep Learning, Energy Audit, Fuzzy Logic Control, Gas Turbine, Green Concrete, Insulation Material, Leak Detection, Maximum Power Point Tracking, Mechanical Properties, Photovoltaic System, Pipeline, Pump System, Thermodynamic Analysis
- Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0973-3
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 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 182 pages, 2025

<https://www.scientific.net/978-3-0364-0973-3/book>



Nano Hybrids and Composites Vol. 47

Volume in the series: 47

Edited by: Dr. Nicușor-Alin Sîrbu and Prof. Mudhar A. Al-Obaidi

The volume presented articles on the research results of modern polymers for packaging solutions based on recycled materials, the optimisation of technological parameters for 3D printing of medical implants, and aluminium-based nanocomposites. The synthesis of carbon nanosphere-modified metal-organic frameworks as a promising electrode material for supercapacitors with improved electrochemical properties is also presented here. The volume will be profitable to many specialists in polymer materials and nanomaterials.

- Topics:** Bioscience and Medicine, Materials Science, Nanoscience
Keywords: 3D Printing, Carbon Nanospheres, Mechanical Properties, Metal Organic Framework, Nanocomposite, Nanocrystal, Polylactic Acid, Polymer, Stretch Film
- Prices: Print: **US\$ 75.00 / EUR 75.00** Print: 978-3-0364-0969-6
 eBook Single-User: **US\$ 75.00 / EUR 75.00** eBook: 978-3-0364-1969-5
 eBook Multi-User: **US\$ 131.00 / EUR 131.00** 64 pages, 2025

<https://www.scientific.net/978-3-0364-0969-6/book>



Journal of Biomimetics, Biomaterials and Biomedical Engineering Vol. 69

Volume in the series: 69

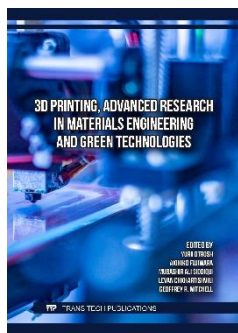
Edited by: Prof. William C. Tang, Dr. Nicușor-Alin Sîrbu, Prof. Chinwuba Arum and Prof. Jong Wan Hu

The 69th volume of the journal features articles dedicated to issues in biomedical engineering, including the synthesis of effective biocompatible hydrogel materials for tissue engineering, the development of materials for 3D printing of orthopaedic implants, and the design of a microfluidic system for organ-on-a-chip technology, etc.

Topics: Bioscience and Medicine, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience
Keywords: Abrasive Flow Machine, Additive Manufacturing, Biocompatibility, Biomaterials, Composite, Hydrogel, Mechanical Properties, Microfluidic System, Nanofinishing, Nanoparticles, Neuromodulation, Orthopedic Implant, Poly-Herb Extraction, Polymer, Steel, Surface Modification, Titanium

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0940-5
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 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 158 pages, 2025

<https://www.scientific.net/978-3-0364-0940-5/book>



3D Printing, Advanced Research in Materials Engineering and Green Technologies

Volume in the series: 1027

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh, Prof. Akihiko Fujiwara, Mubashir Ali Siddiqui, Levan Chkhartishvili and Prof. Geoffrey R. Mitchell

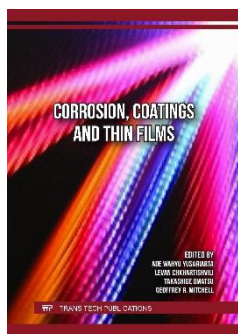
This special edition brings together results from a diverse range of studies in materials science and modern technologies. The presented articles reflect the dynamic and interdisciplinary nature of modern research in materials and technologies, which ensures innovations, sustainability, and technological progress. We hope this special edition serves as a valuable reference for researchers, engineers, and students engaged in the development of advanced materials and technologies.

Topics: Bioscience and Medicine, Building Materials, Civil Engineering, Construction, Information Technologies, Manufacturing, Materials Science, Mechanics

Keywords: Additive Manufacturing, Bioactive Glass, Biomaterials, Composite, Green Concrete, Machine Learning, Mechanical Properties, Metallic Glass, Polymer, Scaffold, Sedimentation, Sorption, Water Treatment

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0948-1
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 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 142 pages, 2025

<https://www.scientific.net/978-3-0364-0948-1/book>



Corrosion, Coatings and Thin Films

Volume in the series: 377

Special topic volume with invited peer-reviewed papers only

Edited by: Ade Wahyu Yusariarta, Levan Chkhartishvili, Prof. Takashige Omatsu and Prof. Geoffrey R. Mitchell

This special edition brings together the results of recent advances in materials science and related technologies, with a focus on corrosion protection, surface engineering, the investigation and creation of thin films, and catalytic processes that are shaping modern applications in engineering systems for energy conversion.

Topics: Electronics, Materials Science

Keywords: Cathodic Protection, Coating, Corrosion, Corrosion Protection, Electrocatalysis, Energy Conversion, Membrane, Photocatalysis, Thin Films

Prices: Print: **US\$ 110.00 / EUR 110.00** Print: 978-3-0364-0937-5
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Advanced Engineering Forum Vol. 57

Volume in the series: 57

Edited by: Prof. Ramesh K. Agarwal

The 57th volume of the journal is compiled from articles that represent the latest research results in machinery, oil recovery, industrial equipment, mechatronics and intelligent measurement and training systems. This volume will be helpful to many engineers in mechanical engineering, manufacturing and information technologies.

Topics: Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Alloy, Atmospheric Boundary Layer, Digital Twin, Gauge Repeatability, Higher Order Sliding Mode Control, Low Pressure Flash Column, Magnetic Field, Maximum Power Tracking, Measurement, Measurements, Measuring System, Mechanical Properties, Oil Recovery, Permanent Magnet Synchronous Generator, Talent Training, Thin Films, Traverse System, Wafer Dicing Process, Wind Tunnel, Wind Turbine Structural Crack,

Prices: Print: **US\$ 95.00 / EUR 95.00** Print: 978-3-0364-0939-9
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 eBook Multi-User: **US\$ 166.00 / EUR 166.00** 116 pages, 2025

<https://www.scientific.net/978-3-0364-0939-9/book>



Journal of Nano Research Vol. 89

Volume in the series: 89

Edited by: Prof. Ramesh K. Agarwal, Prof. Akihiko Fujiwara, Prof. Takashige Omatsu and Prof. Geoffrey R. Mitchell

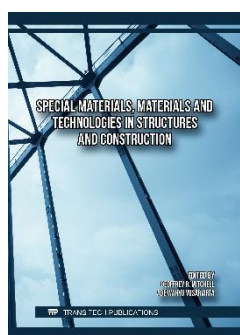
The 89th volume of the journal features peer-reviewed articles dedicated to recent research results in nanomaterials and applied nanotechnologies across a wide spectrum, including the modification of Raman spectroscopy for nano measurements, analysis of nanobubbles' transportation possibilities for biomedical goals and synthesis of multilayer functional aramid nanofibers-based aerogel, green synthesis of carbon quantum dots and optimisation of planar MOSFET nanotechnology. The presented articles will be helpful to many specialists whose activity is related to nanomaterials and nanotechnologies.

Topics: Electronics, Materials Science, Mechanics, Nanoscience

Keywords: Aerogel, Green Synthesis, Hybrid Nanofluid, Membrane, Nanobubble Transport, Nanomaterials, Nanoparticles, Nanoplasmonics, Photoluminescence Properties, Planar MOSFET, Quantum Dots, Raman Spectroscopy

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 eBook Multi-User: **US\$ 131.00 / EUR 131.00** 68 pages, 2025

<https://www.scientific.net/978-3-0364-0938-2/book>



Special Materials, Materials and Technologies in Structures and Construction

Volume in the series: 1026

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Geoffrey R. Mitchell and Ade Wahyu Yusariarta

The special edition offers a comprehensive overview of current research results and developments in materials science and processing technologies, with a priority on their practical applications and provides an integrated perspective on the role of materials in modern science and engineering.

Topics: Bioscience and Medicine, Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanics

Keywords: Biomaterials, Ceramics, Composite, Construction, Green Concrete, Mechanical Properties, Polymer, Steel

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0934-4
 eBook Single-User: **US\$ 125.00 / EUR 125.00** eBook: 978-3-0364-1934-3
 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 164 pages, 2025

<https://www.scientific.net/978-3-0364-0934-4/book>



The 10th International Conference on Science and Technology (ICST)

Volume in the series: 27

Selected peer-reviewed full text papers from the 10th International Conference on Science and Technology (ICST UGM 2024), October 23-24, 2024, Yogyakarta, Indonesia

Edited by: Dr. Ganjar Alfian, Dr. Unan Yusmaniar Oktiawati, Dr. Yuris Mulya Saputra and Dr. Cecep Pratama

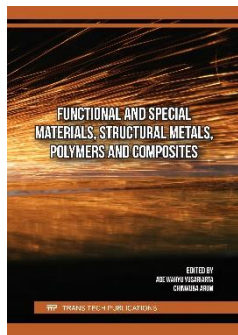
This book presents the proceedings of the 10th International Conference on Science and Technology (23-24 October 2024, Yogyakarta, Indonesia), highlighting cutting-edge innovations in engineering. It compiles selected papers from the Computer, Electronics, and Information Technology Symposiums and the Remote Sensing Symposium, showcasing recent advancements, research methodologies, and machine learning and AI applications in these fields. The aim is to provide a comprehensive platform for researchers, practitioners, and industry experts to share knowledge, discuss emerging technologies, and explore interdisciplinary solutions to complex problems. This volume is a valuable reference for those interested in computing and remote sensing trends and future directions, including artificial intelligence, deep learning, IoT, electronics, digital cartography, and geographic information science.

Topics: Bioscience and Medicine, Computers, Electronics, Environmental Engineering, General Engineering, Industrial Engineering, Information Technologies, Manufacturing, Mechanical Engineering, Mechanics

Keywords: Artificial Intelligence, Big Data, Biomedical Engineering, Blockchain, Communication, Computer Technology, Computer Vision, Control, Deep Learning, Digital Transformation, Education, Engineering Management, Geomatics, Health Care, Information Processing, Internet of Things, Machine Learning, Mechanical Engineering, Mechatronics, Navigation, Product Development, Remote Sensing, Smart Society, Software

Print: **US\$ 335.00 / EUR 335.00** Print: 978-3-0364-0693-0
 eBook Single-User: **US\$ 198.00 / EUR 198.00** eBook: 978-3-0364-1693-9
 eBook Multi-User: **US\$ 347.00 / EUR 347.00** 886 pages, 2025

<https://www.scientific.net/978-3-0364-0693-0/book>



Functional and Special Materials, Structural Metals, Polymers and Composites

Volume in the series: 1025

Special topic volume with invited peer-reviewed papers only

Edited by: Ade Wahyu Yusariarta and Prof. Chinwuba Arum

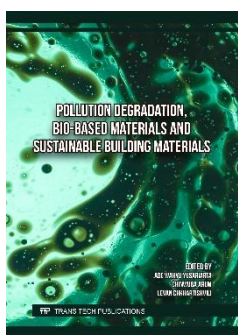
This special edition compiles recent advances and insights in applied materials science, with a particular focus on the relationship between material properties, processing technologies, and their applications in modern industries.

Topics: Bioscience and Medicine, Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Alloy, Carbon Electrode, Composite, Dry Turning, Elastic Shell, Friction Stir Welding, Mechanical Properties, Milling, Nanocomposite, Nanorods, Polymer, Steel, Surface Modification

Prices: Print: **US\$ 115.00 / EUR 115.00** Print: 978-3-0364-0933-7
 eBook Single-User: **US\$ 115.00 / EUR 115.00** eBook: 978-3-0364-1933-6
 eBook Multi-User: **US\$ 201.00 / EUR 201.00** 144 pages, 2025

<https://www.scientific.net/978-3-0364-0933-7/book>



Pollution Degradation, Bio-Based Materials and Sustainable Building Materials

Volume in the series: 1160

Special topic volume with invited peer-reviewed papers only

Edited by: Ade Wahyu Yusariarta, Prof. Chinwuba Arum and Levan Chkhartishvili

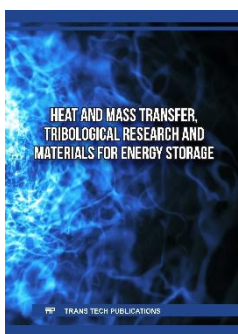
This special edition highlights recent results in materials research and sustainable technology developments, with a particular emphasis on environmentally friendly approaches and applications aimed at addressing modern environmental challenges.

Topics: Building Materials, Civil Engineering, Environmental Engineering, Materials Science, Mechanics, Nanoscience

Keywords: Bio-Based Materials, Catalytic Processes, Composite, Green Building Materials, Green Chemistry, Mechanical Properties, Nanocomposite, Nanoparticles, Photocatalyst, Photodegradation, Pollutant Degradation, Polymer, Reinforcement

Prices: Print: **US\$ 115.00 / EUR 115.00** Print: 978-3-0364-0936-8
 eBook Single-User: **US\$ 115.00 / EUR 115.00** eBook: 978-3-0364-1936-7
 eBook Multi-User: **US\$ 201.00 / EUR 201.00** 124 pages, 2025

<https://www.scientific.net/978-3-0364-0936-8/book>



Heat and Mass Transfer, Tribological Research and Materials for Energy Storage

Volume in the series: 444

Special topic volume with invited peer-reviewed papers only

Edited by: Ade Wahyu Yusariarta, Dr. Nicușor-Alin Țîrbu and Prof. Ramesh K. Agarwal

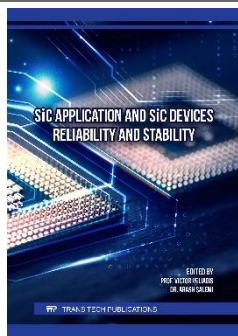
The special edition offers readers a detailed overview of the modern challenges and solutions in materials science and engineering, serving as a valuable reference for researchers and engineers, and as a foundation for fostering innovation across disciplines.

Topics: Electronics, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Alloy, Composite, Corrosion, Electrochemical Properties, Electrode Materials, Flame Straightening, Graphene, Heat and Mass Transfer, Heat Treatment, Hydrothermal Synthesis, Lithium-Ion Battery, Mechanical Properties, Nanofluid, Numerical Investigation, Steel, Supercapacitor, Titanium Dioxide, Tribology

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-0935-1
 eBook Single-User: **US\$ 145.00 / EUR 145.00** eBook: 978-3-0364-1935-0
 eBook Multi-User: **US\$ 254.00 / EUR 254.00** 208 pages, 2025

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SiC Application and SiC Devices Reliability and Stability

Volume in the series: 1024

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

This special edition combines issues related to the reliability and stability of silicon carbide-based electronic devices with an analysis of engineering solutions for their applications in frontier technologies and extreme conditions, providing readers with a comprehensive overview of current advances and future directions of applications.

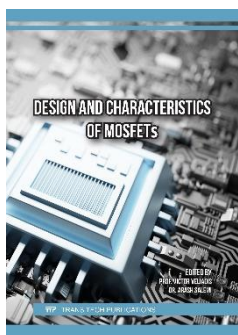
Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Bias Temperature Instability, Converter, Converter Loss, Electrical Parameters, Excessive Channel Leakage, Gate Oxide Breakdown, Gate Oxide Screening, Gate Switching Instability, Overcurrent, PiN Diode, Quantum Applications, Reliability, Sic Photodiode, Silicon Carbide, Space Electronics, TCAD Model, Time-Dependent Dielectric Breakdown, Ultraviolet Photodetector

Prices: Print: **US\$ 130.00 / EUR 130.00**
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Print: 978-3-0364-0916-0
 eBook: 978-3-0364-1916-9
 134 pages, 2025

<https://www.scientific.net/978-3-0364-0916-0/book>



Design and Characteristics of MOSFETs

Volume in the series: 1023

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

This special edition comprehensively overviews state-of-the-art technologies for designing structures and analysing functional characteristics of SiC-based devices and integrated circuits, which, in modern conditions of scientific and technological progress, have wide applications in many engineering and manufacturing fields.

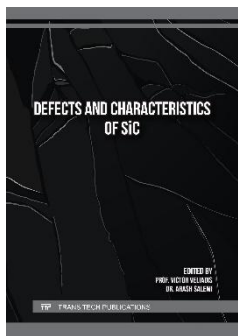
Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Bipolar Diode, Bipolar Junction Transistors, Cell Topology, Channel Density, Electrical Characteristics, Integrated Circuit, MOSFET, Optical Beam Induced Current, PiN Diode, Planar Gate, Power Electronics, Schottky Barrier Diode, Silicon Carbide, Switching Test, TCAD Modelling

Prices: Print: **US\$ 100.00 / EUR 100.00**
 eBook Single-User: **US\$ 0.00 / EUR 0.00**
 eBook Multi-User: **US\$ 0.00 / EUR 0.00**

Print: 978-3-0364-0915-3
 eBook: 978-3-0364-1915-2
 82 pages, 2025

<https://www.scientific.net/978-3-0364-0915-3/book>



Defects and Characteristics of SiC

Volume in the series: 376

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

By integrating technological features of crystal and epitaxial layer growth, physics of defect occurrence processes and procedures for eliminating their effects, and device engineering, this edition provides a comprehensive overview of the current state of research and existing approaches to mitigating defect-related limitations in SiC-based technologies.

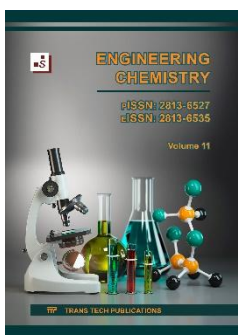
Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Basal Plane Dislocation, Bipolar Degradation, Defect Density, Defect Inspection, Defect Reduction, Electrical Wafer Sorting, Epitaxial Defectivity, Lattice Damage, Prismatic Dislocation, Silicon Carbide, Structure Defect

Prices: Print: **US\$ 100.00 / EUR 100.00**
 eBook Single-User: **US\$ 0.00 / EUR 0.00**
 eBook Multi-User: **US\$ 0.00 / EUR 0.00**

Print: 978-3-0364-0918-4
 eBook: 978-3-0364-1918-3
 90 pages, 2025

<https://www.scientific.net/978-3-0364-0918-4/book>



Engineering Chemistry Vol. 11

Volume in the series: 11

Edited by: Prof. Citlalli Gaona-Tiburcio, Prof. Patrizia Bocchetta and Dr. Dhany Arifianto

The 11th issue of the journal Engineering Chemistry contains articles based on research results in materials and technologies related to environmental remediation, biomass treatment, and the formation of piezoelectric composite materials. This journal's volume will be helpful for many ecological engineering and chemical technologies specialists.

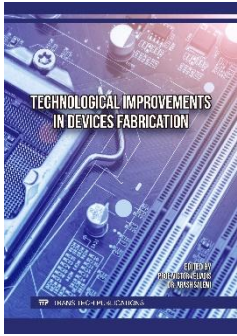
Topics: Environmental Engineering, Manufacturing, Materials Science, Nanoscience

Keywords: Adsorption, Biomass Pyrolysis, Composite, Electrospinning, Environmental Remediation, Graphene Oxide, Methylene Blue, Nanofibers, Oil Contamination, Oil Spill, Photodegradation, Piezoelectric Materials, Polymer, Wastewater Treatment

Prices: Print: **US\$ 75.00 / EUR 75.00**
 eBook Single-User: **US\$ 0.00 / EUR 0.00**
 eBook Multi-User: **US\$ 0.00 / EUR 0.00**

Print: 978-3-0364-0890-3
 eBook: 978-3-0364-1890-2
 86 pages, 2025

<https://www.scientific.net/978-3-0364-0890-3/book>



Technological Improvements in Devices Fabrication

Volume in the series: 1159

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

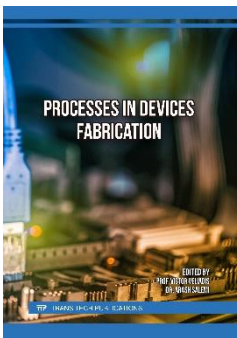
This special edition provides a comprehensive overview of the latest process enhancements that underpin the continued advancement of SiC-based device technologies by addressing methods of compound semiconductor processing and technologies of electronics device structure forming with a focus on end-device reliability.

Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Argon Plasma Treatment, Contact Formation, Contact Resistance, Gate Oxide, Gate Oxide Lifetime, Laser Ablation, Laser Annealing, Plasma Dicing, Schottky Barrier Diodes, Schottky Contacts, Silicon Carbide, Sulfurization, Trench Etching, Wafer Dicing

Prices:	Print:	US\$ 105.00 / EUR 105.00	Print: 978-3-0364-0912-2
	eBook Single-User:	US\$ 0.00 / EUR 0.00	eBook: 978-3-0364-1912-1
	eBook Multi-User:	US\$ 0.00 / EUR 0.00	106 pages, 2025

<https://www.scientific.net/978-3-0364-0912-2/book>



Processes in Devices Fabrication

Volume in the series: 1158

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

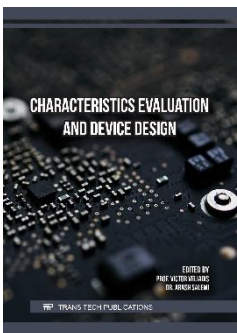
By combining perspective materials processing techniques, device engineering, and circuit integration methods, this special edition provides a comprehensive overview of the state of the art in SiC-based power electronics device fabrication technologies, serving as a valuable resource for researchers, engineers, and practitioners in the field.

Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Backside Metal Contact Resistance, Bonded Substrate, Contact Formation, Contact Resistivity, Deep Implantation, Dielectric Stack, Gate Oxide Integrity, Integrated Circuit, Metal-Oxide-Semiconductor Capacitor, MOSFET, Ohmic Contact, Oxidation Process, Planar CMOS, Post Deposition Annealing, Silicon Carbide, Super-Junction Technology, Trench Etching

Prices:	Print:	US\$ 115.00 / EUR 115.00	Print: 978-3-0364-0911-5
	eBook Single-User:	US\$ 0.00 / EUR 0.00	eBook: 978-3-0364-1911-4
	eBook Multi-User:	US\$ 0.00 / EUR 0.00	104 pages, 2025

<https://www.scientific.net/978-3-0364-0911-5/book>



Characteristics Evaluation and Device Design

Volume in the series: 1022

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

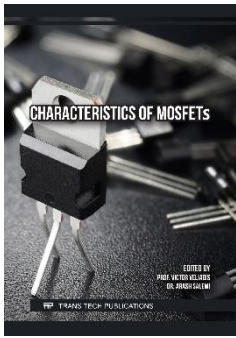
This special edition analyses recent technological advances, modern design methodologies, and performance evaluation and parameters optimisation techniques of SiC-based power devices.

Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Bidirectional Field-Effect Transistor, Bidirectional Power Switches, Breakdown Voltage, Channel Mobility, Drain Voltage, Electrical Characteristics, Junction Termination Extension, MOSFET, PiN Diode, Power Electronics, Schottky Diodes, SiC Thyristor, Silicon Carbide, TCAD Model, Trench MOSFET Structure

Prices:	Print:	US\$ 105.00 / EUR 105.00	Print: 978-3-0364-0914-6
	eBook Single-User:	US\$ 0.00 / EUR 0.00	eBook: 978-3-0364-1914-5
	eBook Multi-User:	US\$ 0.00 / EUR 0.00	100 pages, 2025

<https://www.scientific.net/978-3-0364-0914-6/book>



Characteristics of MOSFETs

Volume in the series: 1021

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

As a valuable resource for researchers, engineers, and practitioners, this special edition presents a balanced account of the scientific foundations together with the engineering and technological solutions that underpin the advancement and deployment of SiC-based power devices.

Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Bipolar Junction Transistor, Body Diode, Bonded Substrate, High Voltage Gate, MOSFET, Power Electronics, Silicon Carbide, Wide Bandgap Semiconductor

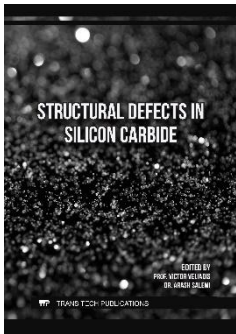
Prices: Print: **US\$ 105.00 / EUR 105.00**
 eBook Single-User: **US\$ 0.00 / EUR 0.00**
 eBook Multi-User: **US\$ 0.00 / EUR 0.00**

Print: 978-3-0364-0913-9

eBook: 978-3-0364-1913-8

106 pages, 2025

<https://www.scientific.net/978-3-0364-0913-9/book>



Structural Defects in Silicon Carbide

Volume in the series: 375

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

This special edition provides a focused overview of the state of the art in the areas of control, analysis of characteristics, and effect compensation of silicon carbide structure defects, highlighting the scientific foundations and technological solutions that underpin the development of high-quality SiC devices.

Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Bipolar Degradation, Bonded Substrate, Carrier Mobility, Defect Inspection, Epitaxial Substrate, Forward Bias Degradation, Implantation, Lattice Damage, Micropipe, Silicon Carbide, Structural Defects

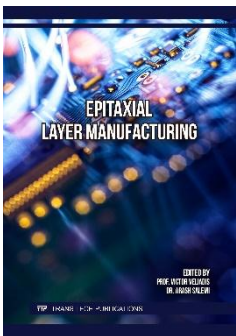
Prices: Print: **US\$ 105.00 / EUR 105.00**
 eBook Single-User: **US\$ 0.00 / EUR 0.00**
 eBook Multi-User: **US\$ 0.00 / EUR 0.00**

Print: 978-3-0364-0917-7

eBook: 978-3-0364-1917-6

88 pages, 2025

<https://www.scientific.net/978-3-0364-0917-7/book>



Epitaxial Layer Manufacturing

Volume in the series: 1157

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

This special edition is a helpful resource for researchers, engineers, and practitioners involved in developing, designing, and manufacturing next-generation power electronic components. The articles cover both fundamental principles and applied methodologies, offering a balanced perspective on modern semiconductor technology.

Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Ammonia Doping, Crystal Defects, Crystal Growth, Epitaxial Layer Growth, Mechanical Slicing, Semiconductor Materials, Silicon Carbide, Wafering

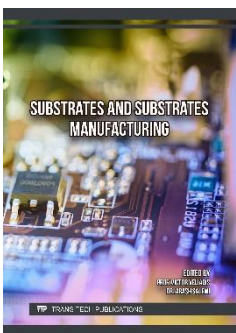
Prices: Print: **US\$ 105.00 / EUR 105.00**
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 eBook Multi-User: **US\$ 0.00 / EUR 0.00**

Print: 978-3-0364-0910-8

eBook: 978-3-0364-1910-7

92 pages, 2025

<https://www.scientific.net/978-3-0364-0910-8/book>



Substrates and Substrates Manufacturing

Volume in the series: 1156

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

This special edition aims to serve as a valuable resource for researchers and engineers engaged in developing and producing advanced semiconductor power devices. The publication provides readers with a balanced view of this field's scientific foundations and applied methodologies.

Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Crystal Growth, Epitaxial Layer Growth, Gallium Nitride, Plasma Etching, Semiconductor Materials, Silicon Carbide, Wafer

Prices: Print: **US\$ 105.00 / EUR 105.00**
 eBook Single-User: **US\$ 0.00 / EUR 0.00**
 eBook Multi-User: **US\$ 0.00 / EUR 0.00**

Print: 978-3-0364-0761-6

eBook: 978-3-0364-1761-5

104 pages, 2025

<https://www.scientific.net/978-3-0364-0761-6/book>



Book of Abstracts from the 8th International Conference on Numerical Modelling in Engineering (NME 2025)

Volume in the series: 13

Edited by: Magd Abdel Wahab

This volume contains the abstracts presented at the 8th International Conference on Numerical Modelling in Engineering (NME 2025), held in Ghent, Belgium, from 29 to 31 July 2025. The conference gathered international experts from academia and industry to discuss recent advances in numerical methods such as FEM, BEM, and IGA, and their application across a broad spectrum of engineering disciplines. Special focus was placed on the industrial relevance of numerical simulations in fields including Civil, Aerospace, Mechanical, Materials, Biomedical, Electrical, and Electronics Engineering. The aim was to encourage interdisciplinary collaboration, promote innovation, and facilitate the exchange of ideas and methodologies among researchers and practitioners.

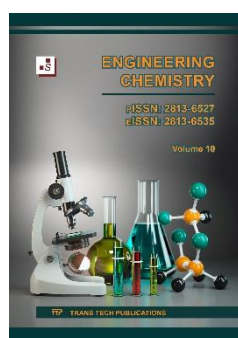
Topics: Building Materials, Civil Engineering, Construction, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering

Keywords: Aerospace Applications, Biomechanical Applications, Boundray Element Method, Bridges, Composite Structures, Contact Problems, Crystal Plasticity, Dams, Dynamics, Finite Element Analysis, Fluid Dynamics, Isogeometric Analysis, Mechanical Behaviour, Nonlinear Analysis, Reinforced Concrete Structures, Steel Structures, Vibration, Wear

Prices: Print: **US\$ 75.00 / EUR 75.00**
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 eBook Multi-User: **US\$ 131.00 / EUR 131.00**

Print: 978-3-0364-0669-5
 eBook: 978-3-0364-1669-4
 46 pages, 2025

<https://www.scientific.net/978-3-0364-0669-5/book>



Engineering Chemistry Vol. 10

Volume in the series: 10

Edited by: Prof. Patrizia Bocchetta, Prof. Citlalli Gaona-Tiburcio and Dr. Madyawati Latief

The presented journal volume of Engineering Chemistry includes articles that reflect the recent developments in chemical synthesis and properties analysis of materials for applications in electronics, chemical production, biofuel synthesis, effective crude oil transportation and corrosion protection. The volume will be helpful for many specialists in applied chemistry and chemical production.

Topics: Manufacturing, Materials Science, Nanoscience

Keywords: Acid Extraction, Biogas, Biotechnology, Buffering Agent, Corrosion Protection, Crude Oil, Dislocations, Inhibitor, Silicon Carbide

Prices: Print: **US\$ 75.00 / EUR 75.00**
 eBook Single-User: **US\$ 0.00 / EUR 0.00**
 eBook Multi-User: **US\$ 0.00 / EUR 0.00**

Print: 978-3-0364-0889-7
 eBook: 978-3-0364-1889-6
 64 pages, 2025

<https://www.scientific.net/978-3-0364-0889-7/book>



Book of Abstracts from the 13th International Conference on Fracture Fatigue and Wear (FFW 2025)

Volume in the series: 12

Edited by: Magd Abdel Wahab

This volume contains the abstracts presented at the 13th International Conference on Fracture, Fatigue and Wear (FFW 2025), held in Ghent, Belgium, from 29 to 31 July 2025. The conference gathered leading researchers and engineers from academia and industry to share advances in fracture mechanics, fatigue, tribology, and material wear. Emphasizing both theoretical and applied perspectives, the event fostered interdisciplinary dialogue through analytical models, numerical methods, and experimental studies. FFW 2025 aimed to promote global collaboration and innovation in addressing real-world engineering challenges.

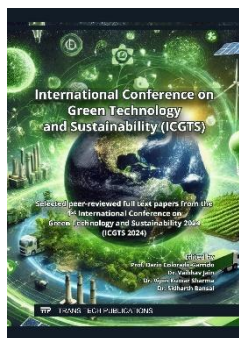
Topics: Manufacturing, Materials Science, Mechanics

Keywords: Damage Mechanics, Damage Tolerance, Elastic Plastic Fracture Mechanics, Fatigue Crack Initiation, Fatigue Crack Propagation, Fatigue Damage, Fretting Fatigue, Fretting Wear, Friction of Materials, Life Prediction Techniques, Linear Elastic Fracture Mechanics, Surface Tribology, Tribology of Materials, Wear Modelling, Wear Monitoring

Prices: Print: **US\$ 120.00 / EUR 120.00**
 eBook Single-User: **US\$ 120.00 / EUR 120.00**
 eBook Multi-User: **US\$ 210.00 / EUR 210.00**

Print: 978-3-0364-0667-1
 eBook: 978-3-0364-1667-0
 88 pages, 2025

<https://www.scientific.net/978-3-0364-0667-1/book>



International Conference on Green Technology and Sustainability (ICGTS)

Volume in the series: 26

Selected peer-reviewed full text papers from the 1st International Conference on Green Technology and Sustainability (ICGTS 2024), January 30-31, 2024, Delhi, India

Edited by: Prof. Dario Colorado-Garrido, Dr. Vaibhav Jain, Dr. Vipin Kumar Sharma and Dr. Sidharth Bansal

This journal's volume brings together contributions presented at the 1st International Conference on Green Technology and Sustainability 2024 (ICGTS 2024, 30-31 January 2024, Delhi, India), reflecting the multidisciplinary nature of sustainability and the importance of collaborative efforts to drive real-world change. The papers featured in this edition explore the technological innovations that underpin green solutions and the social and economic frameworks necessary to foster an environment conducive to sustainable practices. The edition highlights both the potential and the challenges of green technologies in a rapidly evolving world, integrating green technologies and sustainable practices across various sectors of human activities.

Topics: Bioscience and Medicine, General Engineering, Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Biofuel, Biolubricants, Biomedical Engineering, Heat Transfer, Industry 4.0, Refrigeration System, Sustainable Development, Thermal Engineering, Water Desalination

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0622-0
 eBook Single-User: **US\$ 125.00 / EUR 125.00** eBook: 978-3-0364-1622-9
 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 168 pages, 2025

<https://www.scientific.net/978-3-0364-0622-0/book>



Advanced Materials, Additive Manufacturing and Chemical Engineering

Volume in the series: 1020

Special topic volume with invited peer-reviewed papers only

Edited by: Ade Wahyu Yusariarta and Hamada Shoukry

This special edition combines recent research and developments across diverse materials science and engineering fields, highlighting traditional and emerging technologies. The contents are organised into four chapters, each reflecting a vital domain shaping modern scientific and industrial progress.

Topics: Manufacturing, Materials Science, Nanoscience

Keywords: Additive Manufacturing, Aerosol, Composite, Fire Extinguishing, Injection Molding, Mechanical Properties, Nanoparticles, Phase Change Material, Photoluminescence, Polymer, Sedimentation Rate, Semiconductor, Water Treatment, Welding

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0888-0
 eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1888-9
 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 164 pages, 2025

<https://www.scientific.net/978-3-0364-0888-0/book>



16th International Conference on Sustainable Construction and Nano-Technology (NTC)

Volume in the series: 20

Selected peer-reviewed full text papers from the 16th International Conference on Sustainable Construction and Nano-Technology (NTC 2025), 11-15 April, 2025, Sharm El-Sheikh, Egypt

Edited by: Hamada Shoukry

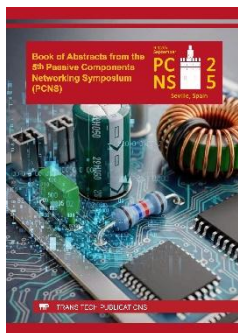
This edition was prepared based on the results of the 16th International Conference on Sustainable Construction and Nano-Technology (11-15 April 2025, Sharm El-Sheikh, Egypt), and presents results of the multidisciplinary explorations, sustainable and innovative solutions in the construction and water management sectors. Topics include the development and application of green concrete for environmentally friendly infrastructure, advanced strategies for building fire protection, and the impact of poor communication in construction projects on project success. In the field of water resources, the edition highlights cutting-edge methods in water desalination using membranes and reverse osmosis, as well as modern wastewater treatment technologies aimed at improving efficiency and sustainability. This book will be helpful for many engineers and researchers.

Topics: Building Materials, Civil Engineering, Construction, Industrial Engineering, Materials Science, Nanoscience

Keywords: Fire Protection, Green Concrete, Mechanical Properties, Membrane, Nano Calcium Hydroxide, Nano Coating, Poor Communication, Reverse Osmosis, Wastewater Treatment, Water Desalination

Prices: Print: **US\$ 85.00 / EUR 85.00** Print: 978-3-0364-0882-8
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 eBook Multi-User: **US\$ 149.00 / EUR 149.00** 94 pages, 2025

<https://www.scientific.net/978-3-0364-0882-8/book>



Book of Abstracts from the 5th Passive Components Networking Symposium (PCNS)

Volume in the series: 11

Edited by: Dr. Tomas Zednicek

The PCNS Passive Components Networking Symposium, a bi-annual international event, is exclusively dedicated to passive electronic components. Organized by the EPCI European Passive Components Institute in collaboration with a European university, the 5th edition of the PCNS Passive Components Networking Days Symposium was held 9-12th September 2025 at the Escuela Técnica Superior de Ingeniería de Sevilla of Universidad de Sevilla, Spain. This event was co-hosted by ALTER Technology as the industrial partner. The PCNS 2025 program included 33 technical, industry, and scientific papers organized in six sessions covering topics ranging from quality to the applications of passive components. The PCNS conference program delves into the challenges associated with the development, design, and testing of passive electronic components tailored for use in industrial, automotive, defence, aerospace, and other environments. The PCNS 2025 themes focused on passive components in harsh environments, and Hot Topic Special Session discussed the impact of artificial intelligence on passive electronic components and their consequences.

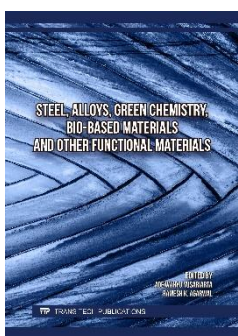
Topics: Electronics, Information Technologies, Materials Science, Nanoscience

Keywords: AI Consequences, Capacitors, Harsh Environment, IEEE Components, Inductors, Passive Electronic Components, Resistors

Prices: Print: **US\$ 75.00 / EUR 75.00**
 eBook Single-User: **US\$ 75.00 / EUR 75.00**
 eBook Multi-User: **US\$ 131.00 / EUR 131.00**

Print: 978-3-0364-0782-1
 eBook: 978-3-0364-1782-0
 64 pages, 2025

<https://www.scientific.net/978-3-0364-0782-1/book>



Steel, Alloys, Green Chemistry, Bio-Based Materials and other Functional Materials

Volume in the series: 1155

Special topic volume with invited peer-reviewed papers only

Edited by: Ade Wahyu Yusariarta and Prof. Ramesh K. Agarwal

The special edition presents an overview of materials science and engineering research results, focusing on modern materials' properties, their processing technologies, and applications, and aims to provide researchers, engineers, educators, and students with insightful perspectives on established and emerging topics in materials science by integrating traditional knowledge with cutting-edge advancements.

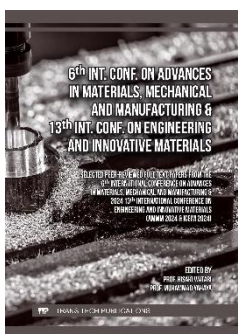
Topics: Building Materials, Manufacturing, Materials Science, Nanoscience

Keywords: Alloy, Bio-Based Materials, Composite, Corrosion, Dyes Remediation, Forming, Functional Materials, Green Chemistry, Mechanical Properties, Nanomaterials, Polymer, Steel, Welding

Prices: Print: **US\$ 130.00 / EUR 130.00**
 eBook Single-User: **US\$ 130.00 / EUR 130.00**
 eBook Multi-User: **US\$ 228.00 / EUR 228.00**

Print: 978-3-0364-0879-8
 eBook: 978-3-0364-1879-7
 156 pages, 2025

<https://www.scientific.net/978-3-0364-0879-8/book>



6th Int. Conf. on Advances in Materials, Mechanical and Manufacturing & 13th Int. Conf. on Engineering and Innovative Materials

Volume in the series: 169

Selected peer-reviewed full text papers from the 6th International Conference on Advances in Materials, Mechanical and Manufacturing & 13th International Conference on Engineering and Innovative Materials (AMMM 2024 & ICEIM 2024), September 06-08, 2024, Tokyo, Japan

Edited by: Prof. Hisaki Watari and Prof. Muhammad Yahaya

This edition comprises articles presented at the 6th International Conference on Advances in Materials, Mechanical and Manufacturing (AMMM 2024) and the 13th International Conference on Engineering and Innovative Materials (ICEIM 2024), which were held from 6-8 September 2024 in Tokyo, Japan. The included articles represent the latest research results in additive manufacturing and engineering practice in the development and design of machines, including computational mechanics methods.

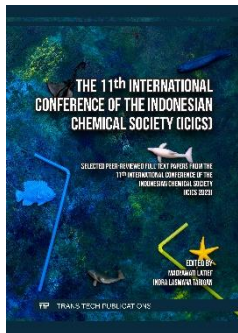
Topics: General Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Additive Manufacturing, Annular Diffuser, Biocomposite, Computational Mechanics, Fused Filament Fabrication, Infill Optimisation, Machine Design, Mechanical Engineering, Modal Analysis, Polymer, Spark Ignition Engine

Prices: Print: **US\$ 125.00 / EUR 125.00**
 eBook Single-User: **US\$ 125.00 / EUR 125.00**
 eBook Multi-User: **US\$ 219.00 / EUR 219.00**

Print: 978-3-0364-0849-1
 eBook: 978-3-0364-1849-0
 116 pages, 2025

<https://www.scientific.net/978-3-0364-0849-1/book>



The 11th International Conference of the Indonesian Chemical Society (ICICS)

Volume in the series: 25

Selected peer-reviewed full text papers from the 11th International Conference of the Indonesian Chemical Society (ICICS 2023), November 15-17, 2023, Jambi, Indonesia

Edited by: Dr. Madyawati Latief and Indra Lasmana Tarigan

This publication includes articles based on research results presented at the 11th International Conference of the Indonesian Chemical Society 2023 (ICICS 2023, 15-17 November 2023, Jambi, Indonesia). The proceedings will be helpful for many branches of engineering related to chemical technologies and chemical production.

Topics: Bioscience and Medicine, Industrial Engineering, Manufacturing, Materials Science

Keywords: Biomaterials, Biotechnology, Chemical Education, Food Chemistry, Geochemistry, Green-Synthesis, Microplastics Detection, Wastewater Treatment

Prices: Print: **US\$ 140.00 / EUR 140.00**

Print: 978-3-0364-0858-3

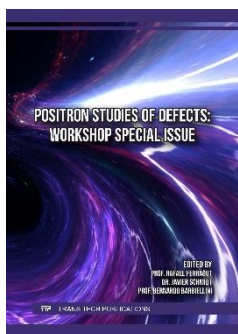
eBook Single-User: **US\$ 140.00 / EUR 140.00**

eBook: 978-3-0364-1858-2

eBook Multi-User: **US\$ 245.00 / EUR 245.00**

180 pages, 2025

<https://www.scientific.net/978-3-0364-0858-3/book>



Positron Studies of Defects: Workshop Special Issue

Volume in the series: 374

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Rafael Ferragut, Dr. Javier Schmidt and Prof. Bernardo Barbiellini

The special edition is devoted to issues related to applying Positron Annihilation Spectroscopy as a nondestructive technique for studying voids and defects in solids. The first chapter contains articles that analyse the features of the latest techniques and instrumentation and present the results of developing some of them. The second chapter is devoted to the practical application of the methods of positron annihilation spectroscopy for studying and analysing defects in alloys, multilayer graphene, photoconductor thin films, complex iron-containing oxide glasses, for the early detection of mental disorders and cancer, etc. Without a doubt, this special edition will be useful for both beginners and professionals with experience in the field of positron annihilation spectroscopy.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Alloys, Angular Correlation of Annihilation Radiation (ACAR), Coincidence Doppler Broadening Spectroscopy, Medical Image, Multilayer Graphene, Oxide Glasses, Photoconductor, Positron Annihilation Spectroscopy (PAS), Positron Beam, Positron Physics, Slow Positron Beam, Structural Defects, Thin Films

Prices: Print: **US\$ 145.00 / EUR 145.00**

Print: 978-3-0364-0860-6

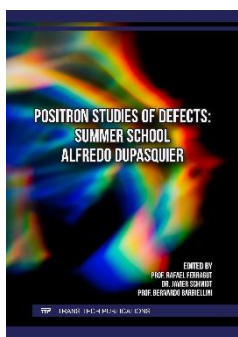
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eBook: 978-3-0364-1860-5

eBook Multi-User: **US\$ 254.00 / EUR 254.00**

174 pages, 2025

<https://www.scientific.net/978-3-0364-0860-6/book>



Positron Studies of Defects: Summer School Alfredo Dupasquier

Volume in the series: 373

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Rafael Ferragut, Dr. Javier Schmidt and Prof. Bernardo Barbiellini

An intensive two-day Summer School in honour of Alfredo Dupasquier was held at the Brunate Library (Como, Italy) on August 31st and September 1st 2024, before the traditional International Workshop on Positron Studies of Defects 2024 (PSD-24, 1-6 September 2024, Como, Italy). The School's lectures presented in this special edition were delivered by leading international experts in Positron Annihilation Spectroscopy (PAS).

Topics: Materials Science, Nanoscience

Keywords: Coincidence Doppler Broadening Spectroscopy, Density Functional Theory, Doppler Broadening Spectroscopy, Interface Defects, Positron Annihilation Lifetime Spectroscopy (PALS), Positron Annihilation Spectroscopy, Positron Beam, Positron Physics, Radiation Damage, Spin-Polarized Positrons, Surface Characterisation, Vacancy Clusters, Vacancy Defects

Prices: Print: **US\$ 130.00 / EUR 130.00**

Print: 978-3-0364-0859-0

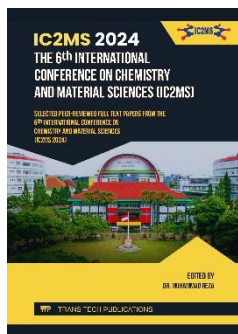
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eBook: 978-3-0364-1859-9

eBook Multi-User: **US\$ 228.00 / EUR 228.00**

176 pages, 2025

<https://www.scientific.net/978-3-0364-0859-0/book>



The 6th International Conference on Chemistry and Material Sciences (IC2MS)

Volume in the series: 24

Selected peer-reviewed full text papers from the 6th International Conference on Chemistry and Material Sciences (IC2MS 2024), September 25-26, 2024, Jember, Indonesia

Edited by: Dr. Muhammad Reza

The International Conference on Chemistry and Material Science (IC2MS 2024, 25-26 September 2024, Jember, Indonesia) provided an international platform to promote mutual exchange between scientists, discuss innovative ideas in scientific research, and propose solutions to contemporary engineering problems in chemistry and materials science. The conference's scope included mini-symposiums that ran in parallel: Material Synthesis and Characterisation, Material Chemistry, Nanomaterials and Nano Devices, Functional Materials, Molecular Science, and Renewable Energy. The collected articles will interest researchers and engineers whose activity is related to chemical technologies, applied materials, bio- and environmental technologies.

Topics: Bioscience and Medicine, Manufacturing, Materials Science, Nanoscience

Keywords: 3D Printing, Adsorbents, Antibacterial Test, Anticancer Agents, Biochar, Biomaterials, Biotechnology, Composites, Deproteinization, Desalination, Enzymes, Food Technology, Functional Materials, Molecular Docking, Nanoparticles, Pectin, Polymers, Sensors, Thin Films, Water Treatment

Prices: Print: **US\$ 130.00 / EUR 130.00** Print: 978-3-0364-0648-0

eBook Single-User: **US\$ 130.00 / EUR 130.00** eBook: 978-3-0364-1648-9

eBook Multi-User: **US\$ 228.00 / EUR 228.00** 158 pages, 2025

<https://www.scientific.net/978-3-0364-0648-0/book>



The 6th International Symposium on Infrastructure Development (ISID-6)

Volume in the series: 23

Selected, peer-reviewed full text papers from the The 6th International Symposium on Infrastructure Development (ISID-6 2023), 24-25 August, 2023, Makassar, Indonesia

Edited by: Dr. Fakhruddin Fakhruddin, Dr. Muhammad Asad Abdurrahman, Dr. A. Ildha Dwi Puspita, Dr. Zarah Arwieny Hanami, Hardianti Alimuddin and Dr. Nurjannah Oktorina

This edition contains selected articles presented at the 6th International Symposium on Infrastructure Development 2023 (ISID 2023, 23-24 August 2023, Makassar, Indonesia). The articles focused on solving significant issues in wastewater treatment and water resources management, geotechnics, and safety and disaster prevention management. These solutions open up additional horizons in the sustainable development of society.

Topics: Civil Engineering, Construction, Environmental Engineering, Industrial Engineering, Mechanics

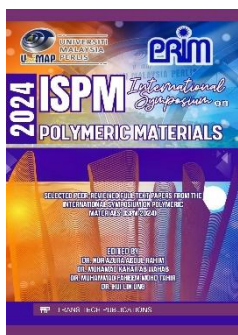
Keywords: Construction Safety, Dam Tunnel, Disaster Mitigation Strategy, Electrocoagulation, Excavation, Flood Area, Geotechnics, Groundwater, Risk of Tank Operation, Rock Mass, Slope Stability, Tsunami, Wastewater Treatment, Watershed

Prices: Print: **US\$ 235.00 / EUR 235.00** Print: 978-3-0364-0817-0

eBook Single-User: **US\$ 198.00 / EUR 198.00** eBook: 978-3-0364-1817-9

eBook Multi-User: **US\$ 347.00 / EUR 347.00** 264 pages, 2025

<https://www.scientific.net/978-3-0364-0817-0/book>



International Symposium on Polymeric Materials (ISPM)

Volume in the series: 168

Selected peer-reviewed full text papers from the International Symposium on Polymeric Materials (ISPM 2024), May 14-16, 2024, Arau, Malaysia

Edited by: Dr. Nor Azura Abdul Rahim, Dr. Mohamad Kahar Ab Wahab, Dr. Muhammad Faheem Mohd Tahir and Dr. Hui Lin Ong

The International Symposium on Polymeric Materials 2024 (ISPM 2024, 14-16 May 2024, Arau, Malaysia) is an upgraded edition of the National Symposium on Polymeric Materials (NSPM) and is a collaborative effort between The Plastics Rubber Institute Malaysia (PRIM) and various local universities. Universiti Malaysia Perlis was honoured to be the organiser for the year 2024. The conference proceedings contain findings in polymeric and biopolymeric materials, polymer composites, rubber technology, and related topics on chemical technologies and will be helpful to many researchers, practitioners, and postgraduate students.

Topics: Bioscience and Medicine, Materials Science

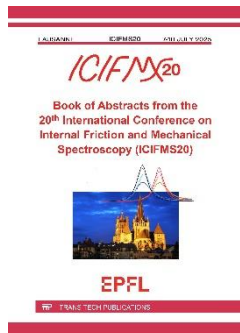
Keywords: Biocomposite, Biopolymer, Bio-Waste, Green Chemistry, Mechanical Properties, Microcrystalline Cellulose, Natural Fiber, Oil Sorbent, Polymer Composite, Polymer Recycling, Tissue Regeneration

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0599-5

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eBook Multi-User: **US\$ 219.00 / EUR 219.00** 148 pages, 2025

<https://www.scientific.net/978-3-0364-0599-5/book>



Book of Abstracts from the 20th International Conference on Internal Friction and Mechanical Spectroscopy (ICIFMS20)

Volume in the series: 10

Edited by: Prof. Daniele Mari, Dr. Iva Tkalccec-Vaju and Dr. Lucas Degeneve

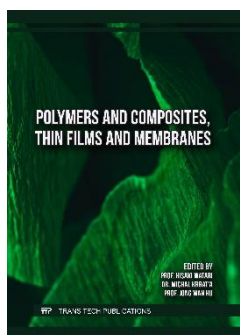
This book contains the abstracts presented at the 20th International Conference on Internal Friction and Mechanical Spectroscopy (ICIFMS20) held in Lausanne 7-10 July 2025. This conference is the 20th of a series that started in 1956 in Providence (USA) until the last one in Rome in 2021. It is an open window on the progress of Science in understanding the elastic, viscoelastic and viscoelastic behaviour of materials. Topics cover a wide domain of modern physics: crystal defect dynamics, magneto mechanical damping, glass transition, and very low damping materials needed for gravitational wave detection and quantum opto-mechanical devices.

Topics: General Engineering, Materials Science

Keywords: Anelasticity, Crystal Defect, Damping, Dislocation, Dynamical Mechanical Analysis, Internal Friction, Mechanical Loss, Viscoelasticity

Prices: Print: **US\$ 95.00 / EUR 95.00** Print: 978-3-0364-0558-2
 eBook Single-User: **US\$ 95.00 / EUR 95.00** eBook: 978-3-0364-1558-1
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Polymers and Composites, Thin Films and Membranes

Volume in the series: 372

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Hisaki Watari, Dr. Michal Krbat'a and Prof. Jong Wan Hu

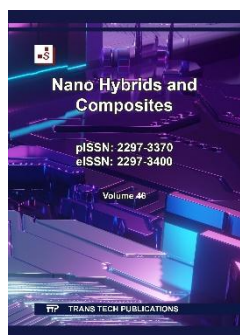
This special edition is intended for researchers and professionals in materials science, chemical engineering, nanotechnology, etc. By providing foundational concepts and current research directions, it aims to support the development of next-generation materials that meet performance and sustainability goals.

Topics: Electronics, Manufacturing, Materials Science, Nanoscience

Keywords: Composite, Deposition, Dielectric Properties, Fiber Reinforcement, Mechanical Properties, Membrane, Microcrystalline Cellulose, Nanocomposite, Piezocomposite, Polymer, Polymer Yarn, Thin Films

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 eBook Single-User: **US\$ 115.00 / EUR 115.00** eBook: 978-3-0364-1847-6
 eBook Multi-User: **US\$ 201.00 / EUR 201.00** 110 pages, 2025

<https://www.scientific.net/978-3-0364-0847-7/book>



Nano Hybrids and Composites Vol. 46

Volume in the series: 46

Edited by: Dr. Amir Al-Ahmed and Prof. Yun-Hae Kim

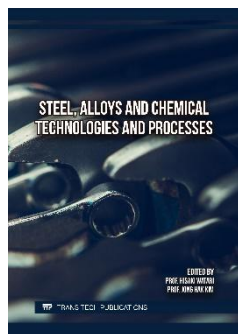
The articles in this volume of the journal focus on research results in synthesising and studying properties of nanomaterials, nanoparticles, and some functional materials. The materials considered have various uses, including wastewater treatment, sensor development, electronic and optoelectronics applications, and fire-retardant coating. The articles will be of great use to researchers working in the field of modern nano- and functional materials.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Dye Adsorption, Fire-Retardant Coating, Heavy Metals, Hydrogen Sulfide Sensor, Metal-Organic Frameworks, Nanocomposite, Nanomaterials, Nanoparticles, Organic Light Emitting Diode, Semiconductor, Wastewater Treatment, Zinc Oxide

Prices: Print: **US\$ 85.00 / EUR 85.00** Print: 978-3-0364-0854-5
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 eBook Multi-User: **US\$ 149.00 / EUR 149.00** 126 pages, 2025

<https://www.scientific.net/978-3-0364-0854-5/book>



Steel, Alloys and Chemical Technologies and Processes

Volume in the series: 1154

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Hisaki Watari and Prof. Jong Hak Kim

This special edition examines research results in two pillars of modern materials and industrial engineering: alloys, steel, and chemical technologies and processes, and is intended for researchers and engineers in materials engineering, metallurgical science, and chemical process industries.

Topics: Manufacturing, Materials Science, Nanoscience

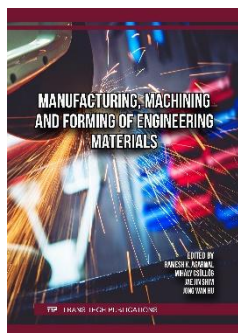
Keywords: Alloy, Biomass Processing, Chemical Technology, Coating, Dye Degradation, Electrodeposition, Fertiliser, Geothermal Waste, Mechanical Properties, Polymer Composite, Pyrolysis, Steel, Stress Corrosion Cracking

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0850-7

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eBook Multi-User: **US\$ 219.00 / EUR 219.00** 110 pages, 2025

<https://www.scientific.net/978-3-0364-0850-7/book>



Manufacturing, Machining and Forming of Engineering Materials

Volume in the series: 1019

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Ramesh K. Agarwal, Mihály Csüllög, Prof. Jae Jin Shim and Prof. Jong Wan Hu

This special edition presents a multidisciplinary view of emerging trends in materials science, technology development, manufacturing, and production equipment. It is intended for a broad audience, including researchers, engineers, and graduate students engaged in materials and technology development, biomedical engineering, and sustainable construction.

Topics: Bioscience and Medicine, Building Materials, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

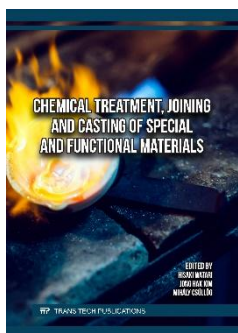
Keywords: Additive Manufacturing, Alloy, Biomaterials, Composite, Green Building Materials, Grinding, Hydrogel, Mechanical Properties, Nanocomposite, Polymer, Single Point Incremental Forming, Steel, Technological Equipment, Wire Electrical Discharge Machining

Prices: Print: **US\$ 155.00 / EUR 155.00** Print: 978-3-0364-0846-0

eBook Single-User: **US\$ 155.00 / EUR 155.00** eBook: 978-3-0364-1846-9

eBook Multi-User: **US\$ 271.00 / EUR 271.00** 146 pages, 2025

<https://www.scientific.net/978-3-0364-0846-0/book>



Chemical Treatment, Joining and Casting of Special and Functional Materials

Volume in the series: 1153

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Hisaki Watari, Prof. Jong Hak Kim and Mihály Csüllög

Materials science and chemical engineering are transformative in advancing industrial technologies and scientific discovery. This special edition's primary aim is to provide researchers, practitioners, and graduate students with a coherent view of the latest developments in these fields. We hope this book serves as a reference and a catalyst for further innovation and interdisciplinary collaboration in materials and chemical engineering.

Topics: Manufacturing, Materials Science

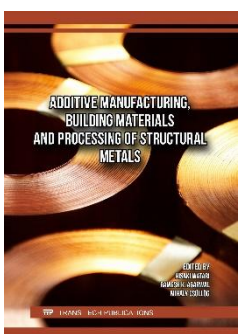
Keywords: Adhesive Joint, Alloy, Aluminium Alloy, Carbon Dioxide, Casting, Ceramics, Composite, Gas Separation, Metamaterials, Photoconversion, Polymer, Refractory Gold, Steel, Tungsten, Welding

Prices: Print: **US\$ 130.00 / EUR 130.00** Print: 978-3-0364-0842-2

eBook Single-User: **US\$ 130.00 / EUR 130.00** eBook: 978-3-0364-1842-1

eBook Multi-User: **US\$ 228.00 / EUR 228.00** 148 pages, 2025

<https://www.scientific.net/978-3-0364-0842-2/book>



Additive Manufacturing, Building Materials and Processing of Structural Metals

Volume in the series: 1018

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Hisaki Watari, Prof. Ramesh K. Agarwal and Mihály Csüllög

The evolution of materials and manufacturing technologies shapes the backbone of industrial development and infrastructure. This special edition presents the results of investigations into three areas that define the technological present and future of machinery, materials engineering, and construction: structural metal processing, additive manufacturing, and building materials. The edition is intended for researchers, engineers, graduate students, and industry professionals in materials science, mechanical engineering and construction.

Topics: Building Materials, Manufacturing, Materials Science, Mechanics

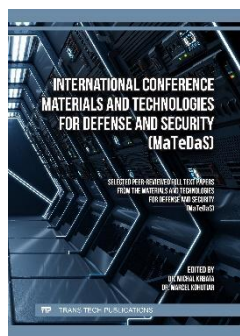
Keywords: Additive Manufacturing, Alloy, Annealing, Cementitious Materials, Gravity Casting, Green Concrete, Mechanical Properties, Metal Matrix Composite, Microstructure, Polymer, Roll Casting, Rolling, Steel

Prices: Print: **US\$ 130.00 / EUR 130.00** Print: 978-3-0364-0845-3

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eBook Multi-User: **US\$ 228.00 / EUR 228.00** 114 pages, 2025

<https://www.scientific.net/978-3-0364-0845-3/book>



International Conference Materials and Technologies for Defense and Security (MaTeDaS)

Volume in the series: 167

Selected peer-reviewed full text papers from the Materials and Technologies for Defense and Security (MaTeDaS), October 09-11, 2024, Trenčín, Slovakia

Edited by: Dr. Michal Krbat'a and Dr. Marcel Kohutiar

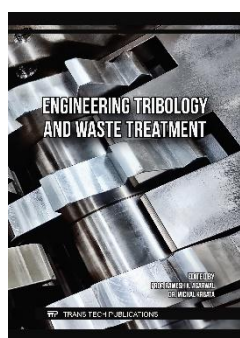
This edition contains papers with research results presented at the conference Materials and Technologies for Defense and Security (MaTeDaS, 9-11 October 2024, Trenčín, Slovakia). The conference was dedicated to developing and designing equipment and mechatronic devices for defense and security. It will be useful for specialists in mechanical engineering and mechatronics.

Topics: General Engineering, Information Technologies, Mechanical Engineering, Mechanics

Keywords: Augmented Reality, Fluid Mechanics, Front Wing, Gear Hydrogenerator, Generative Design, Hydraulic Circuit, Mechatronics, Monopost, Parametric Design, Ramming Device, Shock Absorber, Topology Optimisation, Virtual Reality

Prices: Print: **US\$ 110.00 / EUR 110.00** Print: 978-3-0364-0848-4
 eBook Single-User: **US\$ 110.00 / EUR 110.00** eBook: 978-3-0364-1848-3
 eBook Multi-User: **US\$ 193.00 / EUR 193.00** 110 pages, 2025

<https://www.scientific.net/978-3-0364-0848-4/book>



Engineering Tribology and Waste Treatment

Volume in the series: 1017

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Ramesh K. Agarwal and Dr. Michal Krbat'a

This special edition presents research results in two specific engineering areas: tribology and waste treatment. It is intended for researchers and engineers seeking technical insights and practical problem-solving solutions in these fields. We hope the presented results foster further research, collaboration, and real-world impact across academia and industry.

Topics: Building Materials, Materials Science, Mechanics

Keywords: Alloy, Coefficient of Friction, Friction, Hardness, Internal Surface, Manganese Phosphate Coating, Oil Degradation, Piston Wear, Polymer Composite, Printed Circuit Boards, Steel, Tribology, Waste Cement, Waste Cooking Oil, Waste Treatment, Wear Assessment

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0844-6
 eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1844-5
 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 136 pages, 2025

<https://www.scientific.net/978-3-0364-0844-6/book>



The 6th International Symposium on Infrastructure Development (ISID): Building Materials and Constructions

Volume in the series: 19

Selected peer-reviewed full text papers from the 6th International Symposium on Infrastructure Development (ISID-6 2023), 24-25 August, 2023, Makassar, Indonesia

Edited by: Dr. Fakhruddin Fakhruddin, Dr. Muhammad Asad Abdurrahman, Dr. A. Ildha Dwi Puspita, Dr. Zarah Arwienny Hanami, Hardianti Alimuddin and Dr. Nurjannah Oktorina

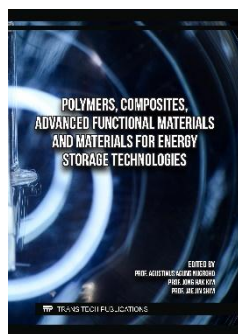
These selected articles were presented at the 6th International Symposium on Infrastructure Development 2023 (ISID 2023, 23-24 August 2023, Makassar, Indonesia) and focus on significant issues of modern construction, whose solutions open up additional horizons in the industry's sustainable development.

Topics: Building Materials, Civil Engineering, Construction, Materials Science, Mechanics

Keywords: Asphalt, Building Information Modelling, Concrete, Earthquake Loads, Geopolymer, Green Building Materials, Mechanical Properties, Multi-Tower Structure, Reinforced Concrete Beam, Seismic Design, Structural Analysis

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0816-3
 eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1816-2
 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 154 pages, 2025

<https://www.scientific.net/978-3-0364-0816-3/book>



Polymers, Composites, Advanced Functional Materials and Materials for Energy Storage Technologies

Volume in the series: 1152

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Agustinus Agung Nugroho, Prof. Jong Hak Kim and Prof. Jae Jin Shim

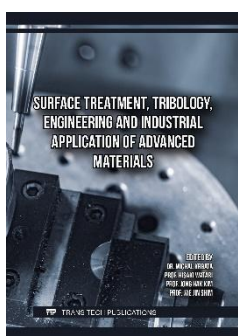
Materials science is crucial in shaping future technologies across sectors such as aerospace, electronics, energy, etc. The presented special edition is a focused selection of research results highlighting recent progress in creating and applying high-performance materials and is designed for researchers, graduate students, and professionals in materials science and machine building.

Topics: Manufacturing, Materials Science, Nanoscience

Keywords: Bifunctional Electrocatalyst, Ceramics, Cobalt Ferrite Nanoparticles, Composite, dielectric characteristics, Graphene Electrode, Graphene Sheet, Hexaferrite, Magnetic Properties, Mechanical Properties, Polymer, Reinforcing, Supercapacitor

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-0841-5
 eBook Single-User: **US\$ 145.00 / EUR 145.00** eBook: 978-3-0364-1841-4
 eBook Multi-User: **US\$ 254.00 / EUR 254.00** 132 pages, 2025

<https://www.scientific.net/978-3-0364-0841-5/book>



Surface Treatment, Tribology, Engineering and Industrial Application of Advanced Materials

Volume in the series: 1016

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Michal Krbat'a, Prof. Hisaki Watari, Prof. Jong Hak Kim and Prof. Jae Jin Shim

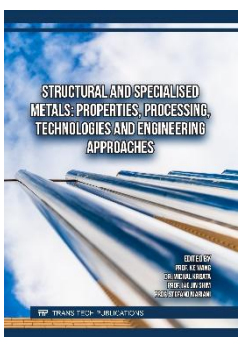
Industrial innovation is grounded in continuously improving materials, optimising technological processes, designing effective production systems and equipment, and ensuring final product quality assurance. This special edition presents a collection of research results contributions across four domains of modern engineering practices: structural metal processing, surface treatment and tribology, industrial engineering and product quality, and engineering design and is intended for researchers and engineers engaged in advancing manufacturing systems and materials processing technologies.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Alloy, Casting, Coating, Corrosion, Damping Property of Materials, Heat Treatment, Machine Learning, Mechanical Properties, Metal Additive Manufacturing, Microstructure, Plasma Nitriding, Polymer, Pore Defect, Property Prediction, Six Sigma, Steel, Tribological Properties, Turning

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-0843-9
 eBook Single-User: **US\$ 145.00 / EUR 145.00** eBook: 978-3-0364-1843-8
 eBook Multi-User: **US\$ 254.00 / EUR 254.00** 138 pages, 2025

<https://www.scientific.net/978-3-0364-0843-9/book>



Structural and Specialised Metals: Properties, Processing, Technologies and Engineering Approaches

Volume in the series: 1151

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Ke Wang, Dr. Michal Krbat'a, Prof. Jae Jin Shim and Prof. Stefano Mariani

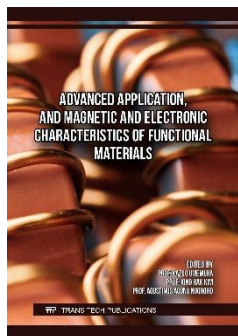
Structural materials and materials for specialised or functional applications are continuously evolving, driven by innovations in synthesis technologies and the demand for higher performance and durability. This special edition brings together results of key developments in both foundational and emerging aspects of engineering materials and their processing and applications, and is intended for students, researchers, and professionals in materials science and applied technologies.

Topics: Bioscience and Medicine, Electronics, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Alloy, Cellulose, Friction Self-Piercing Riveting, Frictional Contact, Gas Atomization, Graphene, Graphene Oxide, Mechanical Properties, Metal Materials, Optical Modulator, Orbital Laser Welding, Steel, Thin Films, Zinc Oxide

Prices: Print: **US\$ 140.00 / EUR 140.00** Print: 978-3-0364-0840-8
 eBook Single-User: **US\$ 140.00 / EUR 140.00** eBook: 978-3-0364-1840-7
 eBook Multi-User: **US\$ 245.00 / EUR 245.00** 134 pages, 2025

<https://www.scientific.net/978-3-0364-0840-8/book>



Advanced Application, and Magnetic and Electronic Characteristics of Functional Materials

Volume in the series: 1015

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura, Prof. Jong Hak Kim and Prof. Agustinus Agung Nugroho

This special edition focuses on research results across three materials science domains: functional materials for advanced technologies, materials for biomedical applications, green building materials and some issues in the mechanical behaviour of building materials and structural elements. The edition is intended to serve as a resource for researchers and professionals seeking a multidisciplinary perspective on the frontiers and innovative solutions in materials science.

Topics: Bioscience and Medicine, Building Materials, Civil Engineering, Construction, Materials Science, Mechanics, Nanoscience

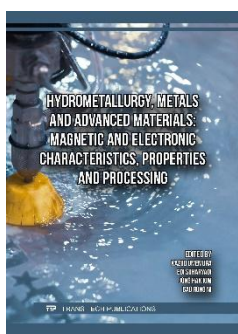
Keywords: Composite, Density Functional Theory, Drug Delivery System, Germanene, Green Building Materials, Magnetic Properties, Nanocomposite, Polymer, Structural Mechanics, Superconductivity, Tetragonal Zirconia, Titanium Alloy, Wound Dressing

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0804-0

eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1804-9

eBook Multi-User: **US\$ 236.00 / EUR 236.00** 120 pages, 2025

<https://www.scientific.net/978-3-0364-0804-0/book>



Hydrometallurgy, Metals and Advanced Materials: Magnetic and Electronic Characteristics, Properties and Processing

Volume in the series: 1014

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura, Edi Suharyadi, Prof. Jong Hak Kim and Prof. Bao Rong Ni

This special edition aims to serve as a valuable resource for professionals engaged in materials science and engineering. Each chapter is designed to offer both theoretical understanding and practical insights, fostering a deeper appreciation of the complexities and innovations shaping modern materials technology.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Cast Iron, Density Functional Theory, Electrical Discharge Machining, Electronic Properties, Hydrometallurgy, Iron Sand, Laser Cladding, Lithium Iron Phosphate, Magnetic Properties, Mechanical Properties, Mechanics of Materials, Steel, Ultrasonic Welding, Wire Arc Additive Manufacturing

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0803-3

eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1803-2

eBook Multi-User: **US\$ 236.00 / EUR 236.00** 130 pages, 2025

<https://www.scientific.net/978-3-0364-0803-3/book>



Advanced Engineering Forum Vol. 56

Volume in the series: 56

Edited by: Prof. Mikkel K. Kragh, Prof. Dumitru Nedelcu and Dr. Rizki Agam Syahputra

The 56th volume of the journal contains articles representing the latest research results in steel processing, green building materials, machine and equipment research and design, microstrip antenna design, power engineering, robotics, and intelligent transportation systems. This volume will be helpful to many engineers in construction, power engineering, machinery, and transportation.

Topics: Building Materials, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Aerodynamic Performance, Airfoils, Archimedes Screw Turbine, Boiler Failure, Cooling Tower, Fiber Reinforced Cement-Based Composites, Heat Transfer, Intelligent Transportation System, Panel Wall, Peak Load, Platooning Control, Power Distribution Network, Reconfigurable MIMO Antenna, Sheet Metal Bending, Steel, Superheater Pipe, Swarm Robotics

Prices: Print: **US\$ 115.00 / EUR 115.00** Print: 978-3-0364-0808-8

eBook Single-User: **US\$ 115.00 / EUR 115.00** eBook: 978-3-0364-1808-7

eBook Multi-User: **US\$ 201.00 / EUR 201.00** 160 pages, 2025

<https://www.scientific.net/978-3-0364-0808-8/book>



2nd International Conference on Applied Engineering, Science, Technology and Innovation

Volume in the series: 18

Selected peer-reviewed full text papers from the 2nd International Conference on Applied Engineering, Science, Technology and Innovation (AESTI 2024), October 28, 2024, Meulaboh - Aceh Barat, Indonesia

Edited by: Dr. Rizki Agam Syahputra and Joli Supardi

The edition contains articles based on research results presented at the 2nd International Conference on Applied Engineering, Science, Technology and Innovation (AESTI 2024, October 2024, Meulaboh-Aceh Barat, Indonesia). The articles that are collected will be helpful to many specialists in the construction industry.

Topics: Building Materials, Civil Engineering, Construction, Materials Science, Mechanics

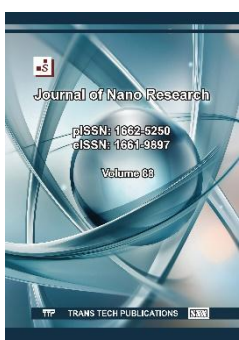
Keywords: Cement, Disaster Resilience Assessment, Flood Mapping, Foundation, Geopolymer, Green Concrete, Irrigation Network, Land Use, Mechanical Properties, Mortar, Porous Asphalt, Rural Planning, Structural Engineering, Urban Drainage System, Urban Planning

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0810-1

eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1810-0

eBook Multi-User: **US\$ 236.00 / EUR 236.00** 168 pages, 2025

<https://www.scientific.net/978-3-0364-0810-1/book>



Journal of Nano Research Vol. 88

Volume in the series: 88

Edited by: Prof. Efstathios I. Meletis and Prof. Stefano Mariani

The 88th volume of the journal contains peer-reviewed articles dedicated to recent research results in the synthesis, properties, and application techniques of nanoscaled materials for various engineering and technological purposes. The research topics highlighted are photocatalysis, thin films for microelectronics and photovoltaic systems, etc. The collected articles will be helpful to many specialists from various industrial branches whose activity is related to nanomaterials and nanotechnologies.

Topics: Electronics, Materials Science, Nanoscience

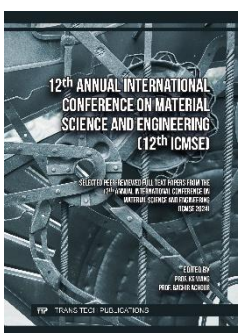
Keywords: Carbon Nanotube, Dye-Sensitised Solar Cells, Electric Properties, Electrochemical Properties, Layer Double Hydroxides, Magnetic Properties, Nanocomposite, Nanomultilayer Films, Optical Properties, Phase Change Microcapsule, Photocatalysis, Photocatalytic Degradation, Photocathode, Solar Hydrogen Production, Thin Films

Prices: Print: **US\$ 110.00 / EUR 110.00** Print: 978-3-0364-0822-4

eBook Single-User: **US\$ 110.00 / EUR 110.00** eBook: 978-3-0364-1822-3

eBook Multi-User: **US\$ 193.00 / EUR 193.00** 122 pages, 2025

<https://www.scientific.net/978-3-0364-0822-4/book>



12th Annual International Conference on Material Science and Engineering (12th ICMSE)

Volume in the series: 166

Selected peer-reviewed full text papers from the 12th Annual International Conference on Material Science and Engineering (ICMSE 2024), 26-28 July 2024, Hangzhou, Zhejiang, China

Edited by: Prof. Ke Wang and Prof. Bachir Achour

This edition contains papers dedicated on research results that were presented at the 12th Annual International Conference on Material Science and Engineering (ICMSE 2024, 26-28 July 2024, Hangzhou, Zhejiang, China) that emphasis a broad spectrum of issues and solutions related to mechanical engineering - design machines, tools and equipment; reliability and durability of engineering structures, big data and applications of artificial intelligence, engineering management and ecological safety. The publication will be helpful for many specialists in machinery, information technologies, production organisation and environmental engineering.

Topics: Construction, Environmental Engineering, Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Adsorption, Artificial Intelligence, Big Data, Design, Durability, Environmental Engineering, Equipment, Heavy Metals, Industrial Engineering, Machinery, Mechanical Properties, Reliability, Structural Mechanics

Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0815-6

eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1815-5

eBook Multi-User: **US\$ 236.00 / EUR 236.00** 160 pages, 2025

<https://www.scientific.net/978-3-0364-0815-6/book>



Journal of Biomimetics, Biomaterials and Biomedical Engineering Vol. 68

Volume in the series: 68

Edited by: Dr. David Duday, Dr. Sooraj Hussain Nandyala and Prof. Agustinus Agung Nugroho

The 68th journal's volume includes articles dedicated to biomedical issues such as drug delivery, the synthesis of effective biodegradable materials with antibacterial activity and materials for bone repair, the investigation of the association between hallux valgus severity and plantar fasciitis, and the design and analysis of the mechanical properties of auxetic 2D scaffolds prepared using 3D bioprinting.

Topics: Bioscience and Medicine, Materials Science, Mechanics, Nanoscience

Keywords: 3D Bioprinting, Antibacterial Properties, Bending Test, Bone Repair, Drug Delivery, Dynamic Simulation, Hallux Valgus, Hydroxyapatite, Magnetite, Nanocomposite, Nanoparticles, Pedicle Screw, Spinal Osteoporosis, Sport Biomechanics, Zinc Oxide

Prices: Print: **US\$ 135.00 / EUR 135.00**
 eBook Single-User: **US\$ 135.00 / EUR 135.00**
 eBook Multi-User: **US\$ 236.00 / EUR 236.00**

Print: 978-3-0364-0821-7
 eBook: 978-3-0364-1821-6
 160 pages, 2025

<https://www.scientific.net/978-3-0364-0821-7/book>



3rd International Conference on Recent Advances in Materials and Manufacturing Technologies

Volume in the series: 22

Selected peer-reviewed full text papers from the 3rd International Conference on Recent Advances in Materials and Manufacturing Technologies (IMMT 2023), November 20, 2023, Dubai, United Arab Emirates

Edited by: Dr. Gulshan Kumar and Dr. Harpreet Singh Bedi

This article collection brings together a diverse yet interconnected range of topics that reflect the latest developments across key domains in contemporary industry. Articles were presented at the 3rd International Conference on Recent Advances in Materials and Manufacturing Technologies (IMMT 2023, 20-23 November 2023, Dubai, UAE). The edition will be both a scholarly reference and a practical guide for researchers, practitioners, and students seeking a deeper understanding of emerging technological trends and engineering methodologies.

Topics: Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Additive Manufacturing, Alloy, Iron Ore Sintering, Micro Pelletizing, Monitoring, Passive Vibration Control, Polymer, Solid Fuel Reduction, Solid Waste Recycling

Prices: Print: **US\$ 75.00 / EUR 75.00**
 eBook Single-User: **US\$ 75.00 / EUR 75.00**
 eBook Multi-User: **US\$ 131.00 / EUR 131.00**

Print: 978-3-0364-0794-4
 eBook: 978-3-0364-1794-3
 56 pages, 2025

<https://www.scientific.net/978-3-0364-0794-4/book>



10th International Scientific Conference on Advances in Mechanical Engineering

Volume in the series: 165

Selected peer-reviewed full text papers from the 10th International Scientific Conference on Advances in Mechanical Engineering (ISCAME), 7-9 November 2024, Debrecen, Hungary

Edited by: Mihály Csüllög and Dr. Tamás Mankovits

This edition contains some articles based on research results that were presented at the 10th International Scientific Conference on Advances in Mechanical Engineering (ISCAME 2024, 7-9 November 2024, Debrecen, Hungary) that highlight a broad spectrum of issues and solutions related to mechanical engineering, industrial measurements, mechatronics and robotics, applications of artificial intelligence and computational mechanics, engineering management and ecological safety. The publication will be helpful for many specialists in machinery and production organisation.

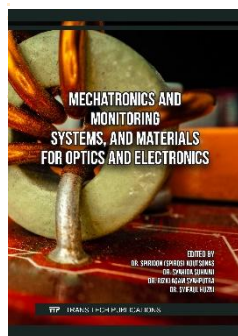
Topics: Environmental Engineering, Industrial Engineering, Information Technologies, Manufacturing, Mechanical Engineering, Mechanics

Keywords: Applied Mechanics, Artificial Intelligence, Automation, Computational Mechanics, Design, Engineering Management, Environmental Management, Machine Learning, Measurement, Mechanical Engineering, Mechatronics, Pollutants, Robotics, Testing, Waste Management

Print: **US\$ 320.00 / EUR 320.00**
 eBook Single-User: **US\$ 198.00 / EUR 198.00**
 eBook Multi-User: **US\$ 347.00 / EUR 347.00**

Print: 978-3-0364-0814-9
 eBook: 978-3-0364-1814-8
 358 pages, 2025

<https://www.scientific.net/978-3-0364-0814-9/book>



Mechatronics and Monitoring Systems, and Materials for Optics and Electronics

Volume in the series: 927

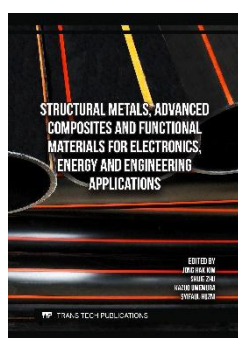
Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Spiridon (Spiros) Koutsonas, Dr. Syahida Suhaimi, Dr. Rizki Agam Syahputra and Dr. Syifaul Huzni

This special edition presents research results and developments across three pivotal domains: optics and electronics materials, innovative engineering solutions in machinery design, and mechatronics with monitoring systems and is intended for researchers, engineers, practitioners, and students who are engaged in cutting-edge research or seeking to understand current trends and innovations in these dynamic fields.

Topics: Electronics, General Engineering, Materials Science, Mechanical Engineering, Mechanics
Keywords: Dye-Sensitized Solar Cell, Leakage Characterisation, Mechatronics, Metal Sealing Ring, Monitoring System, Optics, Passive Solar Desalination, Phosphate Glass, Plastic Optical Fiber, Wind Power Plant Control

Prices: Print: **US\$ 95.00 / EUR 95.00** Print: 978-3-0364-0809-5
 eBook Single-User: **US\$ 95.00 / EUR 95.00** eBook: 978-3-0364-1809-4
 eBook Multi-User: **US\$ 166.00 / EUR 166.00** 102 pages, 2025
<https://www.scientific.net/978-3-0364-0809-5/book>



Structural Metals, Advanced Composites and Functional Materials for Electronics, Energy and Engineering Applications

Volume in the series: 1150

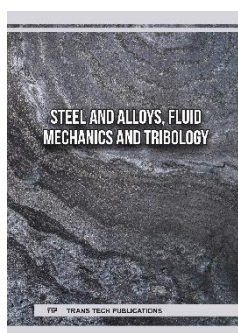
Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Jong Hak Kim, Shijie Zhu, Prof. Kazuo Umemura and Dr. Syifaul Huzni

This special edition is prepared to provide a structured overview of cutting-edge developments and research in three key categories of materials: composites and polymers, structural metals, and functional materials with applications in electronics and energy. Publication serves as a valuable resource for researchers and engineers, aiming to understand the latest trends in the development and application of advanced materials.

Topics: Manufacturing, Materials Science, Nanoscience
Keywords: Alloy, Biocomposite, Biopolymer, Ceramics, Composite, Electrolyte, Heat Treatment, Piezoelectric Composite, Polymer, Steel, Welding

Prices: Print: **US\$ 120.00 / EUR 120.00** Print: 978-3-0364-0801-9
 eBook Single-User: **US\$ 120.00 / EUR 120.00** eBook: 978-3-0364-1801-8
 eBook Multi-User: **US\$ 210.00 / EUR 210.00** 136 pages, 2025
<https://www.scientific.net/978-3-0364-0801-9/book>



Steel and Alloys, Fluid Mechanics and Tribology

Volume in the series: 443

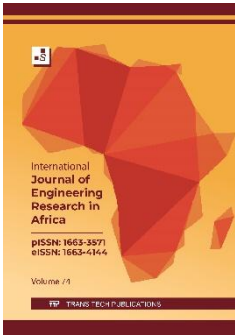
Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura, Prof. Jae Jin Shim, Prof. Stefano Mariani and Mihály Csüllög

This special edition focuses on materials engineering topics central to mechanical engineering and is dedicated to analysing the behaviour of structural materials, their processing methods, tribological properties, and the use of computational procedures for designing fluid systems. The publication aims to equip readers with a well-rounded understanding of the nature of some key engineering solutions and principles driving innovation across multiple sectors of modern industry.

Topics: Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience
Keywords: Alloy, Composite, Fluid Mechanics, Friction Stir Welding, Laser Surface Hardening, Mechanical Properties, Mechanics of Materials, Spark Plasma Sintering, Spot Welding, Steel, Tribology, Turning

Prices: Print: **US\$ 165.00 / EUR 165.00** Print: 978-3-0364-0806-4
 eBook Single-User: **US\$ 165.00 / EUR 165.00** eBook: 978-3-0364-1806-3
 eBook Multi-User: **US\$ 289.00 / EUR 289.00** 200 pages, 2025
<https://www.scientific.net/978-3-0364-0806-4/book>



International Journal of Engineering Research in Africa Vol. 74

Volume in the series: 74

Edited by: Prof. Akii Okonigbon Akaehomen Ibadode

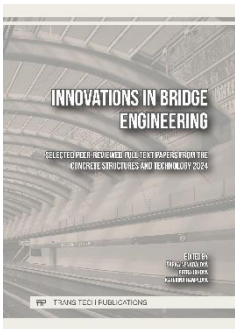
The 74th volume of the journal contains articles that present research results and engineering solutions in materials science, biogas upgrading techniques, green building materials, grey water treatment and solar water pumping, orthogonal simulation test for evaluating fretting wear in low-speed diesel engine connecting rods, and the development of a control system for a waste-to-energy thermal power plant. This edition will be helpful to a wide range of engineers from various industrial branches.

Topics: Building Materials, Construction, General Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Biogas Upgrading, Camouflaged Telecommunication Tower, Cement Mortar, Con-Rod, Diesel Engine, Grey Water Treatment, Landscape Irrigation, Mechanical Properties, Metal Matrix Composite, Model Predictive Control, Solar Water Pump, Steel, Thermal Power Plant, Thermal Swing Adsorption, Waste-To-Energy, Welding

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0812-5
 eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1812-4
 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 172 pages, 2025

<https://www.scientific.net/978-3-0364-0812-5/book>



Innovations in Bridge Engineering

Volume in the series: 164

Selected peer-reviewed full text papers from the Concrete Structures and Technology, 22-24 September 2024, Prague, Czech Republic

Edited by: Dr. Šárka Kalábová, Petra Johová and Kateřina Hamplová

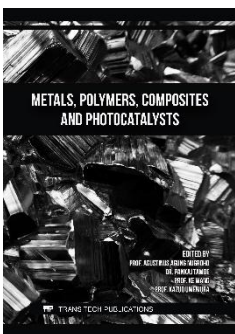
This edition contains articles based on research results presented at the conference Concrete Structures and Technology 2024 (22-24 September 2024, Prague, Czech Republic) and will be useful for construction engineers whose activity is related to the design, erection and exploitation of bridge structures.

Topics: Building Materials, Civil Engineering, Construction, Information Technologies, Materials Science, Mechanics

Keywords: Bridge, Building Information Modelling, Concrete, Design, Digital Twin, Health Monitoring, Mechanical Properties, Reliability Assessment, Repair Works, Structural Analysis

Prices: Print: **US\$ 105.00 / EUR 105.00** Print: 978-3-0364-0797-5
 eBook Single-User: **US\$ 105.00 / EUR 105.00** eBook: 978-3-0364-1797-4
 eBook Multi-User: **US\$ 184.00 / EUR 184.00** 110 pages, 2025

<https://www.scientific.net/978-3-0364-0797-5/book>



Metals, Polymers, Composites and Photocatalysts

Volume in the series: 1013

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Agustinus Agung Nugroho, Dr. Pankaj Tamba, Prof. Ke Wang and Prof. Kazuo Umemura

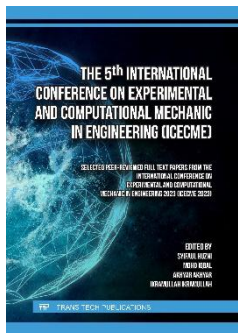
This special edition presents the results of engineering research in the latest materials encompassing polymers and composites, metals, and environmental remediation technologies and is intended for researchers, engineers, and students seeking to deepen their understanding of modern materials science and its role in solving real-world engineering and technological challenges.

Topics: Manufacturing, Materials Science, Nanoscience

Keywords: Alloy, Cast Iron, Composite, Equal Channel Angular Pressing, Green Synthesis, Mechanical Properties, Nanocomposite, Photocatalyst, Photodegradation, Polymer, Reinforcement, Severe Plastic Deformation, Structural Metal, Wastewater Treatment

Prices: Print: **US\$ 140.00 / EUR 140.00** Print: 978-3-0364-0802-6
 eBook Single-User: **US\$ 140.00 / EUR 140.00** eBook: 978-3-0364-1802-5
 eBook Multi-User: **US\$ 245.00 / EUR 245.00** 168 pages, 2025

<https://www.scientific.net/978-3-0364-0802-6/book>



The 5th International Conference on Experimental and Computational Mechanic in Engineering (ICECME)

Volume in the series: 21

Selected peer-reviewed full text papers from the International Conference on Experimental and Computational Mechanic in Engineering 2023 (ICECME 2023), November 09, 2023, Banda Aceh, Indonesia

Edited by: Dr. Syifaul Huzni, Dr. Mohd Iqbal, Akhyar Akhyar and Dr. Ikramullah Ikramullah

The publication contains articles on research and engineering design results, which were presented at the 5th International Conference on Experimental and Computational Mechanics in Engineering (ICECME 2023, 9-10 November 2023, Banda Aceh, Indonesia). This edition brings together two directions of modern engineering practice: computational modelling and production management and offers a comprehensive foundation for researchers and professionals seeking to integrate analytical rigour with solving practical engineering problems.

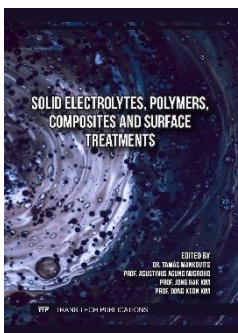
Topics: Bioscience and Medicine, Industrial Engineering, Manufacturing, Mechanical Engineering, Mechanics

Keywords: Agent – Based Modelling, Coffee Bean, Design, Ergonomic Function Deployment, Finite Element Analysis, Manufacture, Manufacturing System, Mechanical Engineering, Motion Economy, Motorcycle Helmet, Pedicle Screw, Product Storage Time

Prices: Print: **US\$ 80.00 / EUR 80.00**
 eBook Single-User: **US\$ 80.00 / EUR 80.00**
 eBook Multi-User: **US\$ 140.00 / EUR 140.00**

Print: 978-3-0364-0795-1
 eBook: 978-3-0364-1795-0
 82 pages, 2025

<https://www.scientific.net/978-3-0364-0795-1/book>



Solid Electrolytes, Polymers, Composites and Surface Treatments

Volume in the series: 371

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Tamás Mankovits, Prof. Agustinus Agung Nugroho, Prof. Jong Hak Kim and Prof. Dong Keon Kim

This special edition presents research results spanning practically significant materials science domains: polymer engineering, surface treatment and protection, microwave-absorbing materials, and solid electrolytes. The publication is created to serve as a resource for researchers, engineers, and graduate students pursuing high-performance materials and their practical deployment into the latest technologies.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Alloy, Coating, Composite, Corrosion Inhibitor, Mechanical Properties, Microwave Absorption, Nanocomposite, Plasma Spray, Polymer, Solid Electrolyte, Steel, Surface Defect, Surface Treatment, Thermal Properties

Prices: Print: **US\$ 145.00 / EUR 145.00**
 eBook Single-User: **US\$ 145.00 / EUR 145.00**
 eBook Multi-User: **US\$ 254.00 / EUR 254.00**

Print: 978-3-0364-0813-2
 eBook: 978-3-0364-1813-1
 168 pages, 2025

<https://www.scientific.net/978-3-0364-0813-2/book>



Advanced Engineering Forum Vol. 55

Volume in the series: 55

Edited by: Prof. Dumitru Nedelcu, Prof. Mikkel K. Kragh, Prof. Kazuo Umemura and Ayo A Adeniyi

This 55th journal volume includes articles introducing the latest engineering research results and solutions in structural materials, multijunction solar cells, additive manufacturing, power machinery, and mechanical engineering, including the distributed generation system, food-layered manufacturing, and risk management with human factors engineering. This volume will be helpful to many engineers in machinery, power engineering, etc.

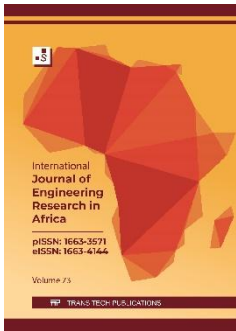
Topics: General Engineering, Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Carbon Dioxide Storage, Distributed Generation, Food Layered Manufacturing, Gas Turbine, Human Factor, Incident Prevention, Machine Design, Moisture, Multijunction Solar Cells, Nanofluid, Power Engineering, Reliability Assessment, Risk Management, Steel, Surface Modification, Thermal Analysis, Wood

Prices: Print: **US\$ 115.00 / EUR 115.00**
 eBook Single-User: **US\$ 115.00 / EUR 115.00**
 eBook Multi-User: **US\$ 201.00 / EUR 201.00**

Print: 978-3-0364-0807-1
 eBook: 978-3-0364-1807-0
 136 pages, 2025

<https://www.scientific.net/978-3-0364-0807-1/book>



International Journal of Engineering Research in Africa Vol. 73

Volume in the series: 73

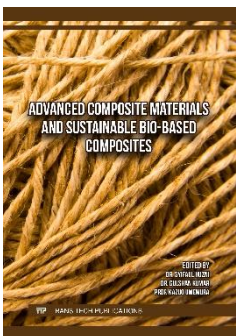
Edited by: Prof. Akii Okonigbon Akaehomen Ibadode

The 73rd volume of the journal presents some research results and engineering decisions regarding the properties of alloys and polymer composites, the theoretical study of heavy metals adsorption on amine functionalised porous carbon, research and design in mechanical engineering, some examples of green construction practice, and mechatronics. The presented research results and engineering solutions will be helpful to a wide range of specialists in the mentioned fields of engineering science.

Topics: Building Materials, Civil Engineering, Construction, General Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Absorption, Alloy, Centrifugal Pump, Corrosion, Fuzzy Sliding Mode Control, Heavy Metals, Hygrothermal Comfort, Induction Motor, Lateritic Soil, Maximum Power Point Tracking, Mechanical Properties, Microstructure, Plate Theory, Polymer Composite, Steel Slag, Stone Walls

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0811-8
 eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1811-7
 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 172 pages, 2025
<https://www.scientific.net/978-3-0364-0811-8/book>



Advanced Composite Materials and Sustainable Bio-Based Composites

Volume in the series: 1149

Special topic volume with invited peer-reviewed papers only

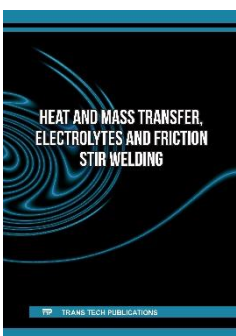
Edited by: Dr. Syifaul Huzni, Dr. Gulshan Kumar and Prof. Kazuo Umemura

The special edition presents readers with the latest research results in the field of modern composite materials and aims to provide researchers, engineers, and anyone interested in materials science with valuable insights into the versatility and potential of these advanced materials.

Topics: Materials Science, Nanoscience

Keywords: Biocomposite, Fiber Orientation, Low-Velocity Impact Analysis, Mechanical Properties, Metal Matrix Composite, Microstructure, Multi-Walled Carbon Nanotubes, Nanocomposite, Natural Fiber, Polymer Composite, Vibrational Properties

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0800-2
 eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1800-1
 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 126 pages, 2025
<https://www.scientific.net/978-3-0364-0800-2/book>



Heat and Mass Transfer, Electrolytes and Friction Stir Welding

Volume in the series: 442

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura, Prof. Jong Hak Kim and Dr. Syifaul Huzni

This special edition presents the research results focused on materials processing, battery engineering, and thermal engineering — three domains that are increasingly critical to modern industry and sustainable technological development. By presenting results of current research across these fields, the special edition aims to inform engineers, researchers, and students working toward innovative and efficient engineering solutions.

Topics: Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Aluminium Alloy, Friction Stir Welding, Heat Transfer, Magnetohydrodynamic Flow, Mass Transfer, Mechanical Properties, Nanofluid, Numerical Model, Solid Polymer Electrolyte, Thermophysical Properties, Turbulent Flow

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-0805-7
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<https://www.scientific.net/978-3-0364-0805-7/book>



Research, Technologies and Technological Equipment for Structural Materials and Surface Treatment

Volume in the series: 1012

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Gulshan Kumar, Prof. Yong Suk Yang, Prof. Roland Tolulope Loto and Ayo A Adeniyi

This special edition is a collection of results from a focused exploration of key processes and innovations in modern metalworking and materials engineering and offers a cohesive overview of engineering solutions and urgent technological challenges in the field of modern structural materials treatment that will be useful for a wide range of engineers in mechanical engineering.

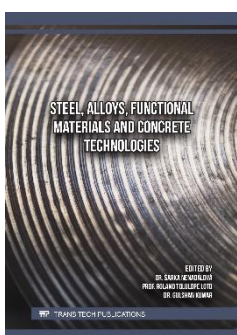
Topics: Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Alloy, Carbon Nanotubes, Carburisation, Corrosion, Drilling, Equipment, Feed Driving System, Forming, Laser Additive Manufacturing, Steel, Turning, Welding

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Print: 978-3-0364-0796-8
 eBook: 978-3-0364-1796-7
 142 pages, 2025

<https://www.scientific.net/978-3-0364-0796-8/book>



Steel, Alloys, Functional Materials and Concrete Technologies

Volume in the series: 1148

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Šárka Kalábová, Prof. Roland Tolulope Loto and Dr. Gulshan Kumar

This special edition offers the results of properties exploration of some functional and structural materials, and various types of concrete and aims to provide engineers and researchers with valuable insights into the fundamental properties, ways of applications, and technological innovations driving the field of materials science and engineering.

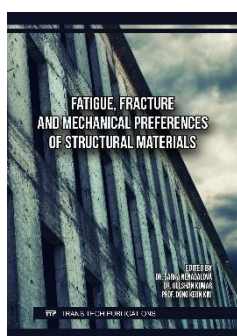
Topics: Building Materials, Civil Engineering, Construction, Materials Science, Mechanics, Nanoscience

Keywords: Activated Carbon, Alloy, Concrete, Concrete Structure, Decarbonisation, Green Concrete, High Entropy Alloy, Laser Cladding, Mechanical Properties, Nanocomposite, Silver Nanoparticles, Steel

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 eBook: 978-3-0364-1799-8
 134 pages, 2025

<https://www.scientific.net/978-3-0364-0799-9/book>



Fatigue, Fracture and Mechanical Preferences of Structural Materials

Volume in the series: 1011

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Šárka Kalábová, Dr. Gulshan Kumar and Prof. Dong Keon Kim

This special edition delves into the critical realm of structural integrity, presenting two interconnected facets: structural materials' behaviour under load and mechanical performance of concrete structures. The publication aims to provide engineers and researchers with valuable insights into ensuring the safety and longevity of structural materials and structures used in modern construction.

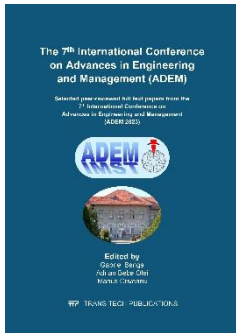
Topics: Building Materials, Civil Engineering, Construction, Materials Science, Mechanics

Keywords: Beam, Cast Iron, Concrete, Fatigue, Fracture, Mechanical Properties, Modelling, Multi-Story Building, Reinforcement, Slab, Steel, Steel Rebars, Structure Mechanics

Prices: Print: **US\$ 120.00 / EUR 120.00**
 eBook Single-User: **US\$ 120.00 / EUR 120.00**
 eBook Multi-User: **US\$ 210.00 / EUR 210.00**

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 eBook: 978-3-0364-1798-1
 126 pages, 2025

<https://www.scientific.net/978-3-0364-0798-2/book>



The 7th International Conference on Advances in Engineering and Management (ADEM)

Volume in the series: 163

Selected peer-reviewed full text papers from the 7th Conference Advances in Engineering and Management (ADEM 2023), 25-27 October 2023, Drobeta-Turnu Severin, Romania

Edited by: Gabriel Benga, Adrian Bebe Olei and Marius Criveanu

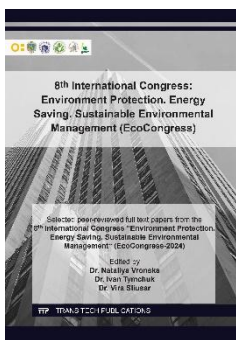
We are pleased to introduce an edition based on research results presented at the 7th Conference Advances in Engineering and Management held on 25-27 October 2023, Drobeta-Turnu Severin, Romania) that reflect current trends, challenges, and innovations in the fields of engineering and sustainable technological development.

Topics: Construction, Environmental Engineering, General Engineering, Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Transportation

Keywords: Additive Manufacturing, Alloy, Clean Energy, Energy Efficiency, Engineering Education, Engineering Management, Environmental Engineering, Industrial Robotics, Materials Engineering, Mechanical Engineering, Navigation, Transportation, Welding

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 eBook Multi-User: **US\$ 298.00 / EUR 298.00** 174 pages, 2025

<https://www.scientific.net/978-3-0364-0505-6/book>



8th International Congress: Environment Protection. Energy Saving. Sustainable Environmental Management (EcoCongress)

Volume in the series: 162

Selected peer-reviewed full text papers from the 8th International Congress "Environment Protection. Energy Saving. Sustainable Environmental Management" (EcoCongress-2024), October 16-18, 2024, Lviv, Ukraine

Edited by: Dr. Nataliya Vronska, Dr. Ivan Tymchuk and Dr. Vira Sliusar

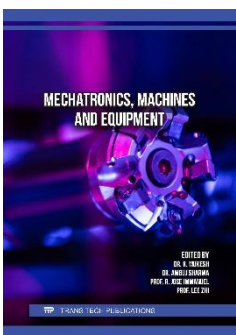
Book «Sustainable Development: Environmental Protection. Energy Saving. Sustainable Environmental Management» published by results of the 8th International Congress «Sustainable Development: Environmental Protection. Energy Saving. Sustainable Environmental Management». The book is devoted to the coverage of the results of scientific reports announced at the 8th International Congress «Sustainable Development: Environmental Protection. Energy Saving. Sustainable Environmental Management», on the topic: environmental aspects, biodiversity preservation, monitoring, audit, system analysis and risk assessment; renewable and nontraditional energy sources; innovation nature protection technologies. Technologies for efficiency increase from using materials, water and energy. Eco-innovation in architecture; economic-management support for construction, implementation and commercializing of eco-innovations in the system of sustainable development; For scientists, teachers, graduate students, doctoral students, etc.

Topics: Environmental Engineering, Materials Science

Keywords: Aerosol Nanocatalysis, Biochar, Biofuel, Biomass Processing, Biowaste Utilisation, Environmental Engineering, Environmental Risk Assessment, Food Security, Military Actions, Plant Growth Stimulants, Sorbent, Sustainability, Waste Management, Waste Recycling, Water Quality

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Mechatronics, Machines and Equipment

Volume in the series: 926

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. R. Mukesh, Dr. Ambuj Sharma, Dr. R. Jose Immanuel and Prof. Lee Zhi

Innovations are continually shaping the evolution of engineering disciplines, step-by-step fostering a new era of efficiency, automation, and intelligent design. This special edition highlights significant topics in engineering, offering research results on machine design, mechatronics, and digital signal and image processing. The chapters included in this publication present new concepts, emerging trends, and practical applications essential for researchers, practitioners, and students in these fields.

Topics: Computers, Electronics, General Engineering, Information Technologies, Materials Science, Mechanical Engineering, Mechanics

Keywords: Automated Cleaning System, Drying Kinetics, Heat Transfer, Holographic Grating, Image Processing, Mechanical Engineering, Mechanical Fatigue, Mechatronics, Overcurrent Protection System, Satellite Communication, Signal Processing, Sound Absorber, Thermal Contact, Vibration

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 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 174 pages, 2025

<https://www.scientific.net/978-3-0364-0776-0/book>



14th International Civil Engineering Conference

Volume in the series: 17

Selected peer-reviewed full text papers from the 14th International Civil Engineering Conference (ICEC 2024), November 15-16, 2024, Karachi, Pakistan

Edited by: Dr. Sarosh Hashmat Lodi, Engr. Sohail Bashir, Abdul Jabbar Sangi and Dr. Shamsoun Fareed

This edition comprises papers presented at the 14th International Civil Engineering Conference (ICEC 2024) held on November 15-16, 2024, in Karachi, Pakistan. The conference theme, "Advancing Civil Engineering: Innovation for Achieving UN Sustainable Goals", underscores the pivotal role that civil engineering plays in realizing the United Nations Sustainable Development Goals (SDGs). It highlights the intersection of technological advancement, sustainable practice, and global development. The conference aimed to showcase cutting-edge research, share best practices and foster collaboration among professionals, researchers, and policymakers, particularly in the civil engineering field.

Topics: Building Materials, Civil Engineering, Construction, Industrial Engineering, Materials Science, Mechanics

Keywords: Building Materials, Construction Project Management, Failure Analysis, Green Concrete, Mechanical Properties, Mechanics of Structures, Risk Management, Seismic Resistance, Soil Behaviour, Urban Planning

Prices: Print: **US\$ 265.00 / EUR 265.00**
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Print: 978-3-0364-0764-7
 eBook: 978-3-0364-1764-6
 278 pages, 2025

<https://www.scientific.net/978-3-0364-0764-7/book>



Journal of Metastable and Nanocrystalline Materials Vol. 41

Volume in the series: 41

Edited by: Dr. Konstantinos Georgarakis, Prof. Nadezhda L. Voropaeva and Assoc. Prof. Dr. Fauziah Sulaiman

The 41st volume of the Journal of Metastable and Nanocrystalline Materials presents articles that analyse distinct melting models of aluminium, silver, gold and lead nanoparticles and the photocatalytic (dye degradation) activity of green synthesised paramagnetic nanoparticles for the water purification process, synthesis method of nanocomposite coating for corrosion protection, preparation of silver-graphene oxide nanocomposite for antibacterial applications and manganese-doped copper sulphide nanoparticles for thin film application. The presented publication will be helpful to many specialists in applied materials science and nanotechnologies.

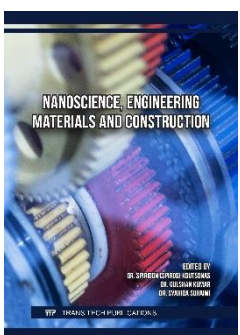
Topics: Materials Science, Nanoscience

Keywords: Anti-Corrosive Coating, Green Synthesis, Nanomaterials, Nanoparticles, Photocatalytic Activity, Silver-Graphene Oxide Nanocomposite

Prices: Print: **US\$ 85.00/ EUR 85.00**
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Print: 978-3-0364-0783-8
 eBook: 978-3-0364-1783-7
 66 pages, 2025

<https://www.scientific.net/978-3-0364-0783-8/book>



Nanoscience, Engineering Materials and Construction

Volume in the series: 925

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Spiridon (Spiros) Koutsonas, Dr. Gulshan Kumar and Dr. Syahida Suhaimi

The recent advancements and innovations in technology and engineering have significantly transformed various scientific currents and industrial domains. This special edition presents a comprehensive exploration of key topics in modern materials science and engineering, covering functional nanostructures, nanomechanics, alloys, building materials, construction mechanics, and engineering design. The collected articles highlight emerging trends and offer practical applications of the received research results, making this edition an invaluable resource for researchers and engineers alike.

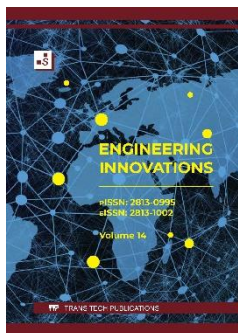
Topics: Building Materials, Electronics, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Adhesively Bonded Joint, Alloy, Anodic Alumina Oxide, Auxiliary Leaf Springs, Beam, Cement Paste, Cement-Based Composite, Construction Mechanics, Corrosion, Delamination, Engineering Design, High Energy Absorption, Mechanical Properties, Nanomaterials, Nanomechanics, Nanoparticles, Nanotubes, Triply Periodic Minimal Surface

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Print: 978-3-0364-0779-1
 eBook: 978-3-0364-1779-0
 186 pages, 2025

<https://www.scientific.net/978-3-0364-0779-1/book>



Engineering Innovations Vol. 14

Volume in the series: 14

Edited by: Prof. Afrooz Barnoush, Prof. Elena Gordo Odériz, José Luis Ordóñez-Ávila, Prof. Ian McAndrew, Dr. Rizki Agam Syahputra, Dr. Ambuj Sharma and Prof. Lee Zhi

The 14th volume of the journal Engineering Innovations includes articles that accent the reader's attention on the latest advances and results of research in materials science, construction and architecture, renewable energy, development and applications of IoT systems, mechatronics and data and image processing. The presented articles will be helpful to many engineers and researchers in engineering sciences.

Topics: Building Materials, Civil Engineering, Environmental Engineering, General Engineering, Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Architecture, Composite, Concrete, Data Processing, Image Processing, Internet of Things, Kevlar Reinforcement, Machine Learning, Mechatronics, Photoluminescent Properties, Renewable Energy, Sensor Network

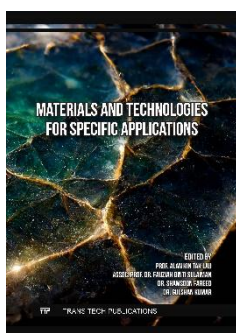
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 eBook Multi-User: **US\$ 0.00 / EUR 0.00**

Print: 978-3-0364-0777-7

eBook: 978-3-0364-1777-6

154 pages, 2025

<https://www.scientific.net/978-3-0364-0777-7/book>



Materials and Technologies for Specific Applications

Volume in the series: 1183

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Alan Kin Tak Lau, Assoc. Prof. Dr. Fauziah Sulaiman, Dr. Shamsoun Fareed and Dr. Gulshan Kumar

Advances in technology and innovation have significantly influenced the progression of engineering disciplines, ushering in a new era of industrial development. This special edition offers an in-depth analysis of functional materials' properties and materials for specific applications such as orthopaedics and construction, water treatment technology, and mechatronic technologies. The articles within this edition provide insights into core principles, emerging trends, and practical applications of materials and technologies, serving as a valuable resource for researchers, practitioners, and students alike.

Topics: Bioscience and Medicine, Building Materials, Manufacturing, Materials Science, Mechanical Engineering, Nanoscience

Keywords: Concrete, Electrocoagulation, Electrode Materials, Laser Surface Melting, Magnesium Alloy, Mechatronics, Nanomaterials, Nanoparticles, Optical Properties, Perovskite, Thermoelectric Materials, Water Treatment

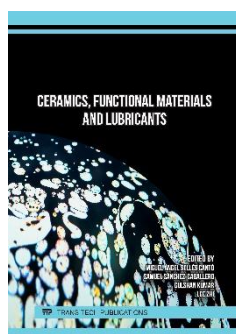
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Print: 978-3-0364-0778-4

eBook: 978-3-0364-1778-3

122 pages, 2025

<https://www.scientific.net/978-3-0364-0778-4/book>



Ceramics, Functional Materials and Lubricants

Volume in the series: 1147

Special topic volume with invited peer-reviewed papers only

Edited by: Miguel Ángel Sellés Cantó, Samuel Sánchez-Caballero, Dr. Gulshan Kumar and Prof. Lee Zhi

This special edition explores three significant domains in materials science: ceramics for electrical and electronic systems, functional materials, and lubricants for mechanical engineering and materials machining and forming. This edition aims to provide a comprehensive overview of these critical areas, offering valuable insights for researchers, industry professionals, and students.

Topics: Building Materials, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Ceramics, Coating, Dielectric Properties, Forming, Functional Materials, Green Concrete, Lubricant, Machining, Mechanical Properties, Self-Lubricating Materials, Silver Nanoparticle, Solid Lubricant, Steel, Tribology

Prices: Print: **US\$ 155.00 / EUR 155.00**
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 eBook Multi-User: **US\$ 271.00 / EUR 271.00**

Print: 978-3-0364-0770-8

eBook: 978-3-0364-1770-8

154 pages, 2025

<https://www.scientific.net/978-3-0364-0770-8/book>



5th International Conference on Machining, Materials and Mechanical Technologies (IC3MT)

Volume in the series: 161

Selected peer-reviewed full text papers from the 5th International Conference on Machining, Materials and Mechanical Technologies (IC3MT 2024), September 11-15, 2024, Phan Thiet City, Vietnam

Edited by: Huy Bich Nguyen, Keiji Yamada, Ju Yi Lee and Assoc. Prof. Dr. Thanh Long Le

This publication contains papers presented at the 5th International Conference on Machining, Materials and Mechanical Technologies (IC3MT 2024) held in Phan Thiet City, Viet Nam, on September 11-15, 2024. Nowadays, machining, materials and mechanical technology (3M) are greatly impacted by Industrial Revolution 4.0, with the effect translating into various fields of both science and engineering. This edition presents the latest research and findings in these dynamic fields and will contribute to their advancement.

Topics: General Engineering, Materials Science, Mechanical Engineering, Mechanics

Keywords: Artificial Neural Network, Computational Research, Cutting Fluid, Design, Finite Element Analysis, Incremental Sheet Forming, Mechanical Engineering, Mechatronics, Microfluidic Chip, Modelling, Servo-Controlled Hydraulic System

Prices: Print: **US\$ 110.00 / EUR 110.00**
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 eBook Multi-User: **US\$ 193.00 / EUR 193.00**

Print: 978-3-0364-0775-3
 eBook: 978-3-0364-1775-2
 120 pages, 2025

<https://www.scientific.net/978-3-0364-0775-3/book>



Journal of Nano Research Vol. 87

Volume in the series: 87

Edited by: Prof. Efstathios I. Meletis, Miguel Ángel Sellés Cantó and Samuel Sánchez-Caballero

The 87th volume of the journal includes peer-reviewed articles dedicated to recent research results in the synthesis, properties and application techniques of nanoscaled materials for various engineering and technological purposes. The photocatalytic application, micro- and optoelectronics, photovoltaic and plasmonic devices, etc., are the research topics highlighted here. The collected articles will be helpful to many specialists from various industrial branches whose activity is related to nanomaterials and nanotechnologies.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Antimicrobial Activity, Electronic Properties, Graphene Oxide, Laser Ablation, MXene, Nanocomposites, Nanomaterials, Nanoparticles, Optical Properties, Photocatalytic Activity, Phytochemical Synthesis, Plasmonic Properties, Polymer, Polymer Composite

Prices: Print: **US\$ 120.00 / EUR 120.00**
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 eBook Multi-User: **US\$ 210.00 / EUR 210.00**

Print: 978-3-0364-0774-6
 eBook: 978-3-0364-1774-5
 118 pages, 2025

<https://www.scientific.net/978-3-0364-0774-6/book>



Additive Manufacturing, Corrosion Protection and Waste Treatment

Volume in the series: 1010

Special topic volume with invited peer-reviewed papers only

Edited by: Huy Bich Nguyen, Miguel Ángel Sellés Cantó, Samuel Sánchez-Caballero and Dr. Ikramullah Ikramullah

The advancement of manufacturing and achievements in materials engineering has significantly shaped modern industries, enabling innovation, efficiency, and sustainability. This special edition is devoted to essential topics in the development and modification of advanced manufacturing processes and materials that drive industrial progress.

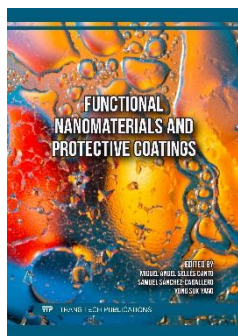
Topics: Building Materials, Manufacturing, Materials Science, Mechanics

Keywords: Additive Manufacturing, Alloy, Corrosion, Cutting, Drilling, Electrochemical Machining, Post Heat Treatment, Steel, Superalloy, Thermoplastic, Waste Treatment

Prices: Print: **US\$ 120.00 / EUR 120.00**
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 eBook Multi-User: **US\$ 210.00 / EUR 210.00**

Print: 978-3-0364-0773-9
 eBook: 978-3-0364-1773-8
 124 pages, 2025

<https://www.scientific.net/978-3-0364-0773-9/book>



Functional Nanomaterials and Protective Coatings

Volume in the series: 370

Special topic volume with invited peer-reviewed papers only

Edited by: Miguel Ángel Sellés Cantó, Samuel Sánchez-Caballero and Prof. Yong Suk Yang

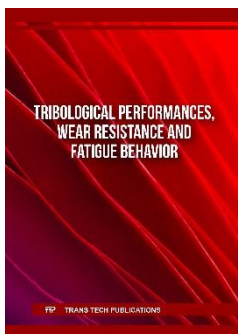
This special edition is intended for researchers and engineers seeking a deeper investigation of functional nanomaterials and protective coating properties. We hope that this publication will inspire further innovation and development in these fields of materials science.

Topics: Bioscience and Medicine, Materials Science, Mechanics, Nanoscience

Keywords: Aluminum, Coating, Corrosion Protection, Forming, Functional Materials, Green Synthesis, Metal Nitrides, Nanotube, Silver Nanoparticles, Steel, Tribology, Urface Wettability

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 eBook Single-User: **US\$ 110.00 / EUR 110.00** eBook: 978-3-0364-1771-4
 eBook Multi-User: **US\$ 193.00 / EUR 193.00** 110 pages, 2025

<https://www.scientific.net/978-3-0364-0771-5/book>



Tribological Performances, Wear Resistance and Fatigue Behavior

Volume in the series: 441

Special topic volume with invited peer-reviewed papers only

Edited by: Miguel Ángel Sellés Cantó, Samuel Sánchez-Caballero, Huy Bich Nguyen and Dr. Ikramullah Ikramullah

The rapid advancements in materials science and engineering have paved the way for groundbreaking innovations in various spheres of engineering including tribology, wear resistance and fatigue behaviour analysis of tools and structural materials, and heat and mass transfer in engineering systems that play a significant role in enhancing the efficiency, durability, and reliability of manufacturing systems. Presenting a blend of theoretical knowledge and practical applications, this special edition serves as a valuable resource for readers and will stimulate further exploration in the mentioned fields of engineering.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Air Flow, Alloy, Cutting Temperature, Face Milling, Fatigue Behavior, Forming, Heat Transfer, Mass Transfer, Mechanical Properties, Steel, Tool Wear, Tribology, Two-Phase Flow, Water Flow, Wear Resistance

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0772-2
 eBook Single-User: **US\$ 135.00 / EUR 135.00** eBook: 978-3-0364-1772-1
 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 136 pages, 2025

<https://www.scientific.net/978-3-0364-0772-2/book>



Defect Detection, Aluminium-Based and Green Materials

Volume in the series: 38

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Mirzo Sharipov and Assoc. Prof. Dr. Fauziah Sulaiman

Advancements in material science and engineering are shaping the sustainable future of various industries. This special edition reflects the current evolution in material science and technologies in machinery and construction and aims to provide valuable insights for researchers, engineers, and professionals seeking to stay at the forefront of materials science development and its practical applications.

Topics: Building Materials, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Aging Temperature, Aluminium Alloy, Bio-Cement Composite, Dross Formation, Metallurgy, Surface Defect Detection

Prices: Print: **US\$ 85.00 / EUR 85.00** Print: 978-3-0364-0759-3
 eBook Single-User: **US\$ 85.00 / EUR 85.00** eBook: 978-3-0364-1759-2
 eBook Multi-User: **US\$ 149.00 / EUR 149.00** 76 pages, 2025

<https://www.scientific.net/978-3-0364-0759-3/book>



International Conference on Research in Engineering and Science Technology (IC-REST)

Volume in the series: 16

Selected peer-reviewed full text papers from the 1st International Conference on Research in Engineering and Science Technology (IC-REST 2023), October 10, 2023, Gowa, Indonesia (construction engineering related papers)

Edited by: Dr. Andi Amijoyo Mochtar, Dr. Zarah Arwieny Hanami and Dr. Muhammad Akbar Caronge

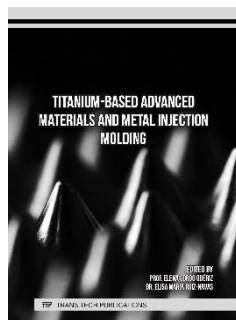
This edition is a compilation of research papers presented at the 1st International Conference on Research in Engineering and Science Technology (IC-REST), held on October 10, 2023, at the Faculty of Engineering Campus, Universitas Hasanuddin, Gowa, Indonesia. The conference is an annual event hosted by the Faculty of Engineering, Universitas Hasanuddin. This meeting focused on "Advanced Technologies to Fulfill SDGs for Sustainable Life". The publication showcases the latest research results and innovative solutions in the area of construction and architecture, highlighting their potential to address global challenges and contribute to a sustainable future. This edition is a valuable resource for researchers, academics, and industry professionals interested in exploring the intersection of engineering practice, science, and sustainable development.

Topics: Building Materials, Civil Engineering, Construction, Industrial Engineering, Materials Science, Mechanics

Keywords: Architecture, Coastal Engineering, Construction Project Management, Hydrology

Prices: Print: **US\$ 95.00 / EUR 95.00** Print: 978-3-0364-0756-2
 eBook Single-User: **US\$ 95.00 / EUR 95.00** eBook: 978-3-0364-1756-1
 eBook Multi-User: **US\$ 166.00 / EUR 166.00** 94 pages, 2025

<https://www.scientific.net/978-3-0364-0756-2/book>



Titanium-Based Advanced Materials and Metal Injection Molding

Volume in the series: 1146

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Elena Gordo Odériz and Dr. Elisa Maria Ruiz-Navas

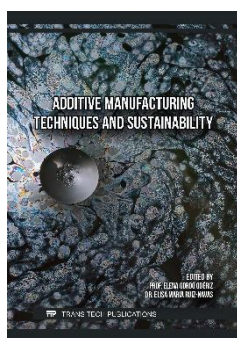
Titanium and titanium-based materials have long been at the forefront of advanced materials research, owing to their exceptional strength-to-weight ratio, corrosion resistance, and high-temperature performance. Their determinative role in aerospace, automotive, biomedical, and other industrial applications underscores the importance of continuous advancements in titanium-related technologies. This special edition aims to provide a comprehensive overview of recent research results and achievements in three key areas: titanium aluminides, titanium matrix composites, metal injection moulding and sinter-based additive manufacturing. Researchers and engineers will find this special edition useful for understanding the latest advancements and prospects in titanium technology.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Cold Metal Fusion (CMF), Heat Treatment, Mechanical Properties, Metal Injection Moulding, Microstructure, Powder Metallurgy, Sintering, Titanium, Titanium Alloy, Titanium Aluminides, Titanium Matrix Composites

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0762-3
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 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 132 pages, 2025

<https://www.scientific.net/978-3-0364-0762-3/book>



Additive Manufacturing Techniques and Sustainability

Volume in the series: 1009

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Elena Gordo Odériz and Dr. Elisa Maria Ruiz-Navas

Titanium and titanium-based alloys continue to be at the forefront of research, driven by their exceptional properties and widespread applications in aerospace, biomedical, and many other industrial sectors. This special edition aims to present the results of the exploration in three critical areas related to titanium: additive manufacturing techniques, reprocessing of titanium-based waste, and specialised applications of titanium. Researchers, engineers, and industry professionals will find this special edition valuable for understanding the next frontier of titanium technologies.

Topics: Manufacturing, Materials Science

Keywords: Additive Manufacturing, Laminate, Powder Metallurgy, Titanium, Titanium Alloy, Titanium Sponge, Titanium-Based Waste Recycling

Prices: Print: **US\$ 110.00 / EUR 110.00** Print: 978-3-0364-0763-0
 eBook Single-User: **US\$ 110.00 / EUR 110.00** eBook: 978-3-0364-1763-9
 eBook Multi-User: **US\$ 193.00 / EUR 193.00** 116 pages, 2025

<https://www.scientific.net/978-3-0364-0763-0/book>



International Conference on Research in Engineering and Science Technology (1st IC-REST)

Volume in the series: 20

Selected peer-reviewed full text papers from the 1st International Conference on Research in Engineering and Science Technology (IC-REST 2023), October 10, 2023, Gowa, Indonesia

Edited by: Dr. Andi Amijoyo Mochtar, Dr. Zarah Arwieny Hanami and Dr. Muhammad Akbar Caronge

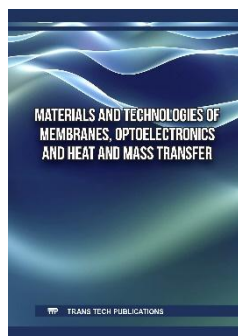
This edition comprised papers selected from the 1st International Conference on Research in Engineering and Science Technology (IC-REST), held on October 10, 2023 (Universitas Hasanuddin, Gowa, Indonesia), which was the first meeting in the series of annual events hosted by the Faculty of Engineering, Universitas Hasanuddin. This inaugural meeting focused on "Advanced Technologies to Fulfill SDGs for Sustainable Life". The articles collected in this publication showcase the latest research results and innovative solutions in biomass processing and mineral resources exploration, machinery and power engineering, highlighting the existent potential to address global challenges and contribute to a sustainable future. This edition is a valuable resource for researchers, academics, and industry professionals in the aforementioned branches interested in exploring the intersection of engineering practice, science, and sustainable development.

Topics: Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Acid Leaching, Biodiesel, Biomass Processing, Design, Hydrokinetics Turbine, Limonite Ore, Machinery, Mineral Resource Exploration, Nickel Mining, Power Engineering, Subcritical Pulverized Coal Boiler, Technological Equipment

Prices: Print: **US\$ 135.00 / EUR 135.00** Print: 978-3-0364-0757-9
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 eBook Multi-User: **US\$ 236.00 / EUR 236.00** 140 pages, 2025

<https://www.scientific.net/978-3-0364-0757-9/book>



Materials and Technologies of Membranes, Optoelectronics and Heat and Mass Transfer

Volume in the series: 440

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Ke Chen, Dr. Mohd Zamri Mohd Yusop, Prof. Yong Suk Yang and Assoc. Prof. Dr. Agus Dwi Anggono

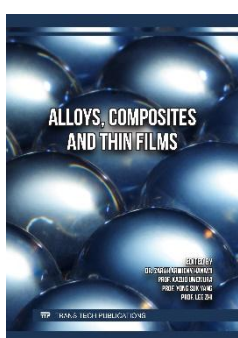
This special edition presents recent research results and engineering solutions in two interconnected fields: membrane technology, heat and mass transfer in engineering systems, highlighting innovative approaches and technologies, and in the area of materials for optoelectronics and energy storage, which also drive scientific and industrial progress.

Topics: Materials Science, Mechanics, Nanoscience

Keywords: Carbon Quantum Dots, Cathode Materials, Heat Transfer, Hybrid Ferrofluid, Luminescence Properties, Mass Flow, Mass Transfer, Membrane, Membrane Technology, Nanofluid, Photocatalytic Membrane, Single Crystal, Thermoelectric Conversion

Prices:	Print:	US\$ 110.00 / EUR 110.00	Print: 978-3-0364-0748-7
	eBook Single-User:	US\$ 110.00 / EUR 110.00	eBook: 978-3-0364-1748-6
	eBook Multi-User:	US\$ 193.00 / EUR 193.00	112 pages, 2025

<https://www.scientific.net/978-3-0364-0748-7/book>



Alloys, Composites and Thin Films

Volume in the series: 1145

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Zarah Arwieny Hanami, Prof. Kazuo Umemura, Prof. Yong Suk Yang and Prof. Lee Zhi

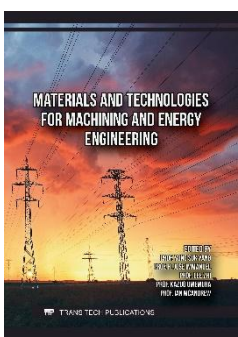
This special edition includes articles based on research results in the essential fields of applied materials science: thin films, composite materials, and steel and alloys. The application of these materials and structures plays a crucial role in modern engineering, manufacturing, and scientific research. This publication is designed to serve as a valuable resource for students, researchers, and professionals seeking a deeper understanding of these topics.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Absorption, Alloy, Aluminum Matrix Composite, Biocomposite, Composite, Fiber Reinforcement, Forming, Friction Stir Welding, Laser Surface Texturing, Mechanical Properties, Photocatalytic Properties, Steel, Superalloy, Thin Films

Prices:	Print:	US\$ 145.00 / EUR 145.00	Print: 978-3-0364-0754-8
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	eBook Multi-User:	US\$ 254.00 / EUR 254.00	152 pages, 2025

<https://www.scientific.net/978-3-0364-0754-8/book>



Materials and Technologies for Machining and Energy Engineering

Volume in the series: 1008

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Yong Suk Yang, Dr. R. Jose Immanuel, Prof. Lee Zhi, Prof. Kazuo Umemura and Prof. Ian McAndrew

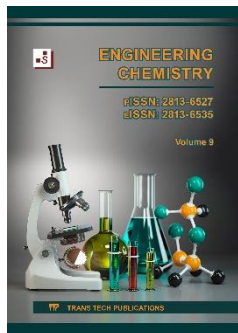
This special edition represents to readers recent advancements and research findings across three critical areas of engineering: materials science, technologies and equipment for machining of structural materials and alternative energy engineering, offering valuable insights for both academics and engineers.

Topics: Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Alternative Energy Engineering, Corrosion, Elastomer, Machine Tool, Machining, Mechanical Properties, Micro Drilling, Nanocomposite, Photocatalysis, Precision Ultrasonic Vibration Polishing, Solar Pond, Solar Stills, Structural Materials, Titanium Dioxide, Wind Turbine

Prices:	Print:	US\$ 120.00 / EUR 120.00	Print: 978-3-0364-0752-4
	eBook Single-User:	US\$ 120.00 / EUR 120.00	eBook: 978-3-0364-1752-3
	eBook Multi-User:	US\$ 210.00 / EUR 210.00	130 pages, 2025

<https://www.scientific.net/978-3-0364-0752-4/book>



Engineering Chemistry Vol. 9

Volume in the series: 9

Edited by: Prof. Patrizia Bocchetta, Prof. Citlalli Gaona-Tiburcio and Bima Prihasto

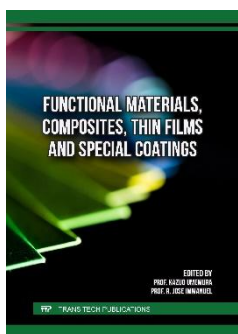
This journal volume contains articles that reflect the latest achievements in modern engineering chemistry, including the synthesis of organic corrosion inhibitors and the investigation of surface tension properties of synthesised fatty pyrimidinium betaine, the electrochemical detection of quinine using boron-doped diamond electrodes and biosensor development for glucose sensing, the review-exploration of the integration and functionality of photoluminescent polymer nanocomposites as light-converting materials, etc. The articles are aimed at professionals in biotechnologies and biomedicine, wastewater treatment, and chemical synthesis.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Absorption, Biosensor, Corrosion, Electrochemistry, Nanocomposite, Nanoparticles, Organic Inhibitor, Photoluminescent Polymer Nanocomposite, Wastewater Treatment

Prices: Print: **US\$ 80.00 / EUR 80.00** Print: 978-3-0364-0758-6
 eBook Single-User: **US\$ 0.00 / EUR 0.00** eBook: 978-3-0364-1758-5
 eBook Multi-User: **US\$ 0.00 / EUR 0.00** 100 pages, 2025

<https://www.scientific.net/978-3-0364-0758-6/book>



Functional Materials, Composites, Thin Films and Special Coatings

Volume in the series: 369

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura and Dr. R. Jose Immanuel

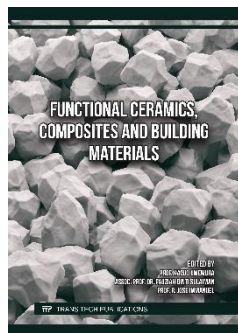
This special edition offers readers research results in some key areas of material science topics: composite materials, thin films, functional materials and special coatings. We hope that this collection will serve as a valuable resource and inspire further innovations in the field of advanced materials and technologies.

Topics: Bioscience and Medicine, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Anti-Corrosion Coating, Composite, Elastomer, Functional Materials, Iron Oxide, Mechanical Properties, Nanocellulose, Nanoparticles, Natural Reinforcement, Organic Coating, Polymer Composite, Thin Films, Yttrium Iron Garnet

Prices: Print: **US\$ 110.00 / EUR 110.00** Print: 978-3-0364-0755-5
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 eBook Multi-User: **US\$ 193.00 / EUR 193.00** 118 pages, 2025

<https://www.scientific.net/978-3-0364-0755-5/book>



Functional Ceramics, Composites and Building Materials

Volume in the series: 1144

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura, Assoc. Prof. Dr. Fauziah Sulaiman and Dr. R. Jose Immanuel

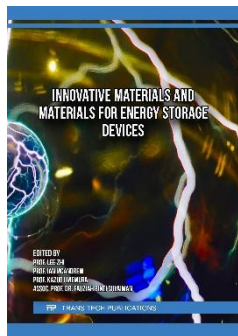
This special edition presents the results of recent advancements in the development, properties analysis, and applications of modern materials, highlighting their role in science and industry, stimulating further research and technological progress and will be useful for a wide range of engineers.

Topics: Building Materials, Materials Science, Mechanics

Keywords: Building Materials, Ceramics, Composite, Electrical Properties, Geopolymer, Green Concrete, Mechanical Properties, Oxides, Zeolite

Prices: Print: **US\$ 120.00 / EUR 120.00** Print: 978-3-0364-0753-1
 eBook Single-User: **US\$ 120.00 / EUR 120.00** eBook: 978-3-0364-1753-0
 eBook Multi-User: **US\$ 210.00 / EUR 210.00** 124 pages, 2025

<https://www.scientific.net/978-3-0364-0753-1/book>



Innovative Materials and Materials for Energy Storage Devices

Volume in the series: 1007

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Lee Zhi, Prof. Ian McAndrew, Prof. Kazuo Umemura and Assoc. Prof. Dr. Fauziah Sulaiman

This special edition presents the results of the exploration of properties and sphere of applications of cutting-edge engineering materials, providing a comprehensive understanding of their role in the development of various engineering fields. The compilation will serve as a valuable resource for researchers and engineers seeking to stay at the forefront of developments in applied material science, and we hope that it will inspire their further exploration and innovation.

Topics: Building Materials, Materials Science, Mechanics, Nanoscience

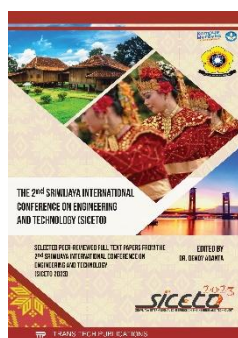
Keywords: Biosorbent, Composite, Concrete, Electrode Materials, Ferrites, Fiber Reinforcement, Geopolymer, Green Building Materials, Mechanical Properties, Polymer, Solid Polymer Electrolyte, Supercapacitor

Print: **US\$ 120.00 / EUR 120.00** Print: 978-3-0364-0751-7

eBook Single-User: **US\$ 120.00 / EUR 120.00** eBook: 978-3-0364-1751-6

eBook Multi-User: **US\$ 210.00 / EUR 210.00** 132 pages, 2025

<https://www.scientific.net/978-3-0364-0751-7/book>



The 2nd Sriwijaya International Conference on Engineering and Technology (SICETO)

Volume in the series: 19

Selected peer-reviewed full text papers from the 2nd Sriwijaya International Conference on Engineering and Technology (SICETO 2023), October 17-18, 2023, Palembang, Indonesia

Edited by: Dr. Dendy Adanta

This book is a collection of articles from the 2nd Sriwijaya International Conference on Engineering and Technology (SICETO 2023), held in October 2023 in Palembang, Indonesia. The conference is a biennial event, being the premier forum for the presentation of new advances and research results in engineering, science, technology theory and practice. This conference was organized to provide an international platform for academicians, researchers, managers, industrial participants and students to share their research findings in the mentioned fields with global experts and the scientific community.

Topics: Building Materials, Civil Engineering, Environmental Engineering, Mechanics

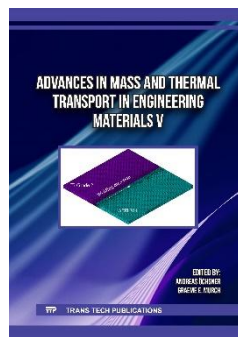
Keywords: Aggregates, Architecture, Arrhythmia, Bearing Capacity, Biodiesel, Biomedical Engineering, CFD Analysis, Civil Engineering, Concretes, Cross-Flow Turbine, Electrolysis, Fluorescence, Heavy Metals Removal, Mass Transfer, Microbiological Treatment, Neural Network, Pile Foundations, Refined Palm Oil, Seismic Load, Steel Column-Beam, Traffic Safety, Transesterification, Urban Planning, Waste Recycling, Wastewater Treatment

Prices: Print: **US\$ 75.00 / EUR 75.00** Print: 978-3-0364-0543-8

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eBook Multi-User: **US\$ 131.00 / EUR 131.00** 96 pages, 2025

<https://www.scientific.net/978-3-0364-0543-8/book>



Advances in Mass and Thermal Transport in Engineering Materials V

Volume in the series: 439

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Andreas Öchsner and Prof. Graeme E. Murch

In this edition of "Advances in Mass and Thermal Transport in Engineering Materials V" diffusion phenomena in solids and liquids with a special focus on characterization of diffusion processes and corresponding experimental and numerical techniques is addressed. Diffusion and diffusion related processes play an important role in the development of advanced engineering materials and associated fields. In-depth knowledge of these different transport phenomena at many levels, from nano to macro, has therefore long attracted the attention of many researchers in materials science and engineering and related disciplines. The present topical volume captures an extensive cross-section of some of the recent progress in mass and thermal diffusion and related areas. Reflecting the enormous breadth of the field, the range of topics covered is accordingly very large.

Topics: Materials Science, Mechanical Engineering, Mechanics, Nanoscience

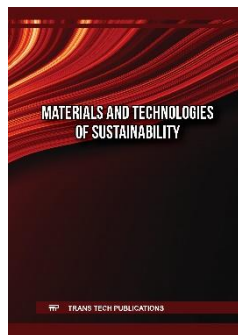
Keywords: Additive Manufacturing, Alloys, Composites, Diffusion Phenomena, Experimental Methods, Finite Element Method (FEM), Fluid Dynamics, Heating Kinetics, Mass Diffusion, Mathematical Modelling, Nanofluids, Nanoscale, Refrigeration Systems, Simulations, Steel, Thermal Diffusion, Thermodynamics, Thin Films

Prices: Print: **US\$ 260.00 / EUR 260.00** Print: 978-3-0364-0697-8

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eBook Multi-User: **US\$ 347.00 / EUR 347.00** 316 pages, 2025

<https://www.scientific.net/978-3-0364-0697-8/book>



Materials and Technologies of Sustainability

Volume in the series: 438

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh, Dr. Risa Suryana and Prof. Sugianto Sugianto

This special edition contains articles that present the results of exploration and cutting-edge developments across an area of material science and technology. The articles collection will be interesting to researchers and practitioners in solar energy, environmental sustainability, and fire safety.

Topics: Materials Science, Nanoscience

Keywords: Activated Carbon, Catalytic Conversion, Chlorpyrifos Pesticide, Combustion Characteristics, Dye-Sensitized Solar Cells, Fire Protection, Fire Resistance, Flame Retardant Paint, Green Synthesis, Natural Dye, Photocatalysts, Photodegradation, Semiconductors, Synthetic Dye

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0345-8
 eBook Single-User: **US\$ 125.00 / EUR 125.00** eBook: 978-3-0364-1345-7
 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 158 pages, 2025
<https://www.scientific.net/978-3-0364-0345-8/book>



Book of Abstracts from the International Symposium on Environment, Health and Safety 2024 (ISEHS 2024)

Volume in the series: 9

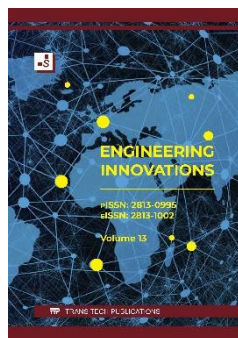
Edited by: Dr. Gábor Bellér and Mihály Csüllög

Welcome to the 4th International Symposium on Environment, Health and Safety (ISEHS), which successfully took place on October 17-18, 2024, in Debrecen, Hungary. ISEHS 2024 aimed to provide a platform for experts from all three pillars of EHS to share their latest research contributions and exchange knowledge, with the common goal of creating a cleaner, healthier, and safer future. More than 115 participants from eight countries registered for the 2024 event. The scientific program included 23 lectures covering a wide range of topics, including but not limited to: environmental protection and management (water and wastewater treatment, soil remediation, greywater utilization); occupational safety, fire protection, and industrial safety; protection against ionizing radiation and nuclear safety; energy storage.

Topics: Civil Engineering, Construction, Environmental Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Construction, Energy Storage System, Environmental Engineering, Pest Detection, Radar Signal Processing, Solar Energy, Wastewater Treatment

Prices: Print: **US\$ 75.00 / EUR 75.00** Print: 978-3-0364-0300-7
 eBook Single-User: **US\$ 75.00 / EUR 75.00** eBook: 978-3-0364-1300-6
 eBook Multi-User: **US\$ 131.00 / EUR 131.00** 24 pages, 2025
<https://www.scientific.net/978-3-0364-0300-7/book>



Engineering Innovations Vol. 13

Volume in the series: 13

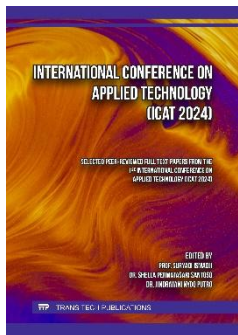
Edited by: Prof. Jong Wan Hu, Dr. Ankit Tyagi, Dr. Mohd Zamri Mohd Yusop, Bima Prihasto and Ali Alnaser

This journal's volume includes articles based on research results that focus on solutions to actual issues of sustainable development of modern civil infrastructure, starting from energy management, development of urban drainage systems, and water treatment and supply finishing with seismic safe buildings design and environmental geology research. The presented articles will be interesting to a wide range of specialists whose professional activity is related to sustainable urban development.

Topics: Building Materials, Civil Engineering, Construction, Environmental Engineering, Industrial Engineering, Mechanical Engineering

Keywords: Drainage System, Environmental Engineering, Environmental Geology, Seismic Design, Urban Planning, Water Distribution, Water Harvesting, Water Treatment

Prices: Print: **US\$ 100.00 / EUR 100.00** Print: 978-3-0364-0728-9
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 eBook Multi-User: **US\$ 0.00 / EUR 0.00** 126 pages, 2025
<https://www.scientific.net/978-3-0364-0728-9/book>



International Conference on Applied Technology (ICAT 2024)

Volume in the series: 18

Selected peer-reviewed full text papers from the 1st International Conference on Applied Technology (ICAT 2024), November 14, 2024, Surabaya, Indonesia

Edited by: Prof. Suryadi Ismadji, Dr. Shella Permatasari Santoso and Dr. Jindrayani Nyoo Putro

We are pleased to present this publication comprising the results of the International Conference on Applied Technology (ICAT) 2024 held in conjunction with the Seminar Nasional Riset dan Teknologi Terapan XI on November 14, 2024, in Surabaya, Indonesia, under the theme "Green Horizons: Building Resilient Futures through Sustainable Agility". This compilation will serve as an essential resource for researchers, industry leaders, and innovators committed to advancing sustainability through technology. In addressing today's unprecedented ecological challenges, this publication emphasizes the concept of sustainable agility, advocating for adaptive strategies and forward-thinking solutions and aiming to strengthen resilience across communities and industries, promoting a more sustainable future.

Topics: Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Bioethanol, Biofuel, Dispatching, Drying Machine, Heat Transfer, Industrial Engineering, Lean Manufacturing, Mechatronics, Robotics, Scheduling, Sensor, Thermal Engineering, Thermal Insulator, Water Treatment

Prices: Print: **US\$ 155.00 / EUR 155.00** Print: 978-3-0364-0593-3
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 eBook Multi-User: **US\$ 271.00 / EUR 271.00**

182 pages, 2025

<https://www.scientific.net/978-3-0364-0593-3/book>



The 2nd Africa International Conference on Clean Energy and Energy Storage (AICCEES)

Volume in the series: 160

Selected peer-reviewed full text papers from the 2nd Africa International Conference on Clean Energy and Energy Storage (AICCEES 2024), September 26-27, 2024, Port Harcourt, Nigeria

Edited by: Prof. Roland Uhumwango, Prof. Sunday Olayinka Oyedepo, Prof. Ogheneruona Endurance Diemuodeke, Prof. Fidelis Ibiang Abam, Dr. Veronica Mbukobong Akpasoh and Engr. Anthony Mbukobong Akpasoh

This publication is a compilation of brilliant research papers on different areas of clean energy presented at the 2nd meeting of the Africa International Conference on Clean Energy and Energy Storage (AICCEES 2024) held in September 2024 in Nigeria. AICCEES is a conference that seeks to facilitate the clean energy transition for Africa through research and knowledge sharing. Contributions to the conference covered different topics related to clean energy, such as hydrogen development in Africa, mini-grids and hydropower development, sustainable battery manufacturing in Africa, waste to energy, energy access and energy supply in Africa as well as renewable energy systems.

Topics: Environmental Engineering, Industrial Engineering, Materials Science, Mechanical Engineering

Keywords: Agriculture, Composites, Coolers, Decarbonisation, Electrolyzers, Energy Efficiency, Energy Management, Energy Production, Energy Storage Systems, Environmental Protection, Fuel Cells, Hydrogen Production, Microbial Treatment, Nanoparticles, Renewable Energy Production, Solar Energy Conversion, Thermodynamics, Thermoelectric Generators, Water Purification, Wind Turbines

Prices: Print: **US\$ 295.00 / EUR 295.00** Print: 978-3-0364-0547-6
 eBook Single-User: **US\$ 198.00 / EUR 198.00** eBook: 978-3-0364-1547-5
 eBook Multi-User: **US\$ 347.00 / EUR 347.00**

352 pages, 2025

<https://www.scientific.net/978-3-0364-0547-6/book>



22nd ISME International Conference on Recent Advances in Mechanical Engineering for Sustainable Development (RAMESD)

Volume in the series: 17

Selected peer-reviewed full text papers from the 22nd ISME International Conference on Recent Advances in Mechanical Engineering for Sustainable Development (RAMESD-2024), July 11-13, 2024, Delhi, India (hybrid)

Edited by: Prof. Amit Pal, Prof. Vijay Gautam, Prof. Pravin Kumar, Prof. Qasim Murtaza, Prof. Hee Chang Lim and Prof. K. A. Subramanian

This edition collects the papers that were presented at the 22nd ISME International Conference on Recent Advances in Mechanical Engineering for Sustainable Development (RAMESD), which was successfully held on July 11-13, 2024, at the Department of Mechanical Engineering, Delhi Technological University (Formerly Delhi College of Engineering), India, under the theme "Recent Advances in Mechanical Engineering for Sustainable Development". The publication focuses on solving engineering issues related to the design of equipment and service technologies for renewable energy production, apparatus in thermal engineering, mechatronic devices and vehicle design, and it will be useful to specialists in the broad realm of mechanical engineering.

Topics: General Engineering, Manufacturing, Mechanical Engineering, Mechanics

Keywords: Design, Heat Transfer, Mechatronics, Numerical Study, Solar Collector, Solar Panel, Steam Generator, Thermal Engineering, Vehicle Engineering, Wheelchair, Wind Turbine

Prices: Print: **US\$ 100.00 / EUR 100.00** Print: 978-3-0364-0726-5
 eBook Single-User: **US\$ 100.00 / EUR 100.00** eBook: 978-3-0364-1726-4
 eBook Multi-User: **US\$ 175.00 / EUR 175.00**

104 pages, 2025

<https://www.scientific.net/978-3-0364-0726-5/book>



International Conference on Design, Materials and Metaheuristic Algorithms for Engineering (ICDMME)

Volume in the series: 16

Selected peer-reviewed full text papers from the 1st International Conference on Design, Materials and Metaheuristic Algorithms for Engineering (ICDMME-2024), April 24, 2024, Tirupur, India

Edited by: Dr. Ramanathan Thirumalai and Dr. R. J. Golden Renjith Nimal

The International Conference on Design, Materials and Metaheuristic Algorithms for Engineering (ICDMME) aims to bring together researchers, engineers, and industry professionals to discuss the latest advancements in design methodologies, materials science, and optimization algorithms, particularly metaheuristics. The scope includes innovative solutions in structural and mechanical design, cutting-edge materials for engineering applications, and the integration of metaheuristic algorithms for solving complex optimization problems. The conference provides a platform for sharing theoretical insights, practical applications, and emerging trends in these fields, encouraging collaboration and knowledge exchange. Topics may range from computational mechanics and materials testing to AI-driven optimization techniques and sustainable engineering solutions.

Topics: Industrial Engineering, Information Technologies, Manufacturing, Mechanical Engineering, Mechanics
Keywords: Communication Engineering, Design Engineering, Engineering Management, Flow-Induced Vibration, Internet of Things, Mechatronics, Multi-Leaf Spring, Robotics

Prices: Print: **US\$ 100.00 / EUR 100.00** Print: 978-3-0364-0560-5
 eBook Single-User: **US\$ 100.00 / EUR 100.00** eBook: 978-3-0364-1560-4
 eBook Multi-User: **US\$ 175.00 / EUR 175.00** 100 pages, 2025
<https://www.scientific.net/978-3-0364-0560-5/book>



Advanced Engineering Forum Vol. 54

Volume in the series: 54

Edited by: Prof. Dumitru Nedelcu and Prof. Mikkel K. Kragh

The 54th volume of the journal contains articles based on the research results that focus on solving current engineering issues related to alloy machining in aerospace production, steel atmospheric corrosion, soil stabilisation in construction, modelling a corona discharge separation of fine particles, and designing a low-cost irradiance meter with a remote data logger. The separate part of the articles is dedicated to developments and engineering solutions in the area of renewable and traditional energy. The presented research results will be helpful to specialists in machinery, construction and energy production.

Topics: Building Materials, Electronics, Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics
Keywords: Atmospheric Corrosion, Biogas, Corona Discharge Separation, Cutting, Harmonics, Hybrid Power Plant, Photovoltaic Thermal System, Power Distribution Network, Power Quality, Reliability, Soil Stabilisation, Steel, Superalloy, Titanium Alloy, Tri-Reforming, Waveform Distortion

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 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 186 pages, 2025
<https://www.scientific.net/978-3-0364-0729-6/book>



11th International Conference on X-Rays and Related Techniques in Research and Industry (ICXRI)

Volume in the series: 15

Selected peer-reviewed full text papers from the 11th International Conference on X-Rays and Related Techniques in Research and Industry (ICXRI2023), August 23-24, 2023, Subang Jaya, Malaysia

Edited by: Dr. Wan Fahmin Faiz Wan Ali, Muhammad Azizi Mat Yajid, Assoc. Prof. Dr. Muhamad Faiz Md Din, Dr. Abdillan Sani Mohd Najib, Dr. Abdul Hakim Md Yusop, Dr. Mohd Zamri Mohd Yusop, Dr. Tuty Asma Abu Bakar and Nor Akmal Fadi

This edition includes articles based on research results presented at the 11th International Conference on X-Rays and Related Techniques in Research and Industry (ICXRI 2023, 23-24 August 2023, Subang Jaya, Malaysia). This collection will be useful to researchers and engineers whose activity is related to materials science and materials processing.

Topics: Building Materials, Materials Science, Mechanics, Nanoscience
Keywords: Bio-Based Materials, Ceramics, Coating, Composite, Electrode Materials, Energy Conversion, Friction Stir Welding, Lead-Free Soldering Technology, Measurement, Mechanical Properties, Microstructure, Nanomaterials, Photovoltaics, Polymer, Testing, Thin Film

Prices: Print: **US\$ 110.00 / EUR 110.00** Print: 978-3-0364-0342-7
 eBook Single-User: **US\$ 110.00 / EUR 110.00** eBook: 978-3-0364-1342-6
 eBook Multi-User: **US\$ 193.00 / EUR 193.00** 138 pages, 2025
<https://www.scientific.net/978-3-0364-0342-7/book>



Journal of Biomimetics, Biomaterials and Biomedical Engineering Vol. 67

Volume in the series: 67

Edited by: Dr. David Duday, Dr. Sooraj Hussain Nandyala and Azlin Fazlina Osman

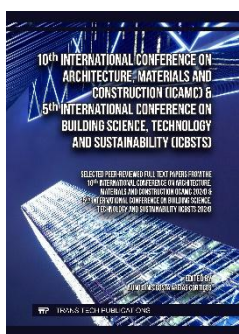
The 67th volume of the journal comprises articles focused on biomimetic approaches in the design of quadruped robot and medical images, analysis of antibacterial and antimicrobial properties of some biomaterials and investigation of dolomite materials properties as a bioceramics substitute. The evaluation of tibia rotation in total knee arthroplasty designed for deep knee flexion using a knee kinematics motion simulator is also presented here. The presented research results will be useful to engineers in the area of robotics and biomedical engineering.

Topics: Bioscience and Medicine, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Antibacterial Properties, Antimicrobial Properties, Bioceramics, Biomaterials, Biomechanics, Biomimetics, Collagen, Cytotoxicity Assay, Knee Joint, Quadruped Robot, Total Knee Arthroplasty

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 eBook Multi-User: **US\$ 210.00 / EUR 210.00** 116 pages, 2025

<https://www.scientific.net/978-3-0364-0727-2/book>



10th Int. Conf. on Architecture, Materials and Construction (ICAMC) & 5th Int. Conf. on Building Science, Technology and Sustainability (ICBSTS)

Volume in the series: 159

Selected peer-reviewed full text papers from the 10th International Conference on Architecture, Materials and Construction (ICAMC 2024) & 5th International Conference on Building Science, Technology and Sustainability (ICBSTS 2024), October 15-18, 2024, Lisbon, Portugal

Edited by: Nuno Dinis Costa Areias Cortiços

This publication brings together the collective knowledge and shared aspirations of two remarkable gatherings: the 10th International Conference on Architecture, Materials, and Construction (ICAMC 2024) and the 5th International Conference on Building Science, Technology, and Sustainability (ICBSTS 2024). Hosted at the University of Lisbon, Portugal, from October 15 to 18, 2024, these events created a space for exchange among global scholars, researchers, industry professionals, and students, all dedicated to advancing sustainable and resilient building practices. For this edition, the papers reflecting rigorous research and pioneering work across architecture, materials science, construction technology, and sustainability were selected. Each contribution provides insight into critical advancements and reflects a shared commitment to addressing the complexities of our built environment.

Topics: Building Materials, Civil Engineering, Construction, Materials Science, Mechanics

Keywords: Additive Manufacturing, Architecture, Biodegradable Materials, Building Envelope, Building Materials, Civil Engineering, CO₂ Emissions, Concrete, Corrosion Resistance, Design, Electromagnetic Energy, Energy Efficiency, Energy Harvesting, Geopolymers, LED Lighting, Natural Hazards, Plastic Waste, PV Cells, Solar Energy, Stainless Steel, Structural Health Monitoring (SHM), Wood Ash

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-0522-3
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 eBook Multi-User: **US\$ 254.00 / EUR 254.00** 140 pages, 2025

<https://www.scientific.net/978-3-0364-0522-3/book>



8th International Conference on Advanced Material for Better Future (ICAMBF)

Volume in the series: 14

Selected peer-reviewed full text papers from the 8th International Conference on Advanced Material for Better Future (ICAMBF2023), October 19, 2023, Surakarta, Indonesia

Edited by: Dr. Risa Suryana, Dianisa Khoirum Sandi and Rosid Eka Mustafa

This publication contains articles that were presented at the 8th International Conference on Advanced Material for Better Future (ICAMBF 2023, Surakarta, Indonesia) and focuses on research results on bioconversion processes and properties of some materials for pharmacological and biomedical applications. The edition will be useful to specialists in the fields of bioresources use, biomedicine and pharmacology.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Antibacterial Material, Bioconversion, Biomaterials, Gelatin, Microbial Fuel Cells, Obesity Treatment, Pharmacology, Silver Nanoparticles

Prices: Print: **US\$ 105.00 / EUR 105.00** Print: 978-3-0364-0688-6
 eBook Single-User: **US\$ 105.00 / EUR 105.00** eBook: 978-3-0364-1688-5
 eBook Multi-User: **US\$ 184.00 / EUR 184.00** 118 pages, 2025

<https://www.scientific.net/978-3-0364-0688-6/book>



International Conference on Technology-Enabled Civil Infrastructure Engineering and Management (TECH-IEM)

Volume in the series: 15

Selected peer-reviewed full text papers from the Technology-Enabled Civil Infrastructure Engineering and Management Conference (TECH-IEM-2023), December 15-16, 2023, Karachi, Pakistan

Edited by: Dr. Farrukh Arif, Asad Ur Rehman Khan, Dr. Shamsoun Fareed and Saad Ahmed Qazi

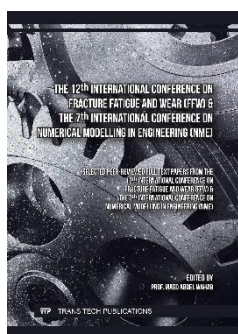
This publication contains selected full-text peer-reviewed papers presented at the International Conference on Technology-Enabled Civil Infrastructure Engineering and Management (TECH-IEM) held on December 15-16, 2023, at NED University of Engineering and Technology, Karachi, and will be useful to specialists from construction and those involved in civil and transport infrastructure engineering, building materials and technology, innovation in the project management and urban planning.

Topics: Building Materials, Civil Engineering, Construction, Industrial Engineering, Materials Science, Transportation

Keywords: Asphalt Mixture, Bars, Beam, Cement, Column, Composite, Concrete, Green Building Materials, Infrastructure, Mechanical Properties, Pavement, Polymer, Reinforcement, Slab, Structural Element, Structural Health Monitoring, Transport, Transport Infrastructure Management

Prices: Print: **US\$ 145.00 / EUR 145.00** Print: 978-3-0364-0483-7
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 eBook Multi-User: **US\$ 254.00 / EUR 254.00** 172 pages, 2025

<https://www.scientific.net/978-3-0364-0483-7/book>



The 12th International Conference on Fracture Fatigue and Wear (FFW) & The 7th International Conference on Numerical Modelling in Engineering (NME)

Volume in the series: 158

(FFW) & the 7th International Conference on Numerical Modelling in Engineering (NME), July 28-31, 2024, Xi'an, China

Edited by: Magd Abdel Wahab

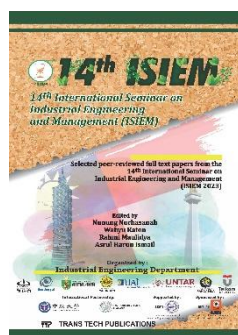
This publication contains the selected papers presented at the 12th International Conference on Fracture Fatigue and Wear (FFW 2024) and the 7th International Conference on Numerical Modelling in Engineering (NME 2024), both held on 28-31 July 2024, in Xi'an, Shaanxi, China. The objective of the FFW 2024 conference was to share the results of engineering investigations in fracture mechanics, fatigue of materials, tribology and wear of materials. The articles that were collected cover theoretical and analytical methods, numerical simulations, and experimental techniques for decision-making in the mentioned engineering sphere. The overall objective of the NME 2024 conference was to present the latest achievements in numerical techniques, such as FEM, BEM, IGA, etc., and their applications to a wide range of engineering disciplines. This edition will be helpful to engineers and researchers of many branches of engineering.

Topics: Civil Engineering, Construction, Materials Science, Mechanical Engineering, Mechanics

Keywords: Bearing, Composite, Damage, Fatigue, Fracture, Mechanical Properties, Mechanism Design, Modelling, Numerical Investigation, Polymer, Steel, Thermal Properties, Wear

Prices: Print: **US\$ 120.00 / EUR 120.00** Print: 978-3-0364-0470-7
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 eBook Multi-User: **US\$ 210.00 / EUR 210.00** 132 pages, 2025

<https://www.scientific.net/978-3-0364-0470-7/book>



14th International Seminar on Industrial Engineering and Management (ISIEM)

Volume in the series: 13

Selected peer-reviewed full text papers from the 14th International Seminar on Industrial Engineering and Management (ISIEM 2023), March 13, 2023, Jakarta, Indonesia (hybrid)

Edited by: Dr. Nuning Nurhasanah, Wahyu Katon, Dr. Rahmi Maulidya and Asrul Harun Ismail

This edition contains articles that were presented at the 14th International Seminar on Industrial Engineering and Management (ISIEM 2023, March 13, 2023, Jakarta, Indonesia, hybrid). The main goal of this seminar was to share experience and research results in machinery design, industrial technology, information technology, engineering management, biomedicine, and occupational health.

Topics: Bioscience and Medicine, General Engineering, Industrial Engineering, Information Technologies, Manufacturing, Mechanical Engineering, Mechanics

Keywords: Analytic Hierarchy Process, Bees Algorithm, Biomedicine, Convolutional Neural Network, Data Envelopment Analysis, Data Processing, Engineering Management, Failure Analysis, Industrial Engineering, Machine Learning, Occupational Health, Supply Chain, Traveling Salesman Problem

Prices: Print: **US\$ 100.00 / EUR 100.00** Print: 978-3-0364-0569-8
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 eBook Multi-User: **US\$ 175.00 / EUR 175.00** 98 pages, 2025

<https://www.scientific.net/978-3-0364-0569-8/book>



Engineering Innovations Vol. 12

Volume in the series: 12

Edited by: Dr. Risa Suryana, Assoc. Prof. Anna Safitri and Dr. Noto Susanto Gultom

The 12th volume of Engineering Innovations accumulated articles that inform readers of the latest research results and engineering solutions in fire retardant materials based on epoxy resin, specific features of wire arc additive manufacturing technology, structures' designing for transportation objects, engineering measurements and free space optical communication. This edition will be useful to a wide range of engineers and researchers in their activities.

Topics: Building Materials, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Epoxy Resin, Flame Retardants, Free Space Optical Communication, Glass Fiber Reinforced Polymer, Mechanical Properties, Metal Inert Gas Welding, Monitoring, Reinforced Concrete, Sensor, Structure Design, Thinwall Structure, Wire Arc Additive Manufacturing

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eBook Single-User: **US\$ 0.00 / EUR 0.00** eBook: 978-3-0364-1691-5
eBook Multi-User: **US\$ 0.00 / EUR 0.00** *84 pages, 2025*

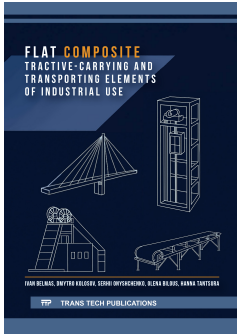
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Monographs

published 2025

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Flat Composite Tractive-Carrying and Transporting Elements of Industrial Use

Volume in the series: 106

Edited by: Ivan Vasylyovych Belmas, Dmytro Leonidovych Kolosov, Serhii Valeriyovych Onyshchenko, Olena Ivanivna Bilous and Hanna Ivanivna Tantsura

The monograph is the result of multiple years of research by a team dedicated to solving the applied problems of composite, structurally orthotropic, tractive-carrying, and transporting elements, specifically elastomer-cable ropes (steel cord belts). The presented investigations delve into the peculiarities of a stress-strain state influenced by various factors, including rope design, field of application, interaction with other objects during operation, and other features such as operational loading, spatial deformation, continuity breakages, longitudinal cuts in a rubber shell, nonlinearity of deformation, etc. This monograph also introduces and justifies a technical solution for controlling the condition of rope tractive elements by applying voltage to them and monitoring the results. Finally, a concept of utilising composite elastomer-steel tractive elements as a suspension for permanent structures is introduced. This monograph will be of interest to everyone who is engaged in industrial transportation – horizontal, vertical and inclined, such as hoisting or conveyor transport, and also used as a research methodology for composite materials, in which a soft elastomer shell surrounds hard longitudinal elements.

Topics: Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Applied Mechanics, Belt Friction, Cable Breakages, Cable Twisting, Composite, Composite Rope, Elastomer-Cable Rope, Hoisting Machine, Hoisting Vessels Displacement, Mechanical Properties, Monitoring, Nonlinear Deformation, Stress Distribution, Stress-Strain State, Tractive-Transporting Element

Prices: Print: **US\$ 295.00/ EUR 295.00**
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Print: 978-3-0364-0980-1
 eBook: 978-3-0364-1980-0
 250 pages, 2025

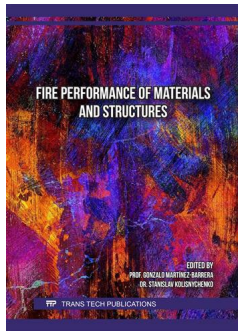
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Published 2025

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Fire Performance of Materials and Structures

Volume in the series: 42

Aggregated Book

Edited by: Prof. Gonzalo Martínez-Barrera and Dr. Stanislav Kolisnychenko

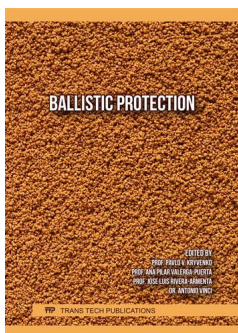
The book "Fire Performance of Materials and Structures" focuses on analysing the fire resistance of various structural materials and building structures. The edition contains selected articles published over the last two years by Trans Tech Publications Inc., covering critical issues preserving structural and functional stability in elevated temperatures and fire action conditions.

Topics: Building Materials, Civil Engineering, Construction, Materials Science

Keywords: Bearing Wall, Biocomposite, Biopolymer, Combustion Process, Crack Formation, Crossbar, Elevated Temperature, Fire Resistance, Fire Test, Green Concrete, Mechanical Properties, Metallic Structure, Modelling, Numerical Simulation, Recycle Coarse Aggregate, Reinforced Concrete, Thermal Decomposition, Thermodynamic Calculation

Prices: Print: **US\$ 155.00 / EUR 155.00** Print: 978-3-0364-0769-2
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 eBook Multi-User: **US\$ 271.00 / EUR 271.00** 192 pages, 2025

<https://www.scientific.net/978-3-0364-0769-2/book>



Ballistic Protection

Volume in the series: 41

Aggregated Book

Edited by: Prof. Pavlo V. Kryvenko, Prof. Ana Pilar Valerga-Puerta, Prof. Jose Luis Rivera-Armenta and Dr. Antonio Vinci

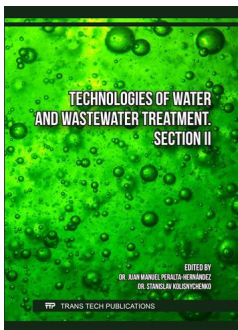
The book provides an overview of the latest research results and engineering solutions in the area of development of materials and technologies for ballistic protection of people, equipment and structures. The edition features articles published between 2020 and 2024 by Trans Tech Publications Ltd., covering the processing methods, microstructure and mechanical characterisation of modern-day protection materials.

Topics: Building Materials, Civil Engineering, Construction, Materials Science, Mechanics

Keywords: Alloy, Aramid Fabric, Armour, Ballistic Protection, Ballistic Resistance, Ballistic Test, Blast Load, Building Materials, Ceramic Matrix Composites, Ceramics, Composite, Concrete, Concrete Fortification, Energy Absorption, Fibers, Fracture Analysis, Impact Resistance, Kevlar, Liquid Silicon Infiltration, Mechanical Properties, Military Structures, Polymer, Reinforcement, Sintering, Steel

Prices: Print: **US\$ 370.00 / EUR 370.00** Print: 978-3-0364-0767-8
 eBook Single-User: **US\$ 198.00 / EUR 198.00** eBook: 978-3-0364-1767-7
 eBook Multi-User: **US\$ 347.00 / EUR 347.00** 472 pages, 2025

<https://www.scientific.net/978-3-0364-0767-8/book>



Technologies of Water and Wastewater Treatment. Section II

Volume in the series: 40

Aggregated Book

Edited by: Dr. Juan Manuel Peralta-Hernández and Dr. Stanislav Kolisnychenko

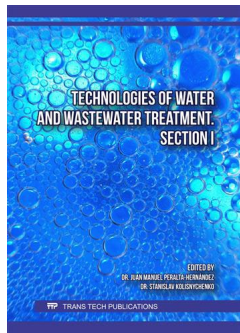
This is the second book in a two-section series focused on materials and technologies for water and wastewater treatment. By highlighting cutting-edge advancements, this edition aims to combine scientific research and engineering practice in the biotreatment of water resources and wastewater. With its interdisciplinary approach, the book serves as a comprehensive resource for professionals and researchers seeking to develop efficient and eco-friendly methods for water purification and wastewater treatment.

Topics: Environmental Engineering, Materials Science, Nanoscience

Keywords: Bentonite, Biochar, Biocoagulants, Biological Purification, Bioremediation, Bio-Sand Filter, Biosorbent, Biosorption, Dye Wastewater, Green Building Materials, Green Synthesis, Heavy Metals, Iron Nanoparticles, Microbial Fuel Cell, Natural Clay, Natural Zeolite, Organic Contaminants, Phytoremediation, Sewage Sludge, Sludge Recycling, Wastewater Deacetylation, Wastewater Treatment, Water Purification

Prices: Print: **US\$ 320.00 / EUR 320.00** Print: 978-3-0364-0744-9
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 eBook Multi-User: **US\$ 347.00 / EUR 347.00** 580 pages, 2025

<https://www.scientific.net/978-3-0364-0744-9/book>



Technologies of Water and Wastewater Treatment. Section I

Volume in the series: 39

Aggregated Book

Edited by: Dr. Juan Manuel Peralta-Hernández and Dr. Stanislav Kolisnychenko

This is the first book in a two-section series focused on materials and technologies for water and wastewater treatment. The edition focuses on research results related to the development of novel materials and industrial processes, starting from membranes and membrane technologies and ending with oxidation and photocatalytic pollutants degradation in aqueous solutions designed to address contemporary environmental concerns, providing valuable insights for engineers and academics addressing ecological challenges.

Topics: Environmental Engineering, Industrial Engineering, Materials Science, Nanoscience

Keywords: Activated Carbon, Adsorbent, Adsorption Properties, Advanced Oxidation Processes, Aeration, Capacitive Deionization, Catalytic Activity, Coagulant, Coagulation, Composite, Contaminants Removal, Cost Analysis, Desalination, Dye Removal, Electrocoagulation, Electrodialysis, Fenton Process, Filtration, Flocculation, Heavy Metals, Hydrogel, Hydrogen Peroxide, Hydrophobicity, Mechanical Properties, Membrane, Membrane Technology, Nanocomposite, Organic Pollutants, Oxidation, Ozonation, Permeate Flux, Photocatalysts, Photocatalytic Degradation, Polymer, Process Optimisation, Reverse Osmosis, Separation, Sorbent, Sorption, Wastewater Treatment, Water Purification, Water Treatment Plant, Zeolite

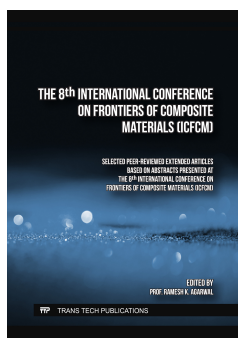
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Scientific Books Collection

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The 8th International Conference on Frontiers of Composite Materials (ICFCM)

Volume in the series: 225

Aggregated Book

Edited by: Prof. Ramesh K. Agarwal

The book contains articles based on research results presented at the 8th International Conference on Frontiers of Composite Materials (ICFCM 2025), held at Tokyo University of Science, Tokyo, Japan, from June 9 to 11, 2025. This conference served as a premier forum for researchers, engineers, and scientists from around the globe to convene and exchange their latest findings and insights in the rapidly evolving field of composite materials.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: 3D Printing, Coating, Composite Materials, Concrete, Cracks, Failures, Fibres, Functional Materials, Hybrid Materials, Laminates, Metal Ceramics, Monocrystals, Nanomaterials, Package, Pipes, Polymers

Prices: Print: **US\$ 95.00/ EUR 95.00** Print: 978-3-0364-0852-1
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 eBook Multi-User: **US\$ 166.00/ EUR 166.00** 94 pages, 2025

<https://www.scientific.net/978-3-0364-0852-1/book>



International Scientific Applied Conference "Problems of Emergency Situations" (PES)

Volume in the series: 224

Aggregated Book

Edited by: Dr. Alexey Vasilchenko, Andrii Kondratiev, Evgeniy Rybka, Mykola Surianinov, Dr. Nina Rashkevich and Yuriy Otrosh

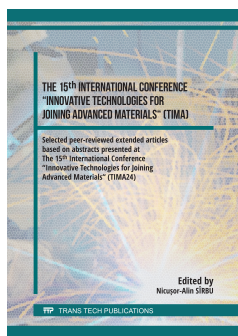
The book includes articles based on research results presented at the International Scientific Applied Conference "Problems of Emergency Situations" (May 14, 2025, Kharkiv, Ukraine). The purpose of the conference was to discuss issues related to the problems and prospects of introducing the latest developments and technologies aimed at preventing emergencies or eliminating or mitigating their consequences.

Topics: Building Materials, Civil Engineering, Construction, Environmental Engineering, General Engineering, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Beams, Building Materials, Building Structures, Composites, Computational Research, Concrete, Electrical Conductivity, Emergency Prevention, Environmental Safety, Fillers, Fire-Extinguishing Materials, Fire-Resistant Materials, Functional Materials, Hazardous Situations, Heat-Insulating Coatings, Monitoring, Particle Behavior, Pollution, Polymers, Pyrotechnics, Sensors, Steel, Waste, Water Treatment

Prices: Print: **US\$ 325.00/ EUR 325.00** Print: 978-3-0364-0351-9
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1351-8
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 540 pages, 2025

<https://www.scientific.net/978-3-0364-0351-9/book>



The 15th International Conference "Innovative Technologies for Joining Advanced Materials" (TIMA)

Volume in the series: 223

Aggregated Book

Edited by: Dr. Nicuşor-Alin Sirbu

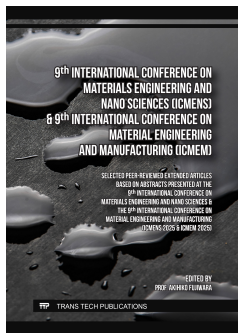
This publication comprises the selected papers presented at the 15th International Conference "Innovative Technology for Joining Advanced Materials" (TIMA 24), held in Timisoara, Romania, in a hybrid manner, with face-to-face sessions at the Faculty of Mechanical Engineering from Politehnica University Timișoara and online, on November 7-8, 2024. The conference aimed to provide a platform for beneficial interaction on actual problems in the field of advanced materials joining and testing procedures. Particular attention was given to practical issues coming from industrial manufacturing.

Topics: Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanics

Keywords: Additive Manufacturing, Alloy, Building Materials, Chemical Analysis, Coating, Composite, Corrosion, Friction Stir Processing, Heat Treatment, Laser Engraving, Laser Welding, Mechanical Properties, Optical Emission Spectroscopy, Polymer, Steel, Strength of Materials, Surface Treatment, Tool, Tribology, Turning, Ultrasonic Welding, Welded Structure, Welding, X-Ray Analysis

Prices: Print: **US\$ 325.00/ EUR 325.00** Print: 978-3-0364-0449-3
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 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 606 pages, 2025

<https://www.scientific.net/978-3-0364-0449-3/book>



9th Intern. Conf. on Materials Engineering and Nano Sciences (ICMENS) & 9th Intern. Conf. on Material Engineering and Manufacturing (ICMEM)

Volume in the series: 222

Aggregated Book

Edited by: Prof. Akihiko Fujiwara

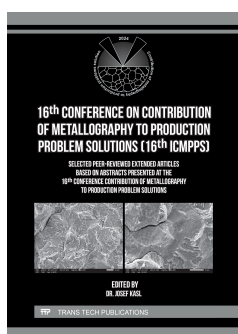
This book compiles the collective expertise and forward-thinking research results which were presented at two distinguished gatherings: the 9th International Conference on Materials Engineering and Nanoscience (ICMENS 2025) and the 9th International Conference on Materials Engineering and Manufacturing (ICMEM 2025). Held jointly in Kyushu University, Fukuoka, Japan, from March 21 to 24, 2025, these conferences brought together leading researchers, engineers, industry professionals, and students from around the world to explore the latest advancements in materials science, nanotechnology, and manufacturing technologies.

Topics: Building Materials, Construction, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Aramid, Asphalt Pavement, Bamboo, Bioactive Glass, Biomaterials, Die Casting, Electrochemical Adsorption, Green Building Materials, High Speed Twin Roll Caster, Mechanical Properties, Nanofibers, Planar MOSFET, Steel Furnace Slag

Prices: Print: **US\$ 95.00/ EUR 95.00** Print: 978-3-0364-0586-5
 eBook Single-User: **US\$ 95.00/ EUR 95.00** eBook: 978-3-0364-1586-4
 eBook Multi-User: **US\$ 166.00/ EUR 166.00** 110 pages, 2025

<https://www.scientific.net/978-3-0364-0586-5/book>



16th Conference on Contribution of Metallography to Production Problem Solutions (16th ICMPPS)

Volume in the series: 221

Aggregated Book

Edited by: Dr. Josef Kasl

This book contains selected contributions presented at the 16th international conference "Contribution of Metallography to Production Problem Solutions" (16th ICMPPS) held on 4 – 6 September 2024 in Mariánské Lázně, Czech Republic. The conference focused on the application of metallography in industrial practice, specifically for solving production problems, elucidating premature failure of machine components and constructions during service, breakdowns, or accidents. In addition, some results of new research projects which could improve manufacturing technology or the quality of machine products are presented. Individual papers address the causes of failure, fracture mechanisms, insufficient material properties, and incorrect component function. This edition will be helpful for specialists in materials science, metallurgy and materials treatment technologies.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: 3D-Printing, Additive Manufacturing, Alloys, Cladding, Coatings, Corrosion, Crack Analysis, Failure Analysis, Fittings, Materials Science, Metallography, Microstructure Replica, Pipelines, Radiation, Sample Preparation, Steel

Prices: Print: **US\$ 175.00/ EUR 175.00** Print: 978-3-0364-0146-1
 eBook Single-User: **US\$ 175.00/ EUR 175.00** eBook: 978-3-0364-1146-0
 eBook Multi-User: **US\$ 306.00/ EUR 306.00** 148 pages, 2025

<https://www.scientific.net/978-3-0364-0146-1/book>



UNAM International Engineering Conference on Sustainable Emerging Innovations and Technological Advancements (UNAM-IEC)

Volume in the series: 220

Aggregated Book

Edited by: Prof. Chinwuba Arum, Prof. Md Azree Othuman Mydin, Prof. Innocent E. Davidson and Prof. Paul Kah

This book presents the transactions of the maiden edition of the University of Namibia (UNAM) International Engineering Conference on Sustainable Emerging Innovations and Technological Advancements, tagged "UNAM IEC-2024", which was held on 02 - 04 December 2024 at the Jose Eduardo Dos Santos (JEDS) Ongwediva Engineering Campus of the University of Namibia. The edition features results of cutting-edge research and technological advancements in sustainable engineering, with a focus on emerging innovations that address global challenges in energy, infrastructure, manufacturing, materials, and digital technologies. The book serves as a valuable resource for academics and engineers seeking to integrate sustainability into engineering and technological development.

Topics: Building Materials, Civil Engineering, Construction, Environmental Engineering, General Engineering, Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: 3D Printing, Alloy, Building Materials, Deep Learning, Design, Dry Turning, Friction Stir Welding, HYDROLOGY, Mechanical Engineering, Mechanical Properties, Milling, Public Infrastructure, Renewable Energy, Smart Grid, Steel, Water Resource Management, Water Supply, Wind Resource, Wood Materials

Prices: Print: **US\$ 295.00/ EUR 295.00** Print: 978-3-0364-0665-7
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1665-6
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 374 pages, 2025

<https://www.scientific.net/978-3-0364-0665-7/book>



The 15th International Conference on Key Engineering Materials (ICKEM)

Volume in the series: 219

Aggregated Book

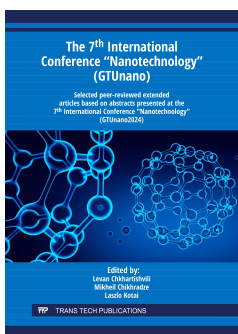
Edited by: Prof. Geoffrey R. Mitchell

The book includes articles based on the research results presented at the 2025 15th International Conference on Key Engineering Materials (ICKEM 2025, 11-13 March 2025, Portugal). The edition will be helpful for specialists in materials engineering.

Topics: Bioscience and Medicine, Building Materials, Construction, Information Technologies, Materials Science, Mechanics, Nanoscience

Keywords: Biomaterials, Biomethane, Carbon Dots, Composite, Concrete, Delamination, Electrocatalysis, Fatigue Crack, Fuel Cell, Geopolymeric Mortar, Hydrogel, Hydrogen Generation, Machine Learning, Mechanical Properties, Metal, Nanofluid, Photocatalysis, Solar Cells, Supercapacitor

Prices: Print: **US\$ 175.00/ EUR 175.00** Print: 978-3-0364-0663-3
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 eBook Multi-User: **US\$ 306.00/ EUR 306.00** 166 pages, 2025
<https://www.scientific.net/978-3-0364-0663-3/book>



The 7th International Conference "Nanotechnology" (GTU nano)

Volume in the series: 218

Aggregated Book

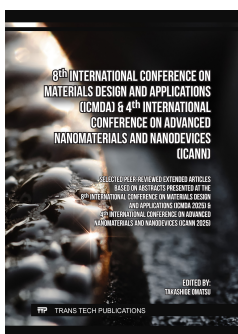
Edited by: Levan Chkhartishvili, Dr. Mikheil Chikhradze and Laszlo Kotai

The book is a collection of selected papers presented at the 7th International Conference on "Nanotechnology", held from October 7 to 11, 2024, in Tbilisi, Georgia, and organised by the Georgian Technical University. The published conference papers focus on the development of production methods, the study of the structure and composition, as well as the physical and chemical properties of advanced materials, including functional nanomaterials.

Topics: Bioscience and Medicine, Building Materials, Electronics, General Engineering, Manufacturing, Materials Science, Nanoscience

Keywords: Alloy, Artificial Intelligence, Biomaterials, Biosynthetic Analysis, Composite, Green Concrete, Management, Mechanical Properties, Nanocomposite, Nanoparticle, Nanotoxicity, Polymer, Semiconductor, Sensor, Steel, Thin Film

Prices: Print: **US\$ 275.00/ EUR 275.00** Print: 978-3-0364-0604-6
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1604-5
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 332 pages, 2025
<https://www.scientific.net/978-3-0364-0604-6/book>



8th Intern. Conference on Materials Design and Applications (ICMDA) & 4th Intern. Conference on Advanced Nanomaterials and Nanodevices (ICANN)

Volume in the series: 217

Aggregated Book

Edited by: Prof. Takashige Omatsu

This edition contains papers that were presented at the 8th International Conference on Materials Design and Applications (ICMDA 2025) and 4th International Conference on Advanced Nanomaterials and Nanodevices (ICANN 2025), which were held at Kyoto Advanced University of Science in Kyoto, Japan and devoted to latest findings, innovative ideas, and advancements in the field of materials science and engineering. The publication will be beneficial for many researchers and engineers in the fields of machinery, materials science, chemical production, and construction.

Topics: Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Alloys, Biomass, Building Materials, Coatings, Computational Research, Concrete, Cracking, Functional Materials, Glasses, Membranes, Modeling, Nanomaterials, Polymers, Steel, Thin Films, Waste, Welding

Prices: Print: **US\$ 230.00/ EUR 230.00** Print: 978-3-0364-0612-1
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1612-0
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 204 pages, 2025
<https://www.scientific.net/978-3-0364-0612-1/book>

International and National Seminar on Materials and Metallurgical Engineering in Borneo (BKPM-SENAMM XVI)

Volume in the series: 216

Aggregated Book

Edited by: Ade Wahyu Yusariarta, Kholiq Deliasgarin Radyantho, Faisal Manta, Gad Gunawan, Doddy Suanggana, Dr. Devy Setiorini Sa'adiyah, Dian Mart Shoodiqin, Atut Reni Septiana and Fadli Robiandi

The International and National Seminar on Materials and Metallurgical Engineering (BKPM-SENAMM XVI 2023, Kota Balikpapan, Indonesia, 2023) was focused on advancing research and innovation in materials, metallurgy, chemical engineering, and construction with an emphasis on sustainable engineering practices and green technologies. The collected articles will be helpful for a wide range of engineers and researchers.

Topics: Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Biocomposite, Biopolymer, Composite, Concrete, Corrosion Resistance, Electrode Materials, Lithium-Ion Battery, Materials Processing Technology, Mechanical Properties, Oxid Graphene, Polymer, Steel, Steel Structure

Prices: Print: **US\$ 245.00/ EUR 245.00** Print: 978-3-0364-0343-4
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1343-3
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 260 pages, 2025
<https://www.scientific.net/978-3-0364-0343-4/book>



The 13th International Conference on Material Science and Engineering Technology (ICMSET)

Volume in the series: 215

Aggregated Book

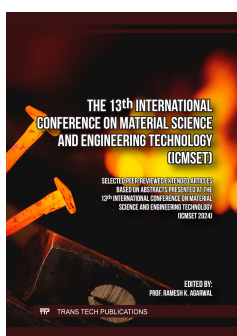
Edited by: Prof. Ramesh K. Agarwal

The 13th International Conference on Materials Science and Engineering Technology (ICMSET 2024) was held in Nagoya, Japan, from November 22 to 24, 2024, and provided a global platform for experts and scholars in all related fields to communicate and explore frontier technologies.

Topics: Bioscience and Medicine, Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Alloys, Biomaterials, Building Materials, Carbon Quantum Dots (CQDs), Cement, Composites, Concrete, Electrodes, Energy Storage Devices, Failure Analysis, Fibers, Forming, Functional Nanomaterials, Heat Treatments, Kinetic Studies, Mechanical Engineering, Microstructure, Steel, Supercapacitors, Waste Treatment

Prices: Print: **US\$ 210.00/ EUR 210.00** Print: 978-3-0364-0572-8
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1572-7
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 244 pages, 2025
<https://www.scientific.net/978-3-0364-0572-8/book>



The 6th International Symposium on Infrastructure Development (6th ISID)

Volume in the series: 214

Aggregated Book

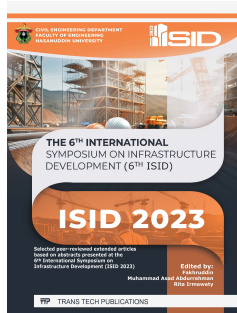
Edited by: Dr. Fakhruddin Fakhruddin, Dr. Muhammad Asad Abdurrahman and Rita Irmawaty

These selected articles were presented at the 6th International Symposium on Infrastructure Development 2023 (ISID 2023, 23 -24 August 2023), hosted by the Civil Engineering Department, Faculty of Engineering, Hasanuddin University, Indonesia. The topics of the presented research results related to the construction industry and environmental engineering, including also water resource management and assessment of technogenic risks and mitigation of natural disasters.

Topics: Building Materials, Civil Engineering, Construction, Environmental Engineering, Industrial Engineering, Materials Science, Mechanics

Keywords: Asphalt, Building Materials, Cement, Concrete, Dams, Disaster Mitigation, Earthquake Resistant, Fluid Flow, Fly Ash, Geotechnical Engineering, Groundwater, Hydrodynamics, Polymers, Reinforced Concrete Beams, Road Pavement, Safety, Seismic Design of Buildings, Slope Stability, Steel, Structural Behavior, Tunnels, Wastewater Treatment, Water Resources Management

Prices: Print: **US\$ 275.00/ EUR 275.00** Print: 978-3-0364-0407-3
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1407-2
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 392 pages, 2025
<https://www.scientific.net/978-3-0364-0407-3/book>





21st International Conference on Silicon Carbide and Related Materials (ICSCRM 2024)

Volume in the series: 213

Aggregated Book

Edited by: Prof. Victor Veliadis and Dr. Arash Salemi

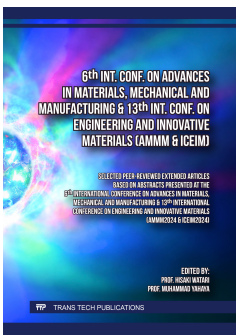
Selected peer-reviewed extended articles based on abstracts presented at the 21 International Conference on Silicon Carbide and Related Materials (ICSCRM 2024).

Topics: Bioscience and Medicine, Construction

Keywords: Anneal, Applications, Basal Plane Dislocations, BJT, BPDs, Defect Characterization, Defects, Design, Device Physics, Diodes, Dislocations, Edge Termination, Epitaxy, Extended Defects, Gate Oxide, Graphite, Growth, Heated Implantation, High Voltage, Implantation, JBS, JFET, Material, Modules, MOS, MOSFET, Ohmic Contacts, Packaging, PiN, Planar MOSFET, Quantum Applications, Quantum Sensors, Reliability, Schottky Diode, SiC, Silicide, Silicon Carbide, Stacking Faults, Substrate, Superjunction, Threshold Voltage, Trench MOSFET, Wafers

Prices: Print: **US\$ 395.00/ EUR 395.00** Print: 978-3-0364-0264-2
 eBook Single-User: **US\$ 0.00/ EUR 0.00** eBook: 978-3-0364-1264-1
 eBook Multi-User: **US\$ 0.00/ EUR 0.00** 876 pages, 2025

<https://www.scientific.net/978-3-0364-0264-2/book>



6th Int. Conf. on Advances in Materials, Mechanical and Manufacturing & 13th Int. Conf. on Engineering and Innovative Materials (AMMM & ICEIM)

Volume in the series: 212

Aggregated Book

Edited by: Prof. Hisaki Watari and Prof. Muhammad Yahaya

This edition comprises articles presented at the 6th International Conference on Advances in Materials, Mechanical and Manufacturing (AMMM 2024) and the 13th International Conference on Engineering and Innovative Materials (ICEIM 2024), which were held on September 6-8, 2024, in Tokyo, Japan. The book included articles representing the latest research results in materials science, materials processing technologies, and the development of methods and solutions for designing in mechanical engineering.

Topics: Building Materials, General Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: 3D Printing, Additive Manufacturing, Alloys, Carbon Quantum Dots (CQDs), Casting, Clay, Coatings, Composites, Computational Fluid Dynamics (CFD), Computational Mechanics, Cutting, Density Functional Theory (DFT), Engines, Finite Element Analysis (FEA), Functional Materials, Machines, Melting, Membranes, Microstructure, Natural Fibers, Polymers, Rolling, Soil Stabilization, Steel, Structural Metals

Prices: Print: **US\$ 295.00/ EUR 295.00** Print: 978-3-0364-0141-6
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1141-5
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 354 pages, 2025

<https://www.scientific.net/978-3-0364-0141-6/book>



The International Scientific Conference on Materials and Technologies for Defence and Security (MaTeDaS)

Volume in the series: 211

Aggregated Book

Edited by: Dr. Michal Krbat'a and Dr. Marcel Kohutiar

With a long tradition, the International Scientific Conference on Materials and Technologies for Defence and Security (MaTeDaS 2024, 9-10 October 2024, Trenčín Slovakia) was focused on materials and technologies for producing special equipment. Thematically, it highlighted research results in engineering technologies of welding, casting, forming, machining, surface treatments, modern additive technologies, and new modelling and simulation approaches. From the point of view of materials, the research mainly focused on metal materials, ceramics, composites, polymer materials, which are important for the automotive industry, as well as multifunctional smart materials that can be used as actuators, sensors, vibration dampers, stabilisers of structural elements, etc. In these areas, the exchange of experience is one of the means of contributing to the development of the technical level and the quality of material equipment in the field of special technology. This edition will be helpful for many specialists in modern machinery and materials science.

Topics: General Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Additive Manufacturing, Alloy, Coating, Composite, Corrosion Resistance, Cutting, Design, Hydraulic Oil, Mechanical Engineering, Mechanical Properties, Mechatronics, Orbital Laser Welding, Plasma Nitriding, Polymer, Steel, Surface Treatment, Tribology

Prices: Print: **US\$ 235.00/ EUR 235.00** Print: 978-3-0364-0352-6
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1352-5
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 326 pages, 2025

<https://www.scientific.net/978-3-0364-0352-6/book>



The International Workshop on Positron Studies of Defects (PSD-24)

Volume in the series: 210

Aggregated Book

Edited by: Prof. Rafael Ferragut, Dr. Javier Schmidt and Prof. Bernardo Barbiellini

Following a standing tradition that began in 1987 in Germany, The International Workshop on Positron Studies of Defects (PSD-24) was held in the Sala Bianca of the Teatro Sociale di Como, Italy, from September 1 to 6, 2024. The workshop aimed to provide a platform for the exchange of the latest scientific results and developments concerning positron interactions with solids and surfaces, the applied techniques, and their diverse applications. An intensive two-day Summer School in honour of Alfredo Dupasquier was held at the Brunate Library on August 31st and September 1st, prior to the PSD-24. The School featured lectures delivered by leading international experts in Positron Annihilation Spectroscopy (PAS).

Topics: Materials Science, Nanoscience

Keywords: Coincidence Doppler Broadening Spectroscopy, Doppler Broadening Spectroscopy, First Principles Calculation, Interface Defects, Positron Annihilation Lifetime Spectroscopy (PALS), Positron Annihilation Spectroscopy, Positron Beam, Spin-Polarized Positrons, Surface Characterization, Vacancy Clusters, Vacancy Defects

Prices: Print: **US\$ 255.00/ EUR 255.00** Print: 978-3-0364-0611-4
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1611-3
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 340 pages, 2025

<https://www.scientific.net/978-3-0364-0611-4/book>



12th Annual International Conference on Material Science and Engineering (ICMSE)

Volume in the series: 209

Aggregated Book

Edited by: Prof. Ke Wang and Prof. Bachir Achour

The idea of the 12th Annual International Conference on Material Science and Engineering (ICMSE2024, Hangzhou, Zhejiang, China, July 26-28, 2024) was for the scientists, engineers and students all around the world to present ongoing results of research activities, and hence to foster technical sciences and relations between the researchers and the industry. The presented research results will be useful for people whose activity is related to materials science, mechanical engineering, construction, and the practical application techniques of big data processing and artificial intelligence.

Topics: Construction, Environmental Engineering, Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Alloy, Artificial Intelligence, Big Data, Composite, Design, Durability, Environmental Engineering, Equipment, Graphene Oxide, Heavy Metals, Industrial Engineering, Machinery, Mechanical Properties, Polymer, Reliability, Steel, Structural Mechanics, Thin Films

Prices: Print: **US\$ 215.00/ EUR 215.00** Print: 978-3-0364-0004-4
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1004-3
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 222 pages, 2025

<https://www.scientific.net/978-3-0364-0004-4/book>



The 3rd International Conference on Magnetism and its Applications (ICMIA)

Volume in the series: 208

Aggregated Book

Edited by: Prof. Agustinus Agung Nugroho, Edi Suharyadi, Prof. Risdiana Risdiana and Prof. Budi Purnama

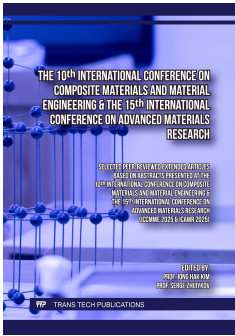
The book contains papers based on research results presented at the International Conference on Magnetism and Its Applications (ICMIA 2024, September 5-6, 2024, Yogyakarta, Indonesia) and will be of interest to many specialists in materials science.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Antibacterial Properties, Ceramics, Density Functional Theory, Dielectric Properties, Drug Delivery, Electronic Properties, Ferrites, Ferromagnetic Materials, First-Principles Simulation, Graphene, Iron Sand, Magnetic Properties, Microwave Absorption, Nanocomposite, Nanocrystals, Nanoparticles, Photocatalyst, Photodegradation, Superconductivity, Wastewater Treatment

Prices: Print: **US\$ 245.00/ EUR 245.00** Print: 978-3-0364-0391-5
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1391-4
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 278 pages, 2025

<https://www.scientific.net/978-3-0364-0391-5/book>



The 10th International Conference on Composite Materials and Material Engineering & The 15th International Conference on Advanced Materials Research

Volume in the series: 207

Aggregated Book

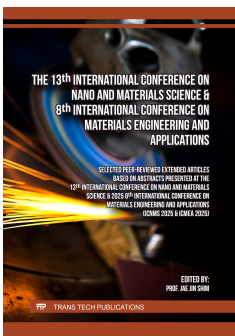
Edited by: Prof. Jong Hak Kim and Prof. Serge Zhuiykov

This book contains articles based on research results that the authors presented at the 10th International Conference on Composite Materials and Material Engineering (ICMME 2025) and the 15th International Conference on Advanced Materials Research (ICAMR 2025), which were held 8-10 January 2025 in Seoul, South Korea. The presented research results will be helpful for researchers and engineers in mechanical engineering, construction and chemical technologies.

Topics: Building Materials, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Alloy, Battery, Ceramics, Coating, Composite, Damping Ratio, Electrolytes, Fertilizer, Finite Element Modeling, Functional Materials, Graphene, Green Building Materials, Hydrometallurgy, Mechanical Properties, Metal Welding, Metamaterials, Nano Silica, Nanotubes, Phase Change Material, Photocatalytic Degradation, Polymer, Pyrolysis, Structural Mechanics, Surface Treatment

Prices: Print: **US\$ 265.00/ EUR 265.00** Print: 978-3-0364-0150-8
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1150-7
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 266 pages, 2025
<https://www.scientific.net/978-3-0364-0150-8/book>



The 13th International Conference on Nano and Materials Science & 8th International Conference on Materials Engineering and Applications

Volume in the series: 206

Aggregated Book

Edited by: Prof. Jae Jin Shim

This compilation of papers includes the proceedings from two distinguished conferences: the 13th International Conference on Nano and Materials Science (ICNMS 2025, Atlanta, GA, USA, from January 13 to 17, 2025) and the 8th International Conference on Materials Engineering and Applications (ICMEA 2025, Bangkok, Thailand, from January 15 to 18, 2025). The collected articles will be helpful for specialists in applied materials and technologies for many industrial branches.

Topics: Building Materials, Industrial Engineering, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Aluminum Alloy, Bifunctional Electrocatalyst, Cellulose, Electrochemical Performance, Electrode Materials, Friction Contact, Graphene, Green Building Materials, Industrial Engineering, Laser Surface Hardening, Material Nonlinearity, Mechanical Properties, Metalworking, Nanomaterials, Product Quality, Steel, Turning, Wire Arc Additive Manufacturing

Prices: Print: **US\$ 165.00/ EUR 165.00** Print: 978-3-0364-0579-7
 eBook Single-User: **US\$ 165.00/ EUR 165.00** eBook: 978-3-0364-1579-6
 eBook Multi-User: **US\$ 289.00/ EUR 289.00** 148 pages, 2025
<https://www.scientific.net/978-3-0364-0579-7/book>



The 3rd International Conference on Recent Advances in Materials and Manufacturing Technologies (IMMT)

Volume in the series: 205

Aggregated Book

Edited by: Dr. Gulshan Kumar and Dr. Harpreet Singh Bedi

The proceedings of the 3rd International Conference on Recent Advances in Materials and Manufacturing Technologies (IMMT 2023, 20-23 November 2023, Dubai, United Arab Emirates) present a compilation of research papers that showcase the most recent advancements in modern materials engineering and manufacturing technologies.

Topics: Bioscience and Medicine, Building Materials, Industrial Engineering, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Alloys, Biodegradable Materials, Coatings, Composites, Computational Materials Science, Concrete, Cuttings, Dental Implants, Fatigue, Ferromagnetic, Finite Element Analysis (FEA), Forming, Fracture, Friction Stir Welding, Functional Materials, Glasses, Industrial Development, Laminates, Machine Learning, Materials for Biomedical Applications, Modeling, Nanofluids, Nanoparticles, Polymers, Processing Technologies, Steel, Structural Materials

Prices: Print: **US\$ 265.00/ EUR 265.00** Print: 978-3-0364-0354-0
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1354-9
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 282 pages, 2025
<https://www.scientific.net/978-3-0364-0354-0/book>



The 2nd International Conference on Applied Engineering, Science, Technology and Innovation (AESTI)

Volume in the series: 204

Aggregated Book

Edited by: Dr. Rizki Agam Syahputra and Joli Supardi

This book compiles the papers presented at the 2nd International Conference on Applied Engineering, Science, Technology and Innovation (AESTI 2024, 28 October 2024, Meulaboh - Aceh Barat, Indonesia). The collected articles explore innovative solutions and their practical applications in various industrial fields, including civil engineering, mechanical engineering, mechatronics, materials science, and industrial engineering. They will be useful for a wide range of specialists in many branches of modern engineering.

Topics: Building Materials, Civil Engineering, Construction, General Engineering, Industrial Engineering, Materials Science, Mechanical Engineering, Mechanics

Keywords: Aerodynamics, Building Materials, Corrosion Inhibitor, Drainage System, Failure Analysis, Industrial Engineering, Infrastructure, Irrigation Network, Materials, Mechanical Engineering, Mechatronics, Monitoring System, Renewable Energy, Rural Planning, Steel, Structural Engineering, Techno-Economic Analysis, Thermal Engineering, Transportation System, Urban Planning

Prices: Print: **US\$ 210.00/ EUR 210.00** Print: 978-3-0364-0694-7
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1694-6
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 274 pages, 2025

<https://www.scientific.net/978-3-0364-0694-7/book>



The 5th International Conference on Experimental and Computational Mechanics in Engineering (ICECME)

Volume in the series: 203

Aggregated Book

Edited by: Dr. Syifaul Huzni, Dr. Mohd Iqbal, Akhyar Akhyar and Dr. Ikramullah Ikramullah

This book compiles the papers presented at the 5th International Conference on Experimental and Computational Mechanics in Engineering, themed "Advancing Computational & Experimental Mechanics for a Sustainable Future" (ICECME 2023, 9-10 November 2023, Banda Aceh, Indonesia). The collected articles explore innovative solutions and their practical applications in various engineering fields, including mechanical engineering, materials science, industrial engineering, etc.. They will be useful for a wide range of specialists in many branches of modern engineering.

Topics: Bioscience and Medicine, Building Materials, Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: 3D Printing, Air Flow, Alloys, ANSYS, Biodegradable Materials, Composites, Computational Research, Corrosion Protection, Cutting, Energy Conversion, Failure Analysis, Finite Element Method, Fluid Flow, Food Packaging, Friction, Heat and Mass Transfer, Implants, Logistics, Modelling, Plants Extract, Production Management, Quality Control, Reinforced Concrete, Resins, Solar Energy, Steel, Waste Treatment, Wear, Welding

Prices: Print: **US\$ 230.00/ EUR 230.00** Print: 978-3-0364-0526-1
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1526-0
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 266 pages, 2025

<https://www.scientific.net/978-3-0364-0526-1/book>



The 10th International Scientific Conference on Advances in Mechanical Engineering (ISCAME)

Volume in the series: 202

Aggregated Book

Edited by: Mihály Csüllög and Dr. Tamás Mankovits

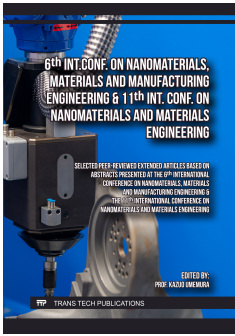
The 10th International Scientific Conference on Advances in Mechanical Engineering (ISCAME, November 7-9, 2024, Debrecen, Hungary) was organized by the Department of Mechanical Engineering (Faculty of Engineering, University of Debrecen), the Working Commission of Mechanical Engineering (Specialized Committee in Engineering, Regional Committee in Debrecen, Hungarian Academy of Sciences) and the Scientific Association for Mechanical Engineering. The ISCAME was part of the 10th Mechanical Engineering Days. The main goal of ISCAME is to bring together engineers, scientists, researchers, and practitioners from academia and industry to present their original works and share experiences regarding all aspects of mechanical engineering sciences.

Topics: Environmental Engineering, Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Additive Manufacturing, Alloy, Applied Mechanics, Artificial Intelligence, Automation, Bonding, Casting, Composite, Computational Mechanics, Design, Engineering Management, Environmental Management, Forming, Machine Learning, Measurement, Mechanical Engineering, Mechanical Properties, Mechanics of Material, Mechatronics, Pollutants, Polymer, Robotics, Steel, Testing, Tribology, Waste Management, Welding

Prices: Print: **US\$ 320.00/ EUR 320.00** Print: 978-3-0364-0610-7
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1610-6
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 572 pages, 2025

<https://www.scientific.net/978-3-0364-0610-7/book>



6th Int. Conf. on Nanomaterials, Materials and Manufacturing Engineering & 11th Int. Conf. on Nanomaterials and Materials Engineering

Volume in the series: 201

Aggregated Book

Edited by: Prof. Kazuo Umemura

The book contains articles based on the research results that were presented at the 6th International Conference on Nanomaterials, Materials and Manufacturing Engineering (ICNMM 2024, 21-23 October 2024, Singapore) and the 11th International Conference on Nanomaterials and Materials Engineering (ICNME 2024, 11-14 December 2024, Bali, Indonesia). This edition will be helpful for researchers and engineers whose activity is related to materials, science, mechanical engineering, biomaterials applications and industrial engineering practice.

Topics: Bioscience and Medicine, Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Alloy, Biomaterials, Casting, Coating, Composite, Corrosion, Electrical Discharge Machining, Equal Channel Angular Pressing, Friction Stir Welding, Functional Materials, Industrial Engineering, Laser Processing, Mechanical Properties, Nanomaterials, Polymer, Steel

Prices: Print: **US\$ 210.00/ EUR 210.00** Print: 978-3-0364-0118-8
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1118-7
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 270 pages, 2025

<https://www.scientific.net/978-3-0364-0118-8/book>



6th Asia Conference on Material and Manufacturing Technology & 8th International Conference on Nanomaterials and Biomaterials

Volume in the series: 200

Aggregated Book

Edited by: Prof. Yong Suk Yang

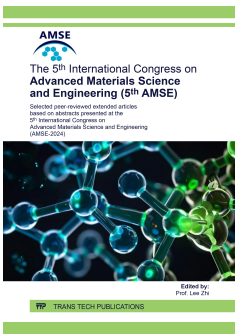
The publication contains papers that were presented at the 6th Asia Conference on Material and Manufacturing Technology (ACMMT 2024) and the 8th International Conference on Nanomaterials and Biomaterials (ICNB 2024), which were held in Phuket, Thailand, from November 25 to 28, 2024, and will be helpful for researchers and engineers in materials, nanotechnologies and machinery.

Topics: Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Alloys, Colorimetric Detection, Drilling, Equipment, Friction Stir Welding, Heat Transfer, Laser Surface Texturing, Lasers, Magnetohydrodynamics (MHD), Manufacturing, Mass Transfer, Materials Processing, Milling, Nanofluids, Nanomaterials, Nanotubes, Non-Newtonian Fluids, Sensors, Steel, Ultrasonic Vibration Polishing, Wear Resistance, Wire Coating

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0517-9
 eBook Single-User: **US\$ 150.00/ EUR 150.00** eBook: 978-3-0364-1517-8
 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 142 pages, 2025

<https://www.scientific.net/978-3-0364-0517-9/book>



The 5th International Congress on Advanced Materials Science and Engineering (5th AMSE)

Volume in the series: 199

Aggregated Book

Edited by: Prof. Lee Zhi

The 5th International Congress on Advanced Materials Sciences and Engineering 2024 (AMSE-2024), held in the picturesque Lovran, Croatia from July 23-26, 2024, brought together a collection of selected papers that delve into the cutting-edge research and developments in the field of advanced materials, engineering and construction. This proceeding will serve as a valuable resource for academics, researchers, and professionals seeking to stay abreast of the latest advancements in materials, technologies and their practical implications for future engineering solutions.

Topics: Civil Engineering, Electronics, Materials Science, Mechanical Engineering, Nanoscience

Keywords: Applied Materials, Architecture, Biosorbents, Building Materials, Catalysis, Ceramics, Dielectrics, Energy Storage, Ferroelectrics, Glasses, Holographic Gratings, Nanocomposites, Nanomaterials, Natural Fiber Composites, Optical Devices, Photocatalytic Activity, Polymers, Rare-Earth Elements, Semiconductors, Solar Energy, Thin Films, Water Treatment

Prices: Print: **US\$ 130.00/ EUR 130.00** Print: 978-3-0364-0570-4
 eBook Single-User: **US\$ 130.00/ EUR 130.00** eBook: 978-3-0364-1570-3
 eBook Multi-User: **US\$ 228.00/ EUR 228.00** 164 pages, 2025

<https://www.scientific.net/978-3-0364-0570-4/book>



Concrete Structures and Technology

Volume in the series: 198

Aggregated Book

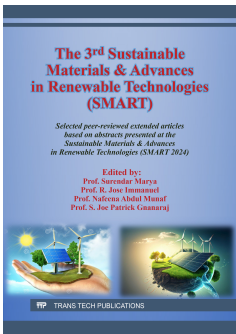
Edited by: Dr. Šárka Kalábová, Kateřina Hamplová and Petra Johová

This book presents papers from the 14th Central European Congress on Concrete Engineering (CCC), all of which focused on concrete structures and related fields, held by The Czech Concrete Society. The papers include a wide range of interesting topics covering the construction of concrete structures, modern concretes and technologies, and sustainability.

Topics: Building Materials, Civil Engineering, Construction, Industrial Engineering, Information Technologies, Materials Science, Mechanics

Keywords: Bridge, Building Information Modelling, Concrete, Concrete Structure, Concrete Technologies, Design, Digital Twin, Durability, Green Concrete, Health Monitoring, Mechanical Properties, Reinforcement, Reliability, Repair Works, Slab

Prices: Print: **US\$ 215.00/ EUR 215.00** Print: 978-3-0364-0548-3
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1548-2
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 238 pages, 2025
<https://www.scientific.net/978-3-0364-0548-3/book>



The 3rd Sustainable Materials & Advances in Renewable Technologies (SMART)

Volume in the series: 197

Aggregated Book

Edited by: Prof. Surendar K. Marya, Dr. R. Jose Immanuel, Dr. R. Nafeena Abdul Munaf and Dr. S. Joe Patrick Gnanaraj

The book contains selected original articles presented at the 3rd Sustainable Materials & Advances in Renewable Technologies 2024 (SMART'24, 2024, Tuticorin, India) conference. As the conference had an interdisciplinary theme, the papers are classified within chapters spanning domains from materials science and nanotechnologies to construction, alternative energy, mechatronics and mechanical engineering. The readers will get a holistic overview of research aimed at a sustainable future.

Topics: Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Alloys, Alternative Energy Sources, Amino Acids, Biodiesel, Building Materials, Composites, Concrete, Electric Vehicles, Electronics, Functional Materials, Geopolymer, Glass Fibers, Green Synthesis, Mechatronics, Nanoparticles, Photonic Materials, Polymers, Sensors, Solar Energy, Waste Treatment, Wind Turbines

Prices: Print: **US\$ 215.00/ EUR 215.00** Print: 978-3-0364-0627-5
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1627-4
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 314 pages, 2025
<https://www.scientific.net/978-3-0364-0627-5/book>



International Conference on Research in Engineering and Science Technology (1st IC-REST 2023)

Volume in the series: 196

Aggregated Book

Edited by: Dr. Andi Amijoyo Mochtar, Dr. Zarah Arwieny Hanami and Dr. Muhammad Akbar Caronge

This book is composed of research papers presented at the 1st International Conference on Research in Engineering Science Technology (IC-REST), held on October 10th, 2023 at the Faculty of Engineering Campus, Universitas Hasanuddin, Gowa, Indonesia. The conference, an annual event hosted by the Faculty of Engineering, Universitas Hasanuddin, focused on the theme "Advanced Technologies to fulfil SDGs for Sustainable Life." The book showcases the latest research results and innovative decisions in the fields of materials engineering and technology, mechanical engineering and construction, and mineral resource and power engineering, highlighting their potential role in addressing global challenges and contributing to a sustainable future. The collection serves as a valuable resource for researchers, academics, and engineers from many branches of modern production.

Topics: Civil Engineering, Construction, General Engineering, Industrial Engineering, Materials Science, Mechanical Engineering, Mechanics

Keywords: Architecture, Biodiesel, Biomass Processing, Coastal Engineering, Composite, Construction Project, Design, Engineering Management, Hydrokinetic Turbine, HYDROLOGY, Mechanical Engineering, Mechanical Properties, Mineral Resources, Modelling, Nickel Mining, Powder metallurgy, Power Engineering, Two-Phase Fluid

Prices: Print: **US\$ 225.00/ EUR 225.00** Print: 978-3-0364-0425-7
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1425-6
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 264 pages, 2025
<https://www.scientific.net/978-3-0364-0425-7/book>



The 11th International Conference on Mechanics, Materials and Manufacturing (ICMMM)

Volume in the series: 195

Aggregated Book

Edited by: Prof. Ian McAndrew

This edition presents articles selected from the 11th International Conference on Mechanics, Materials and Manufacturing (ICMMM 2024), successfully held in Warsaw, Poland, on 14-16 June 2024. The conference provided a platform for scholars, engineers, and researchers to present the latest research demonstrating the advances in the fields of materials and data processing.

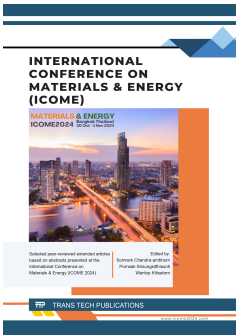
Topics: Building Materials, Computers, Information Technologies, Materials Science

Keywords: Adaptive Learning, Cloud Computing, Composite, Corrosion, Data Mining, Delamination, Mechanical Properties, Meta-Analysis, Polymer, Viscoelastic Material

Prices: Print: **US\$ 95.00/ EUR 95.00**
 eBook Single-User: **US\$ 95.00/ EUR 95.00**
 eBook Multi-User: **US\$ 166.00/ EUR 166.00**

Print: 978-3-0364-0525-4
 eBook: 978-3-0364-1525-3
 86 pages, 2025

<https://www.scientific.net/978-3-0364-0525-4/book>



International Conference on Materials & Energy (ICOME)

Volume in the series: 194

Aggregated Book

Edited by: Prof. Somrerck Chandra-ambhorn, Pornsak Srisungsitthisunti and Dr. Wanlop Kitiatorn

This edition is a collection of the selected peer-reviewed papers presented at the International Conference on Materials & Energy (ICOME 2024), organised by the King Mongkut's University of Technology North Bangkok, Université de Lorraine, and Université Paris-Saclay, on October 30, 2024, to November 1, 2024. The ICOME 2024 was aimed to address the scientific needs of academic researchers, and industrial professionals in exploring new horizons of knowledge on various topics in materials science and engineering. The insights presented in this edition provide valuable knowledge and underlined perspectives for the next research and will be helpful to engineers and researchers involved in materials and engineering.

Topics: Bioscience and Medicine, Building Materials, Materials Science, Nanoscience

Keywords: Alloy, Bio-Based Materials, Coating, Composite, Corrosion, Electrochemical Analysis, Materials Processing Technology, Mechanical Properties, Phase Change Material, Polymer, Porous Material, Steel, Surface Damage, Thermal Insulation

Prices: Print: **US\$ 155.00/ EUR 155.00**
 eBook Single-User: **US\$ 155.00/ EUR 155.00**
 eBook Multi-User: **US\$ 271.00/ EUR 271.00**

Print: 978-3-0364-0224-6
 eBook: 978-3-0364-1224-5
 232 pages, 2025

<https://www.scientific.net/978-3-0364-0224-6/book>



13th Int. Conf. on Nanostructures, Nanomaterials and Nanoengineering & 9th Int. Conf. on Materials Technology and Applications Joint Conference (ICNNN & ICMTA)

Volume in the series: 193

Aggregated Book

Edited by: Prof. Kazuo Umemura

The unique idea behind 2024 The 13th International Conference on Nanostructures, Nanomaterials and Nanoengineering (ICNNN 2023) and 2024 The 9th International Conference on Materials Technology and Applications (November 6th to 8th, 2024, Osaka, Japan) was to provide an opportunity for leading academicians, scientists, researchers and industry professionals from around the world to network and have a scientific discussion on the latest advancements in the interlinked domains of materials science, technologies and engineering, to present their research works, promote scholarly exchanges, expound new ideas, and incubate academic collaborations on creating new innovative decisions.

Topics: Building Materials, Materials Science, Nanoscience

Keywords: 3D Printing, Alloys, Biobased Materials, Bioprinting, Bridges, Building Materials, Capacitors, Carbon Dots, Composites, Concrete, Epoxy, Faraday Rotation, Finite Element Method (FEM), Gas Detection, Geopolymer, Magneto-Optical Effect, Nanoemulsions, Nanomaterials, Perovskites, Pipelines, Resins, Steel, Structural Health Monitoring, Thin Films

Prices: Print: **US\$ 155.00/ EUR 155.00**
 eBook Single-User: **US\$ 155.00/ EUR 155.00**
 eBook Multi-User: **US\$ 271.00/ EUR 271.00**

Print: 978-3-0364-0319-9
 eBook: 978-3-0364-1319-8
 206 pages, 2025

<https://www.scientific.net/978-3-0364-0319-9/book>



The 9th International Conference on Solid State Science and Technology (ICSSST)

Volume in the series: 192

Aggregated Book

Edited by: Assoc. Prof. Dr. Fauziah Sulaiman and Jedol Dayou

The 9th International Conference on Solid State Science and Technology 2023 (ICSSST 2023) was jointly organized by the Universiti Malaysia Sabah (UMS) and the Malaysian Solid State Science and Technology Society (MASS). The conference successfully took place on 5-7 December 2023 in Kota Kinabalu, Sabah, Malaysia. The theme for this meeting was "Solid State Science and Technology for All and Beyond", which highlighted the role of materials science and technology in promoting human development and improving the quality of life for people around the world. This collection will be useful for a wide range of specialists in materials and related technologies.

Topics: Building Materials, Materials Science, Mechanical Engineering, Nanoscience

Keywords: Biocement, Ceramics, Composite, Computational Materials Science, Electrical Properties, First Principles Study, Magnetic Recording, Mechanical Properties, Mechatronics, Metal Oxides, Nanocomposite, Nanogenerator, Optical Properties, Photocatalyst, Piezoelectric Properties, Polymer, Polymer Electrolytes, Semiconductor, Solar Cell, Supercapacitor, Superconductor

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0379-3
 eBook Single-User: **US\$ 115.00/ EUR 115.00** eBook: 978-3-0364-1379-2
 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 126 pages, 2025

<https://www.scientific.net/978-3-0364-0379-3/book>



The 5th Borneo International Conference on Applied Mathematics and Engineering (BICAME)

Volume in the series: 191

Aggregated Book

Edited by: Bima Prihasto

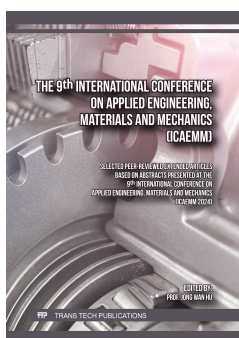
The 5th Borneo International Conference on Applied Mathematics and Engineering - BICAME 2024, (18-19 September 2024, Balikpapan, Indonesia) was devoted to the theme of "Navigating Sustainable Futures: The Synergy Between Digitalization and Green Technology". This conference served as a platform for researchers, academicians, engineers, and practitioners to share innovative ideas and research findings in the fields of sustainable energy, green technology, and climate change. By facilitating the exchange of knowledge and fostering collaborations between academia and industry, the conference sought to address global sustainable needs and promote advancements in environmental practices.

Topics: Building Materials, Construction, Materials Science, Mechanical Engineering, Mechanics

Keywords: Activated Carbon, Biopolymer, Biotechnology, Coastal Engineering, Corrosion, Electrochemical Sensor, Electrochemistry, Electrode Materials, Environmental Geology, Heavy Metals Contamination, Mechanics of Structures, Organic Inhibitor, Pavement Mixture, Semiconductor, Soil Fertility, Steel

Prices: Print: **US\$ 125.00/ EUR 125.00** Print: 978-3-0364-0192-8
 eBook Single-User: **US\$ 125.00/ EUR 125.00** eBook: 978-3-0364-1192-7
 eBook Multi-User: **US\$ 219.00/ EUR 219.00** 162 pages, 2025

<https://www.scientific.net/978-3-0364-0192-8/book>



The 9th International Conference on Applied Engineering, Materials and Mechanics (ICAEMM)

Volume in the series: 190

Aggregated Book

Edited by: Prof. Jong Wan Hu

The 9th International Conference on Applied Engineering, Materials and Mechanics (ICAEMM 2024) took place in Incheon, South Korea on July 19-21, 2024. The primary objective of ICAEMM 2024 was to provide a world-class forum for the exchange of original ideas, new information, and the latest research in materials science and applied technologies. The presented edition will be helpful for academics, scientists, engineers, postgraduates and other professionals in the mentioned areas of engineering sciences.

Topics: Building Materials, Civil Engineering, Materials Science, Mechanics, Nanoscience

Keywords: Concrete, Drainage Ability, Functional Materials, Green Roof, Green Storm Drain, Lithium Metal, Soil Stabilisation, Solid Electrolyte, Urban Drainage System, Vegetated Swales, Zinc Oxide

Prices: Print: **US\$ 95.00/ EUR 95.00** Print: 978-3-0364-0614-5
 eBook Single-User: **US\$ 95.00/ EUR 95.00** eBook: 978-3-0364-1614-4
 eBook Multi-User: **US\$ 166.00/ EUR 166.00** 66 pages, 2025

<https://www.scientific.net/978-3-0364-0614-5/book>



International Conference on Advanced Materials and Technology (ICAMT)

Volume in the series: 189

Aggregated Book

Edited by: Prof. Trung Hai Huynh, Duc Hoa Nguyen, Nguyen Thanh Liem, Anh Hoa Bui, Phan Thanh Thao, Van Quy Nguyen and Van Lich Lê

The book showcases a diverse array of research contributions presented at the International Conference on Advanced Materials and Technology held at Hanoi University of Science and Technology from October 09-12, 2024. This compilation covers a broad spectrum of topics, from electronic materials and devices, including advancements in micro- and nanotechnology, to cutting-edge developments in metal and alloy processing and 3D printing applications. Additional sections explore innovations in textile, apparel, and leather engineering with a focus on sustainability, as well as advancements in polymer materials and eco-friendly printing technologies. The published proceedings aim to foster interdisciplinary collaboration and highlight emerging solutions in materials science and engineering for sustainable industrial practices.

Topics: Bioscience and Medicine, Information Technologies, Manufacturing, Materials Science, Nanoscience

Keywords: Additive Manufacturing, Alloy, Antibacterial Properties, Apparel Production, Biomaterials, Drug Delivery, Electrospinning, Fabric, Functional Materials, High Entropy Alloy, Mechanical Properties, Polymer, Rubber, Spark Plasma Sintering, Steel, Textile, Waste Recycling, Yarn

Prices: Print: **US\$ 195.00/ EUR 195.00** Print: 978-3-0357-1897-3
 eBook Single-User: **US\$ 195.00/ EUR 195.00** eBook: 978-3-0357-3897-1
 eBook Multi-User: **US\$ 341.00/ EUR 341.00** 276 pages, 2025

<https://www.scientific.net/978-3-0357-1897-3/book>



The 3rd International Conference of Sustainable and Environmental Technology (ISET)

Volume in the series: 188

Aggregated Book

Edited by: Dr. Mohd Zamri Mohd Yusop

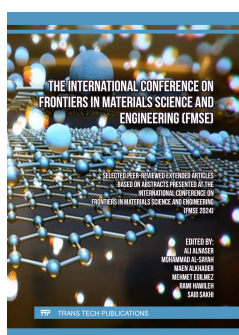
The 3rd International Conference of Sustainable and Environmental Technology 2023 and Regional Conference on Environmental Technology 2023 (26-27 September 2023, Malaysia) on the theme: "Innovative Solutions for a Sustainable Future" were aimed to reflect the latest research results of the cutting-edge technologies and methodologies for promoting sustainability in energy and environmental engineering. The conferences provided researchers and practitioners a platform to share knowledge and research results on renewable energy, climate change mitigation, and environmental conservation. The research focused on the development of innovative solutions to enhance energy efficiency, reduce carbon emissions, and promote circular economy practices. The events have encouraged interdisciplinary collaboration, integrating science and technology to address global sustainability challenges.

Topics: Materials Science, Nanoscience

Keywords: Biomass Processing, Bioremediation, Bleaching, Esterification, Filtration, Membrane, Membrane Technology, Nanocellulose, Nanoparticles, Polymer, Pyrolysis, Solid Acid Catalyst, Wastewater Treatment, Water Treatment

Prices: Print: **US\$ 125.00/ EUR 125.00** Print: 978-3-0364-0447-9
 eBook Single-User: **US\$ 125.00/ EUR 125.00** eBook: 978-3-0364-1447-8
 eBook Multi-User: **US\$ 219.00/ EUR 219.00** 160 pages, 2025

<https://www.scientific.net/978-3-0364-0447-9/book>



The International Conference on Frontiers in Materials Science and Engineering (FMSE)

Volume in the series: 187

Aggregated Book

Edited by: Ali Alnaser, Mohammad Al-Sayah, Prof. Maen Alkhader, Prof. Mehmet Egilmez, Prof. Rami Hawileh and Prof. Said Sakhi

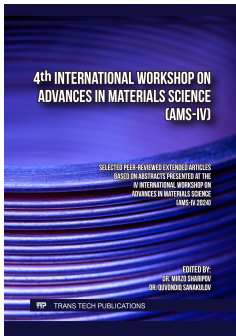
The International Conference on Frontiers in Materials Science and Engineering (FMSE 2024) was organised by the Materials Research Center and the College of Arts and Sciences at the American University of Sharjah (13-15 February 2024, Sharjah, United Arab Emirates). The three-day event brought together over two hundred fifty leading scientists and engineers from more than forty universities and companies worldwide. The conference aimed to promote regional and international collaboration among academics and key government and industry stakeholders.

Topics: Building Materials, Civil Engineering, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Aluminum, Asphalt, Beam, Building Materials, Composite, Concrete, Finite Element Analysis, Friction Stir Processing, Machine Designing, Mechanical Properties, Membrane, Mobilised Thermal Energy Storage System, Shear Strength, Structural Engineering, Thermoplastic Laminate, Thin Film

Prices: Print: **US\$ 165.00/ EUR 165.00** Print: 978-3-0364-0508-7
 eBook Single-User: **US\$ 165.00/ EUR 165.00** eBook: 978-3-0364-1508-6
 eBook Multi-User: **US\$ 289.00/ EUR 289.00** 202 pages, 2025

<https://www.scientific.net/978-3-0364-0508-7/book>



4th International Workshop on Advances in Materials Science (AMS-IV)

Volume in the series: 186

Aggregated Book

Edited by: Dr. Mirzo Sharipov and Dr. Quvondiq Sanakulov

The aim of the book based on the papers presented at the IV International Workshop Advances in Materials Science - AMS-IV 2024 (30-31 May 2024, Bukhara, Uzbekistan) was to encompass an examination of key themes in the latest materials science, integrating both theoretical frameworks and practical applications. The book highlights the mechanical properties of various materials, such as protective coatings and tool steels, emphasizing their behaviour under different processing techniques. It also explores advanced processing techniques, showcasing innovative manufacturing methods like direct metal deposition and CNC machining optimization. The application of nanotechnology is addressed, particularly regarding the influence of nanoparticles on wear resistance and mechanical properties. Furthermore, the integration of machine learning applications is discussed, focusing on how neural networks and deep learning can optimize material compositions and detect surface defects. Finally, the book investigates corrosion and wear resistance, tackling real-world challenges related to material durability in industrial settings. Overall, the edition aims to bridge the gap between theoretical research and industrial application, advancing knowledge in materials science.

Topics: Information Technologies, Materials Science, Mechanical Engineering, Mechanics

Keywords: Alloys, CNC Machining, Computer Simulations, Copper Concentrate, Crystallization, Deep Learning, Defect Detection, Direct Energy Deposition, Electric Arc Furnace, Industrial Manufacturing, Ion Scattering Spectroscopy, Machine Parts, Machine Vision, Machines, Materials Analysis, Nanopowders, Rare Metals, Slag, Steel, Structural Analysis, Thin Films, Tools, Wastes

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0243-7
 eBook Single-User: **US\$ 100.00/ EUR 100.00** eBook: 978-3-0364-1243-6
 eBook Multi-User: **US\$ 175.00/ EUR 175.00** 102 pages, 2025

<https://www.scientific.net/978-3-0364-0243-7/book>



The 5th Research, Invention, and Innovation Congress (RI2C)

Volume in the series: 185

Aggregated Book

Edited by: Prof. Somrerk Chandra-ambhorn, Dr. Kampanart Theinnoi and Dr. Wanlop Kitisatorn

This book is a collection of the selected peer-reviewed papers presented at the 2024 5th Research, Invention, and Innovation Congress (RI2C), organised by the Science and Technology Research Institute (STRI), King Mongkut's University of Technology North Bangkok, during August 8-9, 2024. The Congress was aimed at highlighting and sharing new knowledge as well as contributing to innovative sustainable development. The selected articles delve into various facets of materials science and technology and present the results of research dedicated to, amongst others, sustainable materials, materials for biomedical applications, functional materials, corrosion and oxidation processes as well as engineering and mechanics of materials and technologies in civil engineering and geotechnics. The research results presented in this edition will be helpful to engineers and researchers involved in materials, biomedical engineering, and eco-friendly building materials fields of science.

Topics: Bioscience and Medicine, Building Materials, Civil Engineering, Construction, Materials Science, Mechanics

Keywords: 3D Printing, Biodegradable Materials, Biodiesel, Biomaterials, Cement, Civil Engineering, Coatings, Composites, Dielectrics, Films, Functional Materials, Geotechnical Engineering, Gypsum, Industrial Waste, Monte Carlo Method, Plant Extracts, Polymers, Raw Materials, Sand, Soil Stabilization, Stone Columns, Water Treatment

Prices: Print: **US\$ 195.00/ EUR 195.00** Print: 978-3-0364-0608-4
 eBook Single-User: **US\$ 195.00/ EUR 195.00** eBook: 978-3-0364-1608-3
 eBook Multi-User: **US\$ 341.00/ EUR 341.00** 186 pages, 2025

<https://www.scientific.net/978-3-0364-0608-4/book>



The 2nd International Conference on Marine Research and Technology (ICOMAREST)

Volume in the series: 184

Aggregated Book

Edited by: Dr. Faisal Mahmuddin

This book contains articles presented at the 2nd International Conference on Marine Research and Technology - ICOMAREST 2023 (18-19 October 2023, Labuan Bajo, Indonesia) and focuses on the advances in solid mechanics and materials engineering that transform modern industries. The edition covers a wide range of topics, including structural mechanics, innovative materials, and polymer and mineral-based materials, emphasizing their roles in enhancing the materials' performance and reducing the environmental impact. The collection aims to provide additional resources for students, researchers, and professionals to inspire innovation in technological advancement and sustainability.

Topics: Building Materials, Construction, Materials Science, Mechanics

Keywords: Brass, Cement, Composite, Concrete, Corrosion, Green Building Materials, Mechanical Properties, Mineral Processing, Polymer, Steel, Strength of Materials, Stress Corrosion Cracking, Structural Mechanics

Prices: Print: **US\$ 130.00/ EUR 130.00** Print: 978-3-0364-0422-6
 eBook Single-User: **US\$ 130.00/ EUR 130.00** eBook: 978-3-0364-1422-5
 eBook Multi-User: **US\$ 228.00/ EUR 228.00** 168 pages, 2025

<https://www.scientific.net/978-3-0364-0422-6/book>



The 7th International Conference on Advanced Materials Science (ICoAMS)

Volume in the series: 183

Aggregated Book

Edited by: Assoc. Prof. Dr. Agus Dwi Anggono, Afif Faishal, Waluyo Adi Siswanto and Sarjito Sarjito

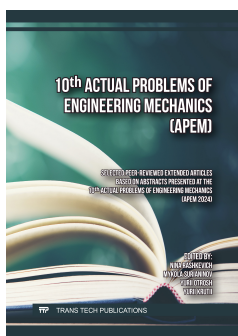
The 7th International Conference on Advanced Materials Science (ICoAMS 2024), held on August 29-30, 2024, in Surakarta, Indonesia, brought together researchers and professionals to explore the latest advancements in materials science. The conference, conducted in a hybrid format with online sessions via Zoom, featured insightful discussions on innovations in materials synthesis and emerging nanotechnology applications. Emphasizing sustainability, the event showcased research on eco-friendly materials and their environmental impacts. A major highlight was the focus on cutting-edge technologies shaping the future of advanced materials. Researchers also presented significant breakthroughs in composite materials, highlighting their potential in various applications. The multifunctional properties of new material structures were explored, emphasizing their relevance across industries. Experts shared findings that pushed the boundaries of material design, bridging the gap between research and industrial applications. Overall, ICoAMS 2024 fostered collaboration, driving forward the development of sustainable and innovative materials for the future.

Topics: Building Materials, Civil Engineering, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Aluminum, Building Materials, Composite, Electrode Materials, Gray Iron, Hardness, Heat Treatment, Machine Design, Mechanical Properties, Microstructure, Nanoribbons, Quenching, Steel, Stir Casting, Structure, Tempering, Thermoelectric Generator

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0563-6
 eBook Single-User: **US\$ 120.00/ EUR 120.00** eBook: 978-3-0364-1563-5
 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 134 pages, 2025

<https://www.scientific.net/978-3-0364-0563-6/book>



10th Actual Problems of Engineering Mechanics (APEM)

Volume in the series: 182

Aggregated Book

Edited by: Dr. Nina Rashkevich, Mykola Surianinov, Yurii Otrosh and Yurii Krutii

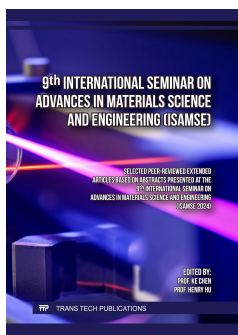
The annual International Conference "Actual Problems of Engineering Mechanics" (APEM 2024) was held online for the tenth time on June 5-7, 2024, Odesa, Ukraine. The conference was organized by the Odesa State Academy of Civil Engineering and Architecture (Ukraine, Odesa). Colleagues from the National University of Civil Defense of Ukraine, Slovak University of Technology (Slovakia), RWTH Aachen University (Germany), University of Sannio (Italy), Polytechnic University of Valencia (Spain) and Warsaw University of Technology (Poland) were involved as partners of the conference. The collected research results will be useful to many specialists in applied materials science, construction and civil defence.

Topics: Building Materials, Civil Engineering, Construction, Information Technologies, Materials Science, Mechanics

Keywords: 3D Models, 3D Printing, Alloys, BIM Technologies, Building Materials, Combined Arch System, Composites, Computational Mechanics, Concrete, Crack Resistance, Ferrites, Fibers, Fire Safety, Fly Ash, Fractal Formalism, Functional Materials, Legendre Polynomials, Load-Resistant Structures, Pipelines, Polymers, Radiation Safety, Raw Materials, Slag, Steel Cylindrical Silo, Tailing Dam, Waste Treatment, Wind Loads

Prices: Print: **US\$ 235.00/ EUR 235.00** Print: 978-3-0364-0524-7
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1524-6
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 298 pages, 2025

<https://www.scientific.net/978-3-0364-0524-7/book>



9th International Seminar on Advances in Materials Science and Engineering (ISAMSE)

Volume in the series: 181

Aggregated Book

Edited by: Prof. Ke Chen and Prof. Henry Hu

This book compiles 41 research papers that were presented at the 9th International Seminar on Advances in Materials Science and Engineering (ISAMSE 2024) held on July 12-14, 2024 in Kaifeng, Henan, China. A wide range of research results in modern materials science from structural metals, green chemistry, environmental engineering and building materials to functional materials, protective coatings, corrosion and materials for micro- and optoelectronics are reflected in this collection. This book is a valuable resource for engineers and researchers seeking to understand and improve material performance in various environments and applications.

Topics: Building Materials, Electronics, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Black Phosphorus, Catalysis, Cement, Ceramics, Coating, Composite, Concrete, Corrosion, Functional Materials, Geopolymer, Green Chemistry, Mechanical Properties, Membrane, Metal Processing Technologies, Microstructure, Nanomaterials, Pollutant Absorption, Polymer, Porous Materials, Quantum Dots, Steel, Surface Treatment

Prices: Print: **US\$ 195.00/ EUR 195.00** Print: 978-3-0364-0446-2
 eBook Single-User: **US\$ 195.00/ EUR 195.00** eBook: 978-3-0364-1446-1
 eBook Multi-User: **US\$ 341.00/ EUR 341.00** 320 pages, 2025

<https://www.scientific.net/978-3-0364-0446-2/book>



The 5th International Conference on Machining, Materials and Mechanical Technologies (IC3MT)

Volume in the series: 180

Aggregated Book

Edited by: Huy Bich Nguyen, Keiji Yamada, Ju Yi Lee and Assoc. Prof. Dr. Thanh Long Le

This edition includes the selected papers presented at the 5th International Conference on Machining, Materials, and Mechanical Technologies (IC3MT 2024), held in Phan Thiet City, Vietnam, on September 11-15, 2024. We hope this collection will be interesting and useful to many researchers and engineers from various fields of machining, materials, and mechanical technologies.

Topics: Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: 3D Printing, Alloys, Automation, Computational Research, Cutting, Cutting Fluids, Defect Identification, Drilling, Fatigue Behavior, Finite Element Analysis, Machining, Mechanical Engineering, Mechatronics, Modeling, Neural Networks, Residual Stress, Steel, Tools, Wear Resistance

Prices: Print: **US\$ 185.00/ EUR 185.00** Print: 978-3-0364-0670-1
 eBook Single-User: **US\$ 185.00/ EUR 185.00** eBook: 978-3-0364-1670-0
 eBook Multi-User: **US\$ 324.00/ EUR 324.00** 208 pages, 2025
<https://www.scientific.net/978-3-0364-0670-1/book>



Tribology in Manufacturing Processes and Advanced Surface Engineering (10th ICTMP)

Volume in the series: 179

Aggregated Book

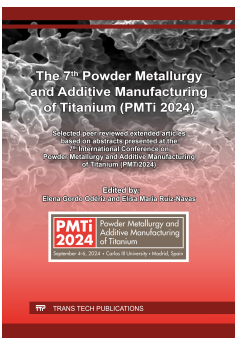
Edited by: Miguel Ángel Sellés Cantó and Samuel Sánchez-Caballero

We are pleased to present this collection of the selected contributions to the 10th International Conference on Tribology in Manufacturing Processes and Advanced Surface Engineering (ICTMP2024), held from June 26th to 28th, 2024, at the Campus of Alcoy of the Universitat Politècnica de València, Spain. The conference served as an international platform, fostering the exchange of innovative methodologies and practical applications in the field of tribology.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: 3D Printing, Additive Manufacturing, Alloys, Ball Burnishing, Cold Rolling, Composites, Corrosion Resistance, Cutting, Forming, Heat Treatment, Lubricants, Metal Processing, Nanoparticles, Optoelectronics, Polymers, Protective Coatings, Rolling Contact, Steel, Thin Films, Tools, Tribology, Wear Resistance

Prices: Print: **US\$ 195.00/ EUR 195.00** Print: 978-3-0364-0511-7
 eBook Single-User: **US\$ 195.00/ EUR 195.00** eBook: 978-3-0364-1511-6
 eBook Multi-User: **US\$ 341.00/ EUR 341.00** 274 pages, 2025
<https://www.scientific.net/978-3-0364-0511-7/book>



The 7th Powder Metallurgy and Additive Manufacturing of Titanium (PMTi 2024)

Volume in the series: 178

Aggregated Book

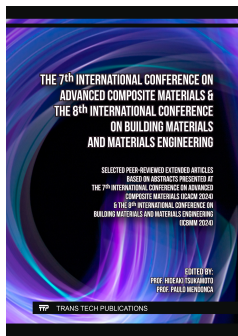
Edited by: Prof. Elena Gordo Odériz and Dr. Elisa Maria Ruiz-Navas

The 7th edition of the International Conference on Powder Metallurgy and Additive Manufacturing of Titanium, PMTi2024, was held in Madrid, Spain, for the first time after a successful series of previous conferences held in Australia, New Zealand, Germany, China, the United States and Canada. Having gathered researchers and professionals on the processing, design and application of titanium and its alloys fabricated by powder metallurgy and additive manufacturing technologies, it was a big success, providing a great insight into different topics. This publication is organised into six chapters comprising a selection of articles from the contributions that were presented during the conference.

Topics: Materials Science

Keywords: Additive Manufacturing, Alloy, Metal Injection Moulding, Powder metallurgy, Recycling, Titanium, Titanium Aluminides, Titanium Matrix Composites

Prices: Print: **US\$ 195.00/ EUR 195.00** Print: 978-3-0357-1603-0
 eBook Single-User: **US\$ 195.00/ EUR 195.00** eBook: 978-3-0357-3313-6
 eBook Multi-User: **US\$ 341.00/ EUR 341.00** 238 pages, 2025
<https://www.scientific.net/978-3-0357-1603-0/book>



The 7th International Conference on Advanced Composite Materials & The 8th International Conference on Building Materials and Materials Engineering

Volume in the series: 177

Aggregated Book

Edited by: Prof. Hideaki Tsukamoto and Prof. Paulo Mendonca

This publication introduces the readers to the selection of papers presented at the 7th International Conference on Advanced Composite Materials (ICACM 2024, Tokyo, Japan, August 21-24, 2024) and the 8th International Conference on Building Materials and Materials Engineering (ICBMM 2024, Madrid, Spain, September 10-12, 2024). ICACM 2024 once again brought together the brightest minds in the realm of advanced composites. These materials, with their exceptional properties and endless potential, are driving innovation across multiple industries. From aerospace to automotive, from energy to electronics, advanced composites are playing a crucial role in shaping the future. The articles presented at this conference offer insights into the latest research, development, and applications of these remarkable materials, highlighting the continuous efforts to enhance their performance, durability, and functionality. In its turn, ICBMM 2024 explored topics ranging from the development of new building materials to the optimization of construction processes, from energy-efficiency to smart building solutions. Construction materials are developing towards the pursuit of functional diversity, circular economy, reuse and recycling, which are essential for sustainable development. The articles from this conference provide valuable knowledge and practical solutions for addressing the challenges faced by the construction industry and promoting greener, more efficient building practices.

Topics: Bioscience and Medicine, Building Materials, Construction, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: 3D Printing, Ball Mill, Biochar, Building Materials, Composites, Concrete, Drilling, Eco-Friendly Materials, Equipment Parts, Functional Materials, Geopolymer, Mechanisms, Mechatronics, Metal Matrix Composites, Natural Fibers, Polymers, Regenerated Plastics, Robots, Seismic Design, Sensors, Silica Coating, Sliding Bearing, Thermal Energy Storage, Transistors, Waste Treatment, Water Treatment

Prices: Print: **US\$ 285.00/ EUR 285.00** Print: 978-3-0364-0523-0
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1523-9
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 252 pages, 2025

<https://www.scientific.net/978-3-0364-0523-0/book>



International Scientific Applied Conference "Problems of Emergency Situations" (PES 2024)

Volume in the series: 176

Aggregated Book

Edited by: Dr. Alexey Vasilchenko, Evgeniy Rybka, Konstantinos Sotiriadis, Mykola Surianinov, Dr. Oleh Turutanov, Dr. Nina Rashkevich, Vladimir Andronov, Yurii Otrosh, Dr. Volodimir Trigub and Andrii Kondratiev

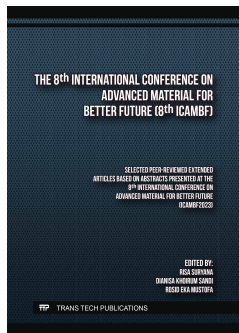
The International Scientific Applied Conference "Problems of Emergency Situations" (PES) is a series of meetings organized on an annual basis by the National University of Civil Defence of Ukraine (Kharkiv, Ukraine). For the 2024 meeting, the conference partnered with the Odessa State Academy of Civil Engineering and Architecture (Odessa, Ukraine). The purpose of the conference was to discuss issues related to the problems and prospects of the introduction of the latest developments and technologies aimed at preventing emergencies, minimizing their consequences in the field of civil defence, sharing experience and finding new facets of scientific cooperation as well as solving problems of recent emergencies that create a global threat to humanity.

Topics: Building Materials, Civil Engineering, Construction, Environmental Engineering, Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Absorption, Alloy, Building Materials, Cement, Chemical Safety, Coating, Combustible Materials, Composite, Concrete, Electromagnetic Radiation, Fire Protection, Fire Resistance, Fire Retardants, Hazardous Materials, Heavy Metals, Mechanical Engineering, Mechanical Properties, Mechanics of Structures, Polymer, Steel, Surface Treatment, Waste Management, Waste Recycling, Wastewater Treatment, Water Treatment, Wood

Prices: Print: **US\$ 380.00/ EUR 380.00** Print: 978-3-0364-0413-4
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1413-3
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 534 pages, 2025

<https://www.scientific.net/978-3-0364-0413-4/book>



The 8th International Conference on Advanced Material for Better Future (8th ICAMBF)

Volume in the series: 175

Aggregated Book

Edited by: Dr. Risa Suryana, Dianisa Khoirum Sandi and Rosid Eka Mustofa

This publication is a selection of peer-reviewed articles presented at the 8th International Conference on Advanced Material for Better Future (ICAMBF 2023), held on October 19, 2023, in Surakarta, Indonesia. ICAMBF aims to create an international forum for academics, researchers and scientists from all over the world to discuss and share their research results, proposals, new ideas and new technologies in the fields of materials and nanomaterials through interactive discussions and technical sessions. The papers included in this collection are dedicated to and consider a wide range of topics in the part of materials science related to functional and specialized materials: synthesis technologies, properties analysis, and features of their applications.

Topics: Bioscience and Medicine, Building Materials, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Absorption, Antibacterial Material, Bioconversion, Biomaterials, Ceramics, Composite, Dye-Sensitized Solar Cell, Electrical Properties, Glass, Liquid Crystal, Mechanical Engineering, Mechanical Properties, Membrane, Membrane Technology, Metal-Organic Framework, Pharmacology, Photocatalyst, Polymer, Porous Silica

Prices: Print: **US\$ 380.00/ EUR 380.00** Print: 978-3-0364-0443-1
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1443-0
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 454 pages, 2025

<https://www.scientific.net/978-3-0364-0443-1/book>



The 13th Annual International Conference on Sciences and Engineering (AIC-SE)

Volume in the series: 174

Aggregated Book

Edited by: Taufik Fuadi Abidin, Nasrul Arahman, Prof. Sugianto Sugianto, Dr. Syawaliah Muchtar, Dr. Yunida Yunida and Dr. Vera Halfiani

This edition features articles presented at the Annual International Conference on Science and Engineering (AIC-SE) 2023, held in Banda Aceh, Indonesia, on November 13-14, 2023. Aligned with the conference theme, "Science and Technology on Coffee and Other Local Commodities for Enhancing Human Prosperity," these selected articles underscore the extensive research achievements across various domains of science and engineering. With a distinctive focus on materials fabrication, modification, characterization, and practical application utilizing natural local commodities, the presented contributions illuminate the forefront of advancements and innovative solutions within the mentioned fields, showcasing the impactful integration of indigenous resources into scientific and engineering endeavors.

Topics: Bioscience and Medicine, Building Materials, Materials Science, Mechanics, Nanoscience

Keywords: Adsorbents, Biomass Processing, Catalysts, Cement, Composites, Concrete, Fibers, Food Processing, Green Building Materials, Laser Induced Breakdown Spectroscopy (LIBS), Membranes, Nanomaterials, Natural Materials, Near-Infrared Spectroscopy (NIRS), Optical Emission Spectroscopy (OES), Photocatalysis, Polymers, Pyrolysis, Waste Treatment, Water Treatment

Prices: Print: **US\$ 245.00/ EUR 245.00** Print: 978-3-0357-2735-7
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0357-3888-9
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 242 pages, 2025

<https://www.scientific.net/978-3-0357-2735-7/book>



The 4th International Conference on Engineering Science and Innovative Technology (ESIT)

Volume in the series: 173

Aggregated Book

Edited by: Assoc. Prof. Dr. Rattanakorn Phadungthin, Wannalak Laotaweesub and Paleerat Wongchampa

The 4th International Conference on Engineering Science and Innovative Technology (ESIT 2024) presented a crucial platform for academics, researchers, and industry professionals to explore and address the multifaceted challenges of our rapidly evolving world. This edition of the conference held at the Amari Pattaya, Thailand, on February 20-23, 2024, continued the tradition of fostering interdisciplinary collaboration and innovation in engineering science. Attendees benefited from a rich program featuring keynote speeches, diverse presentations, interactive workshops, and panel discussions on cutting-edge topics in energy management, industrial applications, and technological innovations. ESIT2024 aimed to not only share knowledge and research findings but also to inspire new ideas and collaborative efforts that will propel the field of engineering science forward.

Topics: Environmental Engineering, Materials Science, Mechanical Engineering, Mechanics

Keywords: 3D Printing, Abrasives, Activated Carbon, Additive Manufacturing, Aluminum Alloy, Catalysts, Chemical Mechanical Polishing, Dielectrics, Electrical Vehicles, Finite Element Analysis, Functional Materials, Lithium-Ion Battery, Mechanical Engineering, Metal Casting, Multi-Rotor, Natural Rubber, Non-Thermal Plasma, Photosynthetic Bacteria, Pollutant Removal, Renewable Energy, Steel, Waste Treatment, Water Treatment, Wireless Power Transfer

Prices: Print: **US\$ 155.00/ EUR 155.00** Print: 978-3-0357-1857-7
 eBook Single-User: **US\$ 155.00/ EUR 155.00** eBook: 978-3-0357-3772-1
 eBook Multi-User: **US\$ 271.00/ EUR 271.00** 170 pages, 2025

<https://www.scientific.net/978-3-0357-1857-7/book>



The 22nd International Conference on Recent Advances in Mechanical Engineering for Sustainable Development (ISME)

Volume in the series: 172

Aggregated Book

Edited by: Prof. Amit Pal, Prof. Vijay Gautam, Prof. Pravin Kumar, Prof. Qasim Murtaza, Prof. Hee Chang Lim and Prof. K. A. Subramanian

Modern mechanical engineering is one of the most diverse and developed engineering disciplines. To meet industry demands, mechanical engineers must be equipped with analytical tools that help them explore existing and develop new cutting-edge solutions in many branches of industry. Understanding the challenges of modern development and realising the importance of sustainability in research and development, the current international conference on Recent Advances in Mechanical Engineering for Sustainable Development (ISME RAMESD 2024) was focused on actual engineering solutions in mechanical engineering.

Topics: General Engineering, Materials Science, Mechanical Engineering, Mechanics

Keywords: 3D Printing, ABAQUS, Additive Manufacturing, Alloys, Aluminium, Clay, Coalescence Dynamics, Computational Fluid Dynamics (CFD), Cracks, Crashworthiness, Dry Turning, Finite Element Methods, Friction Stir Welding, Graphene, Heat Transfer, Lattice Boltzmann Method, Mass Transfer, Mathematical Modelling, Mechanical Engineering, Photovoltaic Panels, Powder Metallurgy, Renewable Energy Production, Road Safety, Rotor Dynamics, Solar Energy, SolidWorks, Speed Bump, Steel, Tensile Strength, Traffic Management, Turbine, Vehicle Research, Wastewater Treatments

Prices: Print: **US\$ 160.00/ EUR 160.00** Print: 978-3-0364-0557-5
 eBook Single-User: **US\$ 160.00/ EUR 160.00** eBook: 978-3-0364-1557-4
 eBook Multi-User: **US\$ 280.00/ EUR 280.00** 208 pages, 2025

<https://www.scientific.net/978-3-0364-0557-5/book>



The 6th International Conference on Materials Science and Manufacturing Technology (ICMSMT)

Volume in the series: 171

Aggregated Book

Edited by: Dr. Ramya Muthusamy, Thangaprakash Sengodan and M. Seenivasan

Materials and technologies are significant elements for all kinds of high-tech industries that pave the road for advancements in the manufacturing area. With the rapid development of computer technology, communications technology, and network technology, the traditional manufacturing process has evolved into intelligent manufacturing that is more technologically flexible and efficient. The Sixth International Conference on Materials Science and Manufacturing Technology 2024 (ICMSMT 2024) provided a premier interdisciplinary platform for researchers, academicians, and practitioners worldwide to present recent developments in materials sciences and manufacturing technology.

Topics: Materials Science, Mechanics, Nanoscience

Keywords: Alloys, Ceramics, Composites, Corrosion, Dielectrics, Electrodes, Electronic Devices, Fibers, Glasses, Liquid Crystals, Microhardness, Milling, Polymers, Reinforcement, Semiconductors

Prices: Print: **US\$ 135.00/ EUR 135.00** Print: 978-3-0364-0580-3
 eBook Single-User: **US\$ 135.00/ EUR 135.00** eBook: 978-3-0364-1580-2
 eBook Multi-User: **US\$ 236.00/ EUR 236.00** 160 pages, 2025

<https://www.scientific.net/978-3-0364-0580-3/book>



The 4th International Conference and Exhibition on Powder Technology Indonesia (ICePTi)

Volume in the series: 170

Aggregated Book

Edited by: Prof. I Made Joni, Dr. Noto Susanto Gultom and Prof. Ayi Bahtiar

This articles collection consists of selected presentations from the 4th International Conference and Exhibition on Powder Technology Indonesia (ICePTi 2023). ICePTi is a biennial international conference and exhibition organized by the Functional Nano Powder University Center of Excellence (FiNder U-CoE), Universitas Padjadjaran, and the Indonesian Powder Association. This edition illustrates the diverse ongoing research in engineering and materials science, showcasing innovative approaches and advancements in the fields.

Topics: Bioscience and Medicine, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: 3D Printing, Adsorption, Agricultural Waste, Biobased Materials, Biofilm Reactor, Biosynthesis, Chitosan, Electrodes, Energy Storage Devices, Functional Materials, Gold Nanoparticles, Leaf Extract, Microcontrollers, Molecular Modeling, Nanocomposites, Nanosuspension, Porous Carbon, Porous Silicon, Sensors, Supercapacitors, Water Treatment

Prices: Print: **US\$ 130.00/ EUR 130.00** Print: 978-3-0364-0149-2
 eBook Single-User: **US\$ 130.00/ EUR 130.00** eBook: 978-3-0364-1149-1
 eBook Multi-User: **US\$ 228.00/ EUR 228.00** 148 pages, 2025

<https://www.scientific.net/978-3-0364-0149-2/book>



The 7th International Conference on Material Engineering Research (ICMER)

Volume in the series: 169

Aggregated Book

Edited by: Prof. Jong Wan Hu

The 7th International Conference on Material Engineering Research (ICMER 2024) took place in Jeju Island, South Korea, on April 19-21, 2024. The primary objective of ICMER 2024 was to provide a world-class forum for exchanging new information and the latest research results, exploring collaborations and sparking new ideas, with the aim of developing new projects and exploiting new technology in the field of applied materials and advanced materials processing technologies. The meeting brought together academics, scientists, engineers, postgraduates and other professionals in the area of material science and engineering technology from all over the world.

Topics: Materials Science, Mechanical Engineering, Nanoscience

Keywords: Additive Manufacturing, Alloys, Cast Iron, Colloids, Compression Molding Machine, Corrosion Inhibitors, Crystallographic Structure, Drilling Fluid Systems, Image Processing, Laser Powder Bed Fusion, Machines, Mesoporous Silica Nanoparticles, Packaging Materials, Plant Fibers, Polymers, Semiconductors, Shaft, Solar Cells, Steel, Twin-Roll Casting, Welding, Wire Coiling

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0003-7
 eBook Single-User: **US\$ 115.00/ EUR 115.00** eBook: 978-3-0364-1003-6
 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 120 pages, 2025

<https://www.scientific.net/978-3-0364-0003-7/book>



The 2nd International Conference on Advances in Materials and Engineering (ICAME)

Volume in the series: 168

Aggregated Book

Edited by: Dr. C Nadhamuni Reddy, Dr. Avijit Ghosh and Dr. Pragathi Bellamkonda Rao

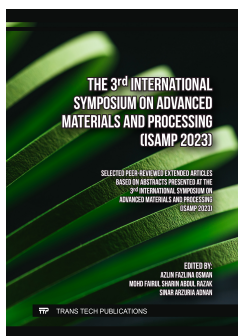
The 2nd International Conference on Advances in Materials and Engineering (ICAME 2024) was jointly organised by the Annamacharya Institute of Technology and Sciences (AITS-T), Tirupati, and the "Science and Technology Research Foundation" (STRF), India, and successfully held on April 19-20, 2024. It focused on the latest research findings in materials and their processing technologies in machinery and construction. The conference provided a sound platform to exchange ideas, innovations, developments and technical aspects among researchers.

Topics: Building Materials, Civil Engineering, Construction, Electronics, Materials Science, Mechanical Engineering

Keywords: Bridge Health Monitoring, Building Materials, Charging System, Composite, Concrete, Electronics, Geopolymer, Green Concrete, Mechanical Properties, Metal Matrix Composite, Soil Stabilisation, Steel, Structural Materials, Water Quality Monitoring, Wire Electro Discharge Machining, Zeolite

Prices: Print: **US\$ 145.00/ EUR 145.00** Print: 978-3-0364-0600-8
 eBook Single-User: **US\$ 145.00/ EUR 145.00** eBook: 978-3-0364-1600-7
 eBook Multi-User: **US\$ 254.00/ EUR 254.00** 176 pages, 2025

<https://www.scientific.net/978-3-0364-0600-8/book>



The 3rd International Symposium on Advanced Materials and Processing (ISAMP)

Volume in the series: 167

Aggregated Book

Edited by: Azlin Fazlina Osman, Dr. Mohd Fairul Sharin Abdul Razak and Dr. Sinar Arzurua Adnan

This edition is dedicated to the latest research findings in the area of materials science and engineering with a focus on processing, properties and characterization, design and applications. This collection was prepared based on the materials of the 3rd International Symposium on Advanced Materials and Processing (ISAMP 2023) and will be helpful and interesting to engineers, researchers and specialists in the fields of polymers, composites, biocomposites, ceramics and inorganic materials.

Topics: Bioscience and Medicine, Materials Science, Mechanics, Nanoscience

Keywords: Bioceramics, Biocomposite, Biomaterials, Biopolymer, Deep Eutectic Solvent, Graphene Oxide, Green Composite, Mechanical Properties, Nanofluid, Plastic Waste, Polymer, Thermoplastic

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0298-7
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1298-6
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 126 pages, 2025

<https://www.scientific.net/978-3-0364-0298-7/book>



The 5th International Conference on Chemical Sciences (ICCS)

Volume in the series: 166

Aggregated Book

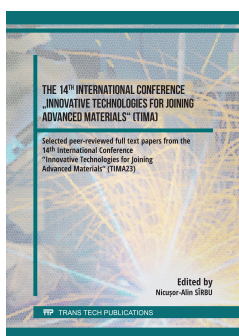
Edited by: Prof. Karna Wijaya and Dr. Niko Prasetyo

The 5th International Conference on Chemical Sciences (ICCS 2023) was organized by the Department of Chemistry, Faculty of Mathematics and Natural Sciences, Universitas Gadjah Mada (UGM), and was successfully held on 08-09 August 2023. The theme of this conference was "Fuel for Sustainable Living", and its scope covered a variety of topics related to analytical, physical, organic and computational chemistry.

Topics: Materials Science, Nanoscience

Keywords: Biomaterials, Catalyst, CoAl, Composite, Computational Materials Science, Density Functional Theory, Digital Colorimetric Analysis, Ethanol Dehydration, Mechanical Properties, Molecular Dynamics, Nanomaterials, Polymer

Prices: Print: **US\$ 195.00/ EUR 195.00** Print: 978-3-0364-0382-3
 eBook Single-User: **US\$ 195.00/ EUR 195.00** eBook: 978-3-0364-1382-2
 eBook Multi-User: **US\$ 341.00/ EUR 341.00** 220 pages, 2025
<https://www.scientific.net/978-3-0364-0382-3/book>



The 14th International Conference "Innovative Technologies for Joining Advanced Materials" (TIMA)

Volume in the series: 165

Aggregated Book

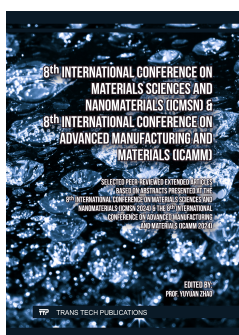
Edited by: Dr. Nicușor-Alin Sîrbu

This edition includes the selected papers presented at the 14th International Conference "Innovative Technologies for Joining Advanced Materials" (TIMA 23) held in Timișoara, România, by videoconference, on November 09-10, 2023. The event brought together researchers from institutes, universities and economic fields from different countries to discuss the following actual topics: new joining technologies; modelling and simulation of welding processes; specific problems in advanced materials joining; characterization of advanced materials and joints; fracture mechanics, damage of advanced materials and remaining life assessment; quality of welded joints and welded structures; engineering applications of surface coatings; non-destructive testing (NDT); nanoscience, nanotechnology and composites. We hope the presented research results will be useful to many researchers and engineers in materials science, machinery and construction.

Topics: Building Materials, Civil Engineering, Construction, Manufacturing, Materials Science, Mechanics

Keywords: Abrasive Waterjet Cutting, Additive Manufacturing, Alloy, Arc Welding, Brazing, Building Materials, Capacitor Discharge Spot Welding, Cavitation Resistance, Clinch Joint, Coating, Composite, Engraving, Fracture Mechanics, Friction Stir Welding, Gas Tungsten Arc Welding, Mechanical Properties, Parts Repair, Polymer, Spot Welding, Steel, Submerged Friction Stir Welding, Tool, Ultrasonic Welding, Welded Joint, Welds

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8th International Conference on Materials Sciences and Nanomaterials (ICMSN) & 8th International Conference on Advanced Manufacturing and Materials (ICAMM)

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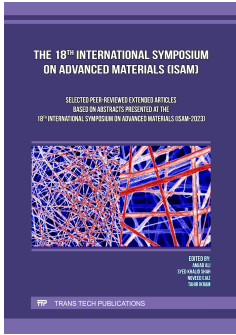
Edited by: Prof. Yuyuan Zhao

This edition is based on the results of the 8th International Conference on Materials Sciences and Nanomaterials (ICMSN 2024) and the 8th International Conference on Advanced Manufacturing and Materials (ICAMM 2024). These two prestigious conferences, held in Edinburgh, UK, on July 9-12, 2024, brought together researchers, scientists and engineers from around the world to share their latest findings, innovations and insights on cutting-edge materials science, nanotechnology and advanced manufacturing.

Topics: Bioscience and Medicine, Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Annealing, Arc Welding, Biobased Thermosets, Biomaterials, Cermet, Coatings, Electrospinning, High Entropy Alloys, Intermetallic Compounds, Nanofibers, Nanomaterials, Photocatalysis, Polymers, Solder Alloys, Spark Plasma Sintering, Stainless Steels, Thermomechanics, Thin Films

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The 18th International Symposium on Advanced Materials (ISAM)

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Edited by: Amjad Ali, Dr. Syed Khalid Shah, Noveed Ejaz and Tahir Ikram

This book contains selected peer-reviewed full-text research papers from the 18th International Symposium on Advanced Materials (18th ISAM) held at the National Centre for Physics (NCP), Islamabad, Pakistan, on October 02-06, 2023. The editors hope that this compilation of the conference results will provide the reader with a broad overview of the latest advances in the field of advanced materials science and technologies, and will be a valuable reference source for further research.

Topics: Bioscience and Medicine, Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Alloy, Biomaterials, Composite, Dielectric Properties, Diffusion Bonding, Electrode Materials, Engineering Research, Functional Materials, Graphene Oxide, Hexaferrite, High Entropy Alloy, Magnetic Properties, Manganese Oxide, Mechanical Properties, Nanocomposite, Nanomaterials, Perovskite, Polymer, Steel, Supercapacitor, Welding

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Volume in the series: 162

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Edited by: Dr. Syed Imran Shafiq, Dr. Wasif Ullah Khan, Dr. Md. Israr Equebal and Dr. Mohd. Yunus Khan

This issue features detailed research findings from the 2nd International Conference on Recent Advancements in Materials, Design, and Manufacturing (ICRAMDM 2023). The conference interdisciplinary platform covers a wide range of topics, including new materials synthesis techniques, innovative design methodologies, and cutting-edge manufacturing processes. Articles delve into properties and applications of materials, efficient product design principles, and advanced manufacturing techniques, offering valuable insights for academicians, researchers, scientists, and industry professionals.

Topics: Civil Engineering, Construction, Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Additive Manufacturing, Alloy, Composite, Construction Technology, Cutting Tool, Electrical Discharge Machining, Engineering Management, Flexible Manufacturing System, Forging Die, Industrial Engineering, Industry 4.0, Lap Joint, Machining, Mechanical Properties, Polymer, Product Design, Steel

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