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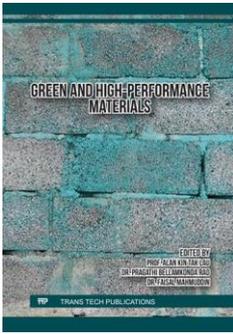
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Green and High-Performance Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Alan Kin Tak Lau, Dr. Pragathi Bellamkonda Rao and Dr. Faisal Mahmuddin

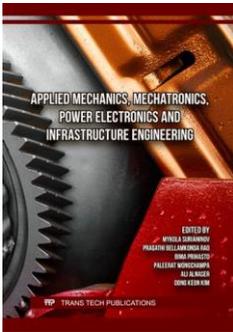
This special edition encapsulates research results across three areas of materials science: functional materials, green and high-performance building materials, and mineral mining and processing. It will be a useful resource for researchers and engineers committed to shaping a sustainable and technologically advanced future.

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

Keywords: Cement, Concrete, Functional Materials, Geopolymer, Green Building Materials, Magnite Nanoparticles, Mechanical Properties, Mineral Mining, Polyurethane Foam, Rice Husk Ash, Sapolite Ore, Silica Fume

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Applied Mechanics, Mechatronics, Power Electronics and Infrastructure Engineering

Special topic volume with invited peer-reviewed papers only

Edited by: Mykola Surianinov, Dr. Pragathi Bellamkonda Rao, Bima Prihasto, Paleerat Wongchampa, Ali Alnaser and Prof. Dong Keon Kim

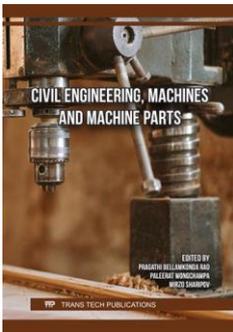
This special edition presents the research results in diverse engineering areas such as mechanical engineering, mechatronics and construction. We hope the presented results inspire readers to research in these fields, fostering innovation, and practical application engineering solutions.

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

Keywords: Applied Mechanics, Building Materials, Coastal Engineering, Construction, Infrastructure Engineering, Mechanical Engineering, Mechanical Properties, Mechatronics, Numerical Modelling, Power Electronics

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Civil Engineering, Machines and Machine Parts

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Pragathi Bellamkonda Rao, Paleerat Wongchampa and Dr. Mirzo Sharipov

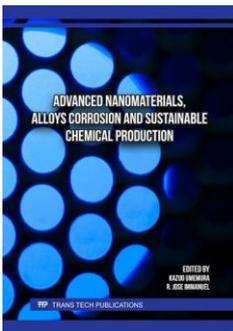
This special edition presents readers with the research results in two critical domains: mechanical engineering and modern civil engineering and will inspire them to further investigate and contribute to these engineering practices, fostering continued progress in engineering disciplines.

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

Keywords: Building Materials, Designing, Green Concrete, Machine, Machine Parts, Machining Tool, Mechanical Properties, Soil Stabilisation, Structural Mechanics

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Advanced Nanomaterials, Alloys Corrosion and Sustainable Chemical Production

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura and Prof. R. Jose Immanuel

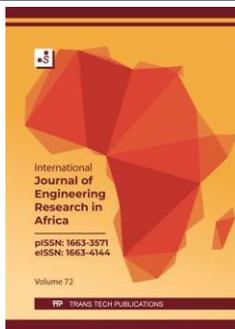
This special edition presents a series of research results in material science, nanotechnologies and sustainable chemical production, giving readers an idea about the formation processes of modern industries. We hope this edition will inspire readers to further their knowledge and contribute to the evolving landscape of materials science and engineering.

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

Keywords: Amino Acid-Based Crystals, Corrosion Resistance, Friction Stir Processing, Green Synthesis, Magnesium Alloy, Nanodots, Nanomaterials, Nanoparticles, Nanotechnologies, Photonic Materials

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International Journal of Engineering Research in Africa Vol. 72

Edited by: Prof. Akii Okonigbon Akaehomen Ibadode

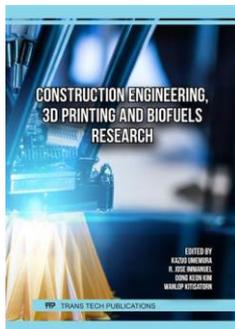
The 72nd volume of the journal is dedicated to actual issues and engineering decisions in corrosion protection, research and design in mechanical engineering, power electronics, investigations of green building materials properties, geological research and comparison of two modelling methodologies in flood risk assessment. The presented research results and engineering solutions will be useful to a wide range of specialists in the mentioned fields of engineering science.

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

Keywords: Aluminide Coating, Converter, Corrosion Protection, Flood Risk Assessment, Geology, Geopolymer, Green Building Materials, Inertial Conveyor, Lithology, Magnet Motor, Morphometric Analysis, Reinforced Concrete Frame Building, Seismic Performance, Solar Radiation Flux

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Construction Engineering, 3D Printing and Biofuels Research

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura, Prof. R. Jose Immanuel, Prof. Dong Keon Kim and Wanlop Kitisatorn

The presented special edition is based on research results in diverse fields of materials science and engineering, giving readers insights into advanced materials and transformative technologies shaping the modern world. Focusing on the development of technology and the synthesis of new materials that transform our approaches to solving many engineering problems it will be a valuable source for many specialists whose professional activities contribute to the sustainable development of the designated areas of engineering.

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

Keywords: 3D Printing, Biodiesel, Building Materials, Solar Desalination, Structural Mechanics

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Materials for Engineering, Food and Biomedical Applications, Sustainable Technologies and Waste Recycling

Special topic volume with invited peer-reviewed papers only

Edited by: Duc Hoa Nguyen, Mykola Surianinov, Wanlop Kitisatorn, Ali Alnaser and Prof. Jong Wan Hu

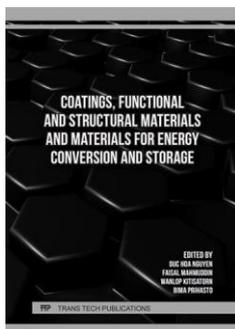
Materials science and processing technologies play a pivotal role in addressing technical challenges and fostering innovation across diverse industries. This special edition provides the results of multidisciplinary explorations on key topics in the area of materials that shape modern advancements in engineering and will be useful to many specialists in materials science, machinery, chemical and biomedical engineering and construction.

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

Keywords: Biomaterials, Concrete, Food Technology, Leaching, Magnetic Nanoparticles, Mechanical Properties, Mechanics of Structures, Metallurgy, Soil Stabilisation, Structural Engineering, Waste Recycling

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Coatings, Functional and Structural Materials and Materials for Energy Conversion and Storage

Special topic volume with invited peer-reviewed papers only

Edited by: Duc Hoa Nguyen, Dr. Faisal Mahmuddin, Wanlop Kitisatorn and Bima Prihasto

This special edition introduces the results of groundbreaking research across four areas of materials engineering: materials for functional applications, materials for energy conversion and energy storage devices, corrosion behaviour and functional coatings of structural materials, and the strength of materials and structural mechanics. The edition will be useful to specialists in materials science, machinery, electronics and structural engineering.

Topics: Electronics, Materials Science, Mechanics, Nanoscience

Keywords: Brass, Carbon Nanomaterials, Coating, Corrosion, Electrode Materials, Electromechanical Properties, Mechanical Properties, Moiré Lattices, Photonics, Steel, Strength of Materials, Surface Damage, Zinc Oxide

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Engineering and Technological Solutions in Materials Science

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Noto Susanto Gultom, Dr. Risa Suryana and Assoc. Prof. Anna Safitri

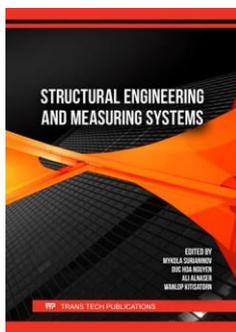
From pioneering materials to innovative technologies, each chapter of this special edition explores the achievements and possibilities within specialised areas of engineering science. The presented research results and engineering solutions will be useful to a wide range of specialists involved in materials science, chemical technologies, machinery and environmental engineering.

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

Keywords: Biomaterials, Calcium Hydroxide, Chemical Engineering, Computational Materials Science, Machine Design, Membrane, Nanocomposite, Nanoparticle, Pectin, Polymer, Polysulfone, Pore Agent, Remote Sensing, Spatial Interpolation, Taguchi Method, Tire-Terrain Interaction

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Structural Engineering and Measuring Systems

Special topic volume with invited peer-reviewed papers only

Edited by: Mykola Surianinov, Duc Hoa Nguyen, Ali Alnaser and Wanlop Kitisatorn

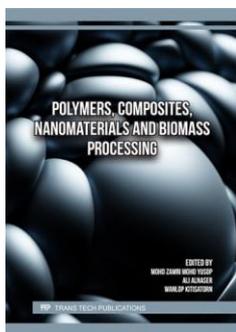
This special edition is dedicated to research results in structural engineering and measurement systems and aims to serve as a valuable resource for students, researchers, and the engineering community whose activity is related to the mentioned branches of engineering.

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

Keywords: Biosensors, Honeycomb Lattice, Magnetite Nanoparticles, Measurement, Mechanical Properties, Slope Stability, Software Tool, Stress Corrosion, Structural Engineering, Structure Mechanics

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Polymers, Composites, Nanomaterials and Biomass Processing

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Mohd Zamri Mohd Yusop, Ali Alnaser and Wanlop Kitisatorn

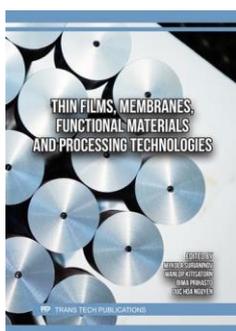
This special edition presents the results of cutting-edge research and developments across diverse fields of materials science and highlights the innovative approaches driving progress in modern materials engineering. We hope that this edition will serve as an inspiration and resource for researchers, practitioners, and students eager to advance the frontiers of this dynamic field.

Topics: Building Materials, Materials Science, Mechanics, Nanoscience

Keywords: Biomass Processing, Bleaching, Building Materials, Composite, Esterification, Mechanical Properties, Nanoparticles, Polymer, Surfactant

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Thin Films, Membranes, Functional Materials and Processing Technologies

Special topic volume with invited peer-reviewed papers only

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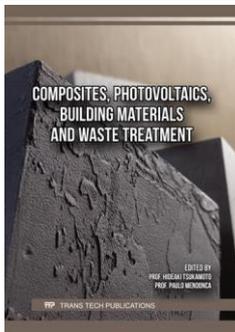
The breadth of topics covered in this special edition underscores the vital role of materials science in shaping our technological future. We hope that this special edition will serve as an inspiration and resource for researchers, practitioners, and students eager to advance the frontiers of this dynamic field.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Alloy, Composite, Forming, Functional Materials, Mechanical Properties, Membranes, Polymer, Steel, Thin Films, Welding

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Composites, Photovoltaics, Building Materials and Waste Treatment

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Hideaki Tsukamoto and Prof. Paulo Mendonca

The articles included in this special edition explore composites, materials for photovoltaic application, waste treatment and environmental remediation, building materials, and manufacturing processes, showcasing a spectrum of solutions that address contemporary challenges while shaping a sustainable future. This edition is a useful resource for researchers, practitioners, and students seeking a comprehensive understanding of the innovative technologies and methodologies shaping the future of engineering and materials science.

Topics: Building Materials, Manufacturing, Materials Science, Mechanics

Keywords: Absorption, Building Materials, Composite, Concrete, Deep Eutectic Solvent, Environmental Remediation, Machining, Manufacturing Process, Photovoltaics, Solar Cell, Thermal Insulation, Waste Treatment

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Edited by: Duc Hoa Nguyen, Dr. Mohd Zamri Mohd Yusop, Mykola Surianinov and Ali Alnaser

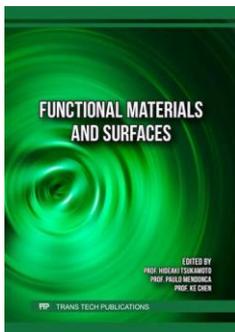
This special edition contains articles based on the results of research and engineering developments in applied materials and technologies offering insights into both fundamental properties and practical applications. We hope that this special edition will be a useful resource for researchers, practitioners, and students whose professional activity is related to materials engineering.

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

Keywords: Alloy, Aluminum, Biomaterials, Composite, Drug Delivery, Friction Stir Processing, Nanoparticles, Phytoremediation, Spark Plasma Sintering, Titanium, Waste Recycling, Wastewater Treatment

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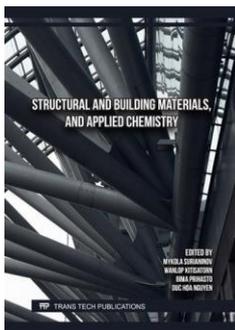
This special edition presents research results in three critical areas of materials engineering: polymers and composites, functional materials, corrosion, protective coatings, and surface treatment and is an essential resource for researchers, engineers, and students seeking to deepen their knowledge in these areas.

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

Keywords: Biopolymer, Calcium Carbonate, Coating, Composite, Corrosion Resistance, Functional Materials, Graphene Ink, Graphene Oxide, Luminescence, Phase Change Material, Polymer, Silica-Coating, Steel, Thermosets, Zinc Oxide

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Structural and Building Materials, and Applied Chemistry

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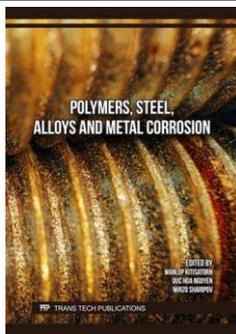
This special edition brings together an exploration of materials and their application methods in diverse branches, spanning from construction and machinery to food chemistry. It will be helpful to many specialists in the above-mentioned branches of manufacturing.

Topics: Building Materials, Manufacturing, Materials Science, Mechanics

Keywords: Additive Manufacturing, Biocomposite, Biopolymer, Building Materials, Cement, Composite, Concrete, Food Chemistry, High Entropy Alloy, Mechanical Properties, Polymer, Rubber, Steel

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Polymers, Steel, Alloys and Metal Corrosion

Special topic volume with invited peer-reviewed papers only

Edited by: Wanlop Kitisatorn, Duc Hoa Nguyen and Dr. Mirzo Sharipov

This special edition delves into three pivotal areas of materials research: structural steel and alloys, corrosion behaviour of metal materials and modern polymer materials, providing valuable insights into the properties, functionality, and possible methods of applications. We hope this special edition will serve readers as a resource and an inspiration for further exploration in the field of materials science.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Biopolymer, Corrosion, Electrochemical Analysis, Electrospinning, Mechanical Properties, Melting, Nanofibers, Polymer, Rubber, Steel, Stress Corrosion Cracking, Superalloy, Wear Resistance

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Waste Treatment and Materials for Advanced Application

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Edited by: Prof. Sugianto Sugianto, Thangaprakash Sengodan and Dr. Pragathi Bellamkonda Rao

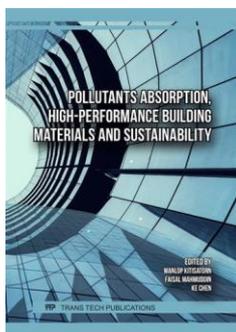
This special edition presents the results of cutting-edge research and engineering solutions across diverse materials science and processing technology domains, offering valuable knowledge and data for researchers, practitioners, and students working to solve challenges in these interdisciplinary fields.

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

Keywords: Biocomposite, Biomass Treatment, Borate Glass, Ceramics, Dental Cement, Dielectric Properties, Mechanical Properties, Metal Matrix Composite, Optical Properties, Photoluminescence Properties, Steel, Waste Treatment, Wire Electro-Discharge Machining

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Pollutants Absorption, High-Performance Building Materials and Sustainability

Special topic volume with invited peer-reviewed papers only

Edited by: Wanlop Kitisatorn, Dr. Faisal Mahmuddin and Prof. Ke Chen

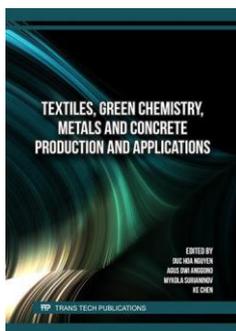
The civil engineering and environmental engineering fields continue to evolve rapidly, driven by imperatives of sustainability and innovation. The articles compiled in this special edition reflect the results of cutting-edge research and practical engineering decisions in domains of sustainable and high-performance building materials, geotechnical engineering and pollutant absorption technologies. We hope this special edition will serve as a valuable resource for academics, professionals, and students seeking insights into the transformative advancements shaping our built and natural environments.

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

Keywords: Bitumen, Concrete, Dust Stone, Fly Ash, Gap-Graded Sands Erosion, Geopolymer, Geotechnical Engineering, Green Building Materials, Lead Adsorption, Membrane, Oil Absorption, Phase Change Material, Pollutant Absorption, Polymer, Sea Sand, Soft Soil Subgrade, Tire Crumb

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Textiles, Green Chemistry, Metals and Concrete Production and Applications

Special topic volume with invited peer-reviewed papers only

Edited by: Duc Hoa Nguyen, Assoc. Prof. Dr. Agus Dwi Anggono, Mykola Surianinov and Prof. Ke Chen

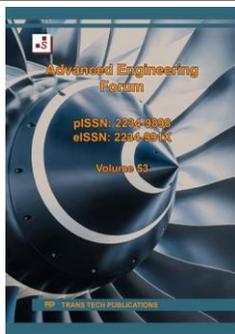
This special edition presents diverse explorations in materials science, processing and synthesis technologies, building materials and textile production highlighting sustainable and innovative solutions that define the future of industry and construction.

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

Keywords: Alloy, Cast Iron, Concrete, Concrete Protection, Cotton Fabric, Green Chemistry, Knitted Fabric, Mechanical Properties, Polymer, Quenching, Steel, Textile, Welding, Wool Yarn

Prices: Print: **US\$ 155.00/ EUR 155.00** Print: 978-3-0364-0452-3
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 eBook Multi-User: **US\$ 271.00/ EUR 271.00** 150 pages, 2024

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Advanced Engineering Forum Vol. 53

Edited by: Prof. Dumitru Nedelcu, Prof. Mikkel K. Kragh and Nicușor Alin Sirbu

This 53rd volume of the journal includes articles introducing the latest engineering research results and solutions in structural materials, building materials and analysis of the effect of fire on metal structure performance, urban planning and transportation, energy supply and machinery. This volume will be helpful to many engineers in urban planning and transportation, machinery, power engineering and construction industry.

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

Keywords: Cement Replacing, Daily Load Curve, Failures, Fire Effects, Gas Supply Pipeline, Geopolymer, Hardfacing, Heat-Affected Zone, Mechanical Engineering, Mechanics, Natural Daylight, Photovoltaic Energy Conversion, Power Supply Conditions, Steel, Steel Structure, Surface Coating, Techno-Economic Evaluation, Tool Life, Transportation, Wear Resistance

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0712-8
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1712-7
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 132 pages, 2024

<https://www.scientific.net/978-3-0364-0712-8/book>



Membranes, Special Materials and Technologies for Different Application

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Ke Chen, Assoc. Prof. Dr. Agus Dwi Anggono, Wanlop Kitisatorn and Prof. Sugianto Sugianto

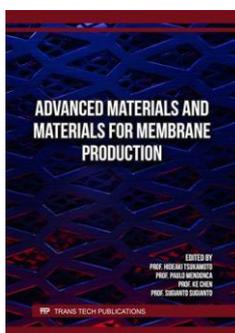
This special edition presents a collection of research results in materials and materials processing technologies and will be a useful resource for academics, professionals, and students, fostering new ideas and advancements across the mentioned fields of study.

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

Keywords: Biomaterials, Biopolymer, Cement, Composite, Grinding Wheel, Lightweight Concrete, Membrane, Membrane Technologies, Microwave Absorption, Platform Jacket Structure, Polymer, Porous Structure, Shape Memory Epoxy Resin, Structural Stealth Material, Structure Reliability, Wastewater Treatment, Zinc Ferrite

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 eBook Multi-User: **US\$ 228.00/ EUR 228.00** 128 pages, 2024

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Advanced Materials and Materials for Membrane Production

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Hideaki Tsukamoto, Prof. Paulo Mendonca, Prof. Ke Chen and Prof. Sugianto Sugianto

This special edition offers a series of engineering explorations in materials science and materials processing technologies and could serve as a valuable resource for researchers, engineers, and practitioners, inspiring innovation and collaboration in tackling the technical and technological challenges of the future.

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

Keywords: Alloy, Building Materials, Concrete, Geopolymer, Induction Melting, Magnetic Properties, Mechanical Properties, Membrane, Mortar, Polymer, Steel, Superalloy, Welding

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0704-3
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 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 134 pages, 2024

<https://www.scientific.net/978-3-0364-0704-3/book>



Magnetic Materials, Surface Treatment and Advanced Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Ke Chen, Wanlop Kitisatorn and Amjad Ali

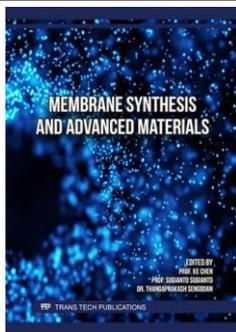
This special edition contains articles based on research results and developments in materials science, focusing on polymers and composites, magnetic materials, analysis of corrosion resistance, protective coatings, and surface treatment, and is an important resource for researchers, practitioners, and students interested in understanding and leveraging the latest advancements in materials science and engineering.

Topics: Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Coating, Composite, Corrosion, Hexaferrites, Laser Quenching, Magnetic Properties, Mechanical Properties, Nanoparticles, Polymer, Steel, Surface Treatment

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0713-5
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 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 120 pages, 2024

<https://www.scientific.net/978-3-0364-0713-5/book>



Membrane Synthesis and Advanced Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Ke Chen, Prof. Sugianto Sugianto and Thangaprakash Sengodan

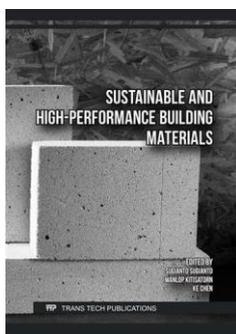
This special publication contains a selection of articles based on research results in applied materials science and analysis of diverse materials applications and will inspire the development of both academic and industrial progress, fostering collaboration and innovation to meet the challenges of the 21st century.

Topics: Materials Science, Mechanics

Keywords: Alloy, Biopolymer, Casting, Composite, Mechanical Properties, Membrane, Polymer, Steel, Thermal Characteristics, Welding

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0703-6
 eBook Single-User: **US\$ 120.00/ EUR 120.00** eBook: 978-3-0364-1703-5
 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 130 pages, 2024

<https://www.scientific.net/978-3-0364-0703-6/book>



Sustainable and High-Performance Building Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Sugianto Sugianto, Wanlop Kitisatorn and Prof. Ke Chen

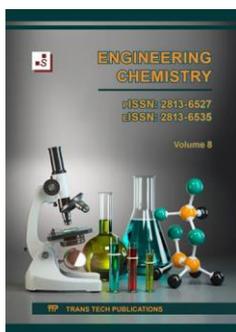
This special edition is dedicated to modern building materials, focusing on innovations that address the pressing needs of modern infrastructure and sustainability development of the construction branch and is a comprehensive resource for researchers, engineers, and students from the area of construction engineering, offering insights into how innovative materials and technologies are driving progress in resilient infrastructure development.

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

Keywords: Additive, Composite, Concrete, Construction, Geotechnical Engineering, Green Building Materials, High-Performance Concrete, Mechanical Properties, Reinforcement, Sea Sand, Seawater, Soil Stabilisation

Prices: Print: **US\$ 130.00/ EUR 130.00** Print: 978-3-0364-0708-1
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 eBook Multi-User: **US\$ 228.00/ EUR 228.00** 138 pages, 2024

<https://www.scientific.net/978-3-0364-0708-1/book>



Engineering Chemistry Vol. 8

Edited by: Prof. Patrizia Bocchetta, Prof. Citlalli Gaona-Tiburcio, Prof. Sugianto Sugianto and Prof. Karna Wijaya

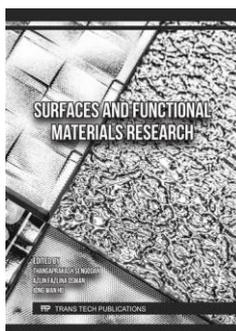
The 8th volume of the journal "Engineering Chemistry" includes articles based on research results related to the synthesis of materials used to solve pollutant removal problems. Technologies of pollutant removal, analysis of water and air treatment efficiency, modelling corresponding chemical processes, etc., are also the topics of this journal's issue. This volume will be topical for specialists in the chemistry of environmental protection.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Absorbent, Bentonite, Binary Adsorption Kinetics, Biopolymer, Biosorbent, Carbon Dioxide, Cellulose, Chitosan, Graphene Oxide, Heavy Metals, Pollutant Removal, Serpentine Rock

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0706-7
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 eBook Multi-User: **US\$ 0.00/ EUR 0.00** 88 pages, 2024

<https://www.scientific.net/978-3-0364-0706-7/book>



Surfaces and Functional Materials Research

Special topic volume with invited peer-reviewed papers only

Edited by: Thangaprakash Sengodan, Azlin Fazlina Osman and Prof. Jong Wan Hu

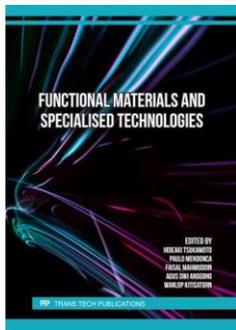
This special edition presents the latest research results in the dynamic field of materials science and materials processing techniques. The edition is structured to offer readers results of a well-rounded exploration of both foundational concepts and emerging advancements across these areas.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Coating, Composite, Corrosion, Functional Materials, Graphene Oxide, Machining, Mechanical Properties, Mesoporous Silica Nanoparticles, Nanofluid, Polymer, Steel, Surface Treatment

Prices: Print: **US\$ 140.00/ EUR 140.00** Print: 978-3-0364-0702-9
 eBook Single-User: **US\$ 140.00/ EUR 140.00** eBook: 978-3-0364-1702-8
 eBook Multi-User: **US\$ 245.00/ EUR 245.00** 156 pages, 2024

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Functional Materials and Specialised Technologies

Special topic volume with invited peer-reviewed papers only

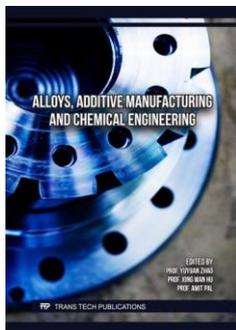
Edited by: Prof. Hideaki Tsukamoto, Prof. Paulo Mendonca, Dr. Faisal Mahmuddin, Assoc. Prof. Dr. Agus Dwi Anggono and Wanlop Kitisatorn

This special edition highlights recent advancements in investigations into materials science and technology development, focusing on pivotal features shaping the progress of modern industry and is a helping resource for researchers, engineers, and students whose activity is related to the mentioned fields of engineering.

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

Keywords: 3D Printing Filament, Biocomposite, Biodiesel, Biopolymer, Composite, Electrochemical Water Treatment, Extraction, Mechanical Properties, Melanin, Metal Matrix Composite, Polymer, Silicene Nanoribbons, Thermal Properties, Ultrasonic Cavitation

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Alloys, Additive Manufacturing and Chemical Engineering

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Yuyuan Zhao, Prof. Jong Wan Hu and Prof. Amit Pal

This special edition guides the research results of materials science, engineering, and manufacturing technologies and will be useful to many specialists in machinery and chemical engineering.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Additive Manufacturing, Alloy, Cast Iron, Casting, Chemical Engineering, Clay, Fluid Dynamics, High Entropy Alloy, Mechanical Properties, Polymer, Steel, Wastewater Treatment

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0701-2
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Journal of Nano Research Vol. 86

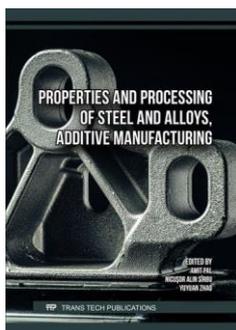
Edited by: Dr. Wanisa Abdussalam-Mohammed and Amjad Ali

This volume of the "Journal of Nano Research" contains peer-reviewed articles reflecting the practical research results in the synthesis, properties analysis and applications techniques of nanomaterials for various engineering goals - photocatalytic applications, micro- and optoelectronics, photovoltaic and electrochemical use and energy storage devices, for applications in biomedicine, creating protective coatings, etc. The presented articles collection will be helpful to specialists from many branches of engineering whose activity is related to nanomaterials and nanotechnologies.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Graphene Oxide, Hybrid Nanofluid, Magnetic Hyperthermia, Magnetic Properties, Metal Oxide, Nanocomposite, Nanohybrids, Nanomechanical Properties, Nanotube, Optical Properties, Photoluminescence, Thin Film

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0698-5
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Properties and Processing of Steel and Alloys, Additive Manufacturing

Special topic volume with invited peer-reviewed papers only

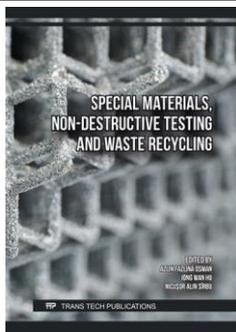
Edited by: Prof. Amit Pal, Nicușor Alin Sîrbu and Prof. Yuyuan Zhao

Advancements in materials science and materials processing technologies are pivotal in developing innovative solutions across industries. The rapid evolution of processing techniques, coupled with the demand for enhanced material performance, has created a fertile ground for wide explorations and engineering refinements in this sphere. We hope this special edition will inspire further innovation and exploration in the fascinating and ever-evolving fields of applied materials science and materials processing technologies.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Abrasive Waterjet Cutting, Additive Manufacturing, Alloy, Clinch Joints, Engraving, Mechanical Properties, Powder Compacting, Steel, Wire, Wire Rope

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<https://www.scientific.net/978-3-0364-0679-4/book>



Special Materials, Non-Destructive Testing and Waste Recycling

Special topic volume with invited peer-reviewed papers only

Edited by: Azlin Fazlina Osman, Prof. Jong Wan Hu and Nicușor Alin Sirbu

The impetuous pace of technological advancement and the increasing demand for sustainable solutions have propelled innovation across diverse fields of materials science and engineering. The research results in this special edition reflect these trends, offering cutting-edge engineering solutions and their application methods.

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

Keywords: Biocomposite, Construction, Drilling Fluid, Gallium Arsenide, Non-Destructive Testing, Polymer, Solar Cell, Waste Recycling

Prices: Print: **US\$ 125.00/ EUR 125.00** Print: 978-3-0364-0680-0
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Functional and Special Materials and their Application

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Yuyuan Zhao, Thangaprakash Sengodan, Prof. Jong Wan Hu and Nicușor Alin Sirbu

The rapid advancement of science and technology has defined the vital role of materials science and engineering in shaping modern industries and addressing pressing global challenges of technical and technological progress. This special edition reflects the multifaceted nature of these disciplines, encompassing cutting-edge research and practical applications.

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

Keywords: Alloy, Cermet, Composite, Crack Orientation, Failure Analysis, Friction Stir Welding, Machine Design, Mechanical Properties, Nanoantenna, Nanofibers, Optical Properties, Plasmonic Material, Polymer, Steel, Thermal Diffusion, Thin Film, Vertical Directional Solidification

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Journal of Nano Research Vol. 85

Edited by: Dr. Wanisa Abdussalam-Mohammed and Amjad Ali

The presented volume collects peer-reviewed articles that mirror the results of scientific research and engineering solutions in the area of applied nanomaterials and nanotechnologies used in mechanical engineering, microelectronics, biomedicine, pharmacology, etc. This edition will be interesting to specialists in applied nanomaterials and nanotechnologies in many branches of production.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Antimicrobial Properties, Antioxidant Activity, Drug Delivery, Graphene Oxide, Green Synthesis, Mechanical Properties, Nanocomposite, Nanofibrils, Silver Nanoparticles, Solid Lipid Nanoparticle

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0119-5
 eBook Single-User: **US\$ 100.00/ EUR 100.00** eBook: 978-3-0364-1119-4
 eBook Multi-User: **US\$ 175.00/ EUR 175.00** 84 pages, 2024

<https://www.scientific.net/978-3-0364-0119-5/book>



Book of Abstracts from the 10th International Scientific Conference on Advances in Mechanical Engineering (ISCAME 2024)

Edited by: Mihály Csüllög and Dr. Tamás Mankovits

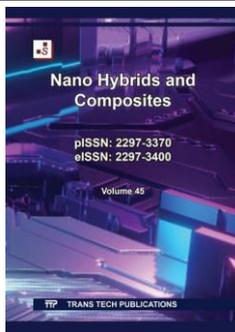
The 10th International Scientific Conference on Advances in Mechanical Engineering (ISCAME, November 7-9, 2024, Debrecen, Hungary) was organized by the Department of Mechanical Engineering (Faculty of Engineering, University of Debrecen), the Working Commission of Mechanical Engineering (Specialized 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 yearly bring together engineers, scientists, researchers, practitioners from academia and industry to present their original works and share experiences regarding all aspects of mechanical engineering sciences.

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

Keywords: Additive Manufacturing, Alloy, Ceramics, Composite, Construction, Die Casting, Engineering Management, Heat Transfer, Machine Design, Machining Technology, Mechanical Engineering, Mechanical Properties, Polymer, Steel, Thermal Insulation Materials

Prices: Print: **US\$ 195.00/ EUR 195.00** Print: 978-3-0364-0660-2
 eBook Single-User: **US\$ 195.00/ EUR 195.00** eBook: 978-3-0364-1660-1
 eBook Multi-User: **US\$ 341.00/ EUR 341.00** 234 pages, 2024

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Nano Hybrids and Composites Vol. 45

Edited by: Dr. Risa Suryana and Prof. Karna Wijaya

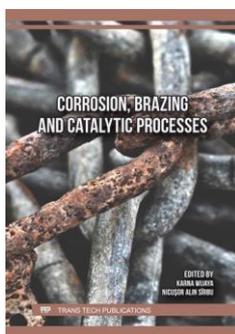
The articles that are collected in this edition analyse the latest research results in functional nanomaterials and advanced polymers and composites. The synthesis methods and processing techniques of metal oxide nanoparticles for sensing, dye degradation and absorption, biobased polymers and composites for various applications, including biomedicine and construction, etc., are the topics of this journal volume.

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

Keywords: Composite, Dye Removing, Geopolymer, Green Synthesis, Hydrogel, Metal Oxides, Nanomaterials, Nanoparticles, Polymer, Rubber

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0692-3
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 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 136 pages, 2024

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Corrosion, Brazing and Catalytic Processes

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Karna Wijaya and Nicușor Alin Sirbu

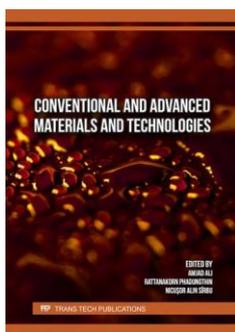
This special edition presents research and development results in important areas of materials science and will be a useful referential resource for many specialists.

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

Keywords: Brazing, Catalyst, Catalytic Processes, Coating, Computational Materials Science, Corrosion Inhibition, Corrosion Protection, Crystallographic Texture, First-Principle Calculation, Numerical Modelling, Perovskite Solar Cell, Silica Catalyst, Soldering, Steel, Synthesis

Prices: Print: **US\$ 135.00/ EUR 135.00** Print: 978-3-0364-0689-3
 eBook Single-User: **US\$ 135.00/ EUR 135.00** eBook: 978-3-0364-1689-2
 eBook Multi-User: **US\$ 236.00/ EUR 236.00** 168 pages, 2024

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Conventional and Advanced Materials and Technologies

Special topic volume with invited peer-reviewed papers only

Edited by: Amjad Ali, Assoc. Prof. Dr. Rattanakorn Phadungthin and Nicușor Alin Sirbu

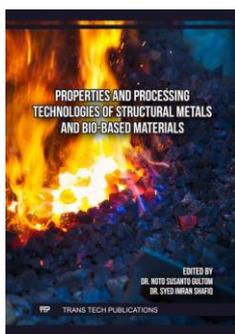
This special edition is dedicated to two domains: i) analysing properties and processing technologies of structural metals and ii) environmental remediation materials and technologies, each contributing uniquely to the progress of sustainable development.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Cavitation Resistance, Ceramics, Composite, Friction Stir Welding, Heat Treatment, High Entropy Alloy, Horizontal Centrifugal Casting, Mechanical Properties, Non-Ferrous Alloy, Photocatalytic Properties, Pollutant Removal, Steel, Wastewater Treatment, Welding

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0684-8
 eBook Single-User: **US\$ 120.00/ EUR 120.00** eBook: 978-3-0364-1684-7
 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 130 pages, 2024

<https://www.scientific.net/978-3-0364-0684-8/book>



Properties and Processing Technologies of Structural Metals and Bio-Based Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Noto Susanto Gultom and Dr. Syed Imran Shafiq

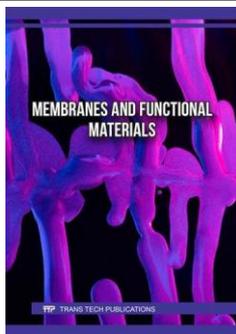
This special edition presents the latest research results in materials science, focusing on structural metals and bio-based materials and is intended for engineers and researchers who seek to deepen their knowledge in the mentioned branches of materials science.

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

Keywords: Alloy, Bio-Based Materials, Biocarrier, Chitosan, Hot Forging, Lap Joint, Leaf Extract, Milling, Moving Bed Biofilm Reactor, Nanoemulsion, Natural Preservative, Steel

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0318-2
 eBook Single-User: **US\$ 100.00/ EUR 100.00** eBook: 978-3-0364-1318-1
 eBook Multi-User: **US\$ 175.00/ EUR 175.00** 106 pages, 2024

<https://www.scientific.net/978-3-0364-0318-2/book>



Membranes and Functional Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Risa Suryana, Dr. Noto Susanto Gultom and Dr. Syed Imran Shafiq

This special edition presents research results in three important spheres of materials science: membranes and membrane technologies, functional materials, and composites; it can serve as a valuable informative resource for researchers and engineers.

Topics: Materials Science, Mechanics, Nanoscience

Keywords: Biosynthesis, Composite, Gold Nanoparticles, Mechanical Properties, Membrane, Membrane Technology, Peat Water Treatment, Polymer, Porous Silicon, Wastewater Treatment

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0686-2
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 eBook Multi-User: **US\$ 175.00/ EUR 175.00** 84 pages, 2024

<https://www.scientific.net/978-3-0364-0686-2/book>



Composite Materials, Building Materials and Additive Manufacturing

Special topic volume with invited peer-reviewed papers only

Edited by: Assoc. Prof. Dr. Rattanakorn Phadunghin

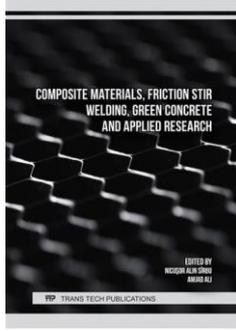
The impact of materials engineering is felt across industries, from high-tech manufacturing and biomedicine to sustainable construction. This special edition is dedicated to reviewing recent advancements in the area of materials research and technologies of their synthesis and processing.

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

Keywords: Additive Manufacturing, Amorphous Silica, Building Materials, Composite, Graphene, Green Concrete, Mechanical Properties, Nanocomposite, Nanomaterials, Organic Light-Emitting Diode, Polymer, Steel, Wire Arc Additive Manufacturing

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0685-5
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1685-4
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 130 pages, 2024

<https://www.scientific.net/978-3-0364-0685-5/book>



Composite Materials, Friction Stir Welding, Green Concrete and Applied Research

Special topic volume with invited peer-reviewed papers only

Edited by: Nicușor Alin Sîrbu and Amjad Ali

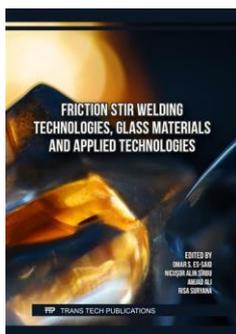
This special edition presents the results of cutting-edge research across diverse fields of material science and engineering, highlighting advances that are shaping modern manufacturing and will be helpful to a wide range of engineers and researchers.

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

Keywords: Aluminum Alloy, Carbon Fiber Reinforced Plastic Composite, Carbon Nanotube, Friction Stir Welding, Green Concrete, Mechanical Properties, Shot Peening, Solar Cell, Thermal Conductive Silicone

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0677-0
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Friction Stir Welding Technologies, Glass Materials and Applied Technologies

Special topic volume with invited peer-reviewed papers only

Edited by: Nicușor Alin Sîrbu, Amjad Ali and Dr. Risa Suryana

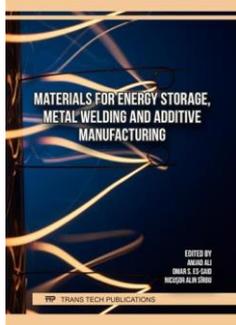
The synergy of advanced materials and technologies stands at the forefront of innovation, driving transformative changes across manufacturing industries and engineering disciplines. This special edition is a comprehensive resource that delves readers into key areas of materials science and engineering, offering both foundational knowledge and insights into effective engineering solutions.

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

Keywords: Aluminium Alloy, Electrochemical Devices, Electrode Materials, Frictions Stir Welding, Heat Transfer, Honeycomb Structures, Mechanical Properties, Nanofluid, Tellurite Glasses, Thermal Imaging, Thermal Management

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0675-6
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Materials for Energy Storage, Metal Welding and Additive Manufacturing

Special topic volume with invited peer-reviewed papers only

Edited by: Amjad Ali and Nicușor Alin Sîrbu

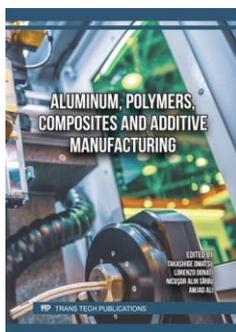
This special edition presents readers with the results of cutting-edge research and engineering solutions in the fields of materials science and processing technologies, which play an essential role in modern manufacturing development.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Alloy, Ceramics, Corrosion, Electrochemical Performance, Electrode Materials, Friction Stir Welding, Perovskite, Post-Processing, Shot Peening, Solar Cell, Steel, Welding

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0676-3
 eBook Single-User: **US\$ 115.00/ EUR 115.00** eBook: 978-3-0364-1676-2
 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 120 pages, 2024

<https://www.scientific.net/978-3-0364-0676-3/book>



Aluminum, Polymers, Composites and Additive Manufacturing

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Takashige Omatu, Prof. Lorenzo Donati, Nicușor Alin Sîrbu and Amjad Ali

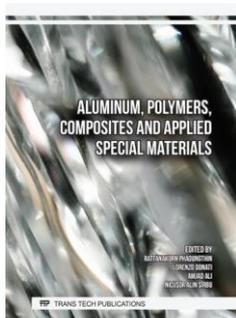
This special edition is crafted to share research results in three important areas in materials engineering: aluminum and its alloys, additive manufacturing, and polymers and composites. We hope this book will serve as both a reference and a source of inspiration for investigations in the field of materials and technology.

Topics: Manufacturing, Materials Science

Keywords: Aging Time, Aluminum, Aluminum Alloys, Composite, Extrusion, Homogenization Cycle, Hot Rolling, Mechanical Properties, Natural Rubber, Polymer, Thermal Degradation

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0682-4
 eBook Single-User: **US\$ 115.00/ EUR 115.00** eBook: 978-3-0364-1682-3
 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 126 pages, 2024

<https://www.scientific.net/978-3-0364-0682-4/book>



Aluminum, Polymers, Composites and Applied Special Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Assoc. Prof. Dr. Rattanakorn Phadungthin, Prof. Lorenzo Donati, Amjad Ali and Nicușor Alin Sîrbu

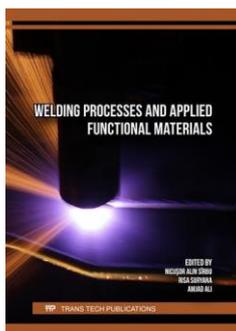
In a world driven by technological innovation, materials are the foundation upon which new possibilities are built. This special edition invites readers to explore the research results on advanced materials, from structural and specialised polymers and composites and various functional materials to high-performance aluminum alloys.

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

Keywords: Aluminum, Aluminum Alloys, Anodizing, Chemical Mechanical Polishing, Composite, Friction Stir Welding, Functional Materials, Mechanical Properties, Phase Change Materials, Polymer, Viscosity

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0683-1
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 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 108 pages, 2024

<https://www.scientific.net/978-3-0364-0683-1/book>



Welding Processes and Applied Functional Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Nicușor Alin Sîrbu, Dr. Risa Suryana and Amjad Ali

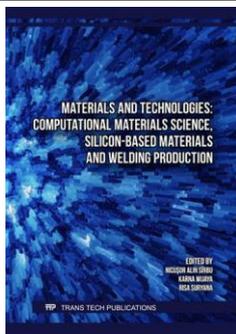
This special edition represents the results of recent advancements in material science, showcasing its vital role across diverse fields such as manufacturing technology and biomedicine. The publication will be useful for researchers and engineers of the mentioned branches.

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

Keywords: Biomaterials, Brazing, Ceramics, Composite, Copper, Dissimilar Metal Welding, Functional Materials, Mechanical Properties, Metal-Organic Frameworks, Nematic Liquid Crystal, Perovskite, Polymer, Shape Memory Alloy, Steel, Welding Processes

Prices: Print: **US\$ 125.00/ EUR 125.00** Print: 978-3-0364-0527-8
 eBook Single-User: **US\$ 125.00/ EUR 125.00** eBook: 978-3-0364-1527-7
 eBook Multi-User: **US\$ 219.00/ EUR 219.00** 138 pages, 2024

<https://www.scientific.net/978-3-0364-0527-8/book>



Materials and Technologies: Computational Materials Science, Silicon-based Materials and Welding Production

Special topic volume with invited peer-reviewed papers only

Edited by: Nicușor Alin Sîrbu, Prof. Karna Wijaya and Dr. Risa Suryana

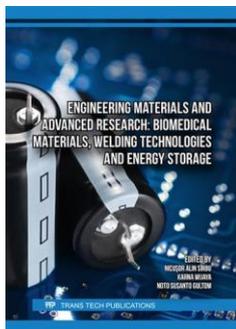
The ever-evolving field of material science stands at the forefront of technological progress, addressing challenges and opportunities across diverse production sectors. This special edition aims to serve as a valuable resource for researchers, engineers, and students whose activities are related to materials and technologies.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Absorbent, Computational Materials Science, Density Functional Theory, Electrochemical Anodisation, First-Principle Calculation, Mechanical Properties, Porous Materials, Silicon-Based Materials, Welded Structure, Welding

Prices: Print: **US\$ 145.00/ EUR 145.00** Print: 978-3-0364-0394-6
 eBook Single-User: **US\$ 145.00/ EUR 145.00** eBook: 978-3-0364-1394-5
 eBook Multi-User: **US\$ 254.00/ EUR 254.00** 168 pages, 2024

<https://www.scientific.net/978-3-0364-0394-6/book>



Engineering Materials and Advanced Research: Biomedical Materials, Welding Technologies and Energy Storage

Special topic volume with invited peer-reviewed papers only

Edited by: Nicușor Alin Sîrbu, Prof. Karna Wijaya and Dr. Noto Susanto Gultom

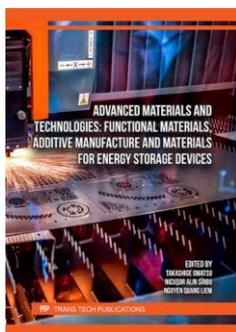
The special edition presents a curated selection of current results in materials research and technology developments, offering insights into how these advancements ensure the sustainable development of modern production. The presented publication will serve as an inspiring resource for researchers, engineers, and students eager to contribute to the advancement of materials science and modern technologies.

Topics: Bioscience and Medicine, Manufacturing, Materials Science

Keywords: Activated Carbon, Antimicrobial Properties, Antioxidant, Corrosion, Electrode Materials, Mechanical Properties, Mineral Processing, Pharmacology, Silver Nanoparticles, Spot Welding, Steel, Supercapacitor, Welding

Prices: Print: **US\$ 125.00/ EUR 125.00** Print: 978-3-0364-0392-2
 eBook Single-User: **US\$ 125.00/ EUR 125.00** eBook: 978-3-0364-1392-1
 eBook Multi-User: **US\$ 219.00/ EUR 219.00** 142 pages, 2024

<https://www.scientific.net/978-3-0364-0392-2/book>



Advanced Materials and Technologies: Functional Materials, Additive Manufacture and Materials for Energy Storage Devices

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Takashige Omatsu, Nicușor Alin Sîrbu and Nguyen Quang Liem

The demand for advanced materials constantly grows, unlocking new technological capabilities that drive industrial progress. This special edition comprehensively looks at the research results in some pivotal areas of materials science that are shaping the future of production.

Topics: Manufacturing, Materials Science, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Composite, Electrolyte, Friction Stir Welding, Functional Materials, Luminescence Properties, Mechanical Properties, Nanoparticles, Polymer, Polyol Synthesis, Quantum Dots

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0681-7
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 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 106 pages, 2024

<https://www.scientific.net/978-3-0364-0681-7/book>



Luminophores and Resistant Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh and Jav Davaasambuu

This special edition brings together cutting-edge research results and insights in two areas of materials science: luminescence materials and technologies and materials for fire protection and fire resistance. The presented research results will be useful to researchers and engineers in mechanical engineering, construction and optoelectronics.

Topics: Building Materials, Materials Science, Mechanics, Nanoscience

Keywords: Building Materials, Concrete Structure, Fire Protection, Fire Resistance, Fire Retardant, Flame Front, Luminescence Properties, Luminophores, Mechanical Properties, Metal Structure, Phosphor, Rare Earth Ions

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 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1657-1
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 126 pages, 2024

<https://www.scientific.net/978-3-0364-0657-2/book>



International Conference on Science, Technology and Innovation (CONICIETI)

Selected peer-reviewed full text papers from the 1st International Conference on Science, Technology and Innovation (CONICIETI), May 29-30, 2024, Tegucigalpa, Honduras

Edited by: Reyna Durón, Prof. José Luis Ordóñez-Ávila, Mariela Contreras and Dr. Manuel Cardona

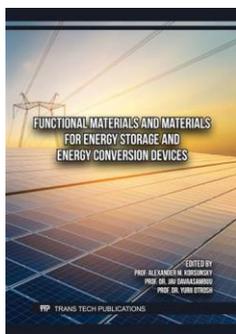
This edition collects articles based on research results that were represented at the 1st "Conferencia Internacional de Ciencia, Tecnología e Innovación" (1st International Conference on Science, Technology and Innovation, CONICIETI 2024, May 29 - 30, 2024, Tegucigalpa, Honduras). This inaugural event at the Universidad Tecnológica Centroamericana (UNITEC) brought together a community of experts and researchers in engineering and the development of innovative technologies. The conference provided a forum for active discussions and interesting presentations and its results will be helpful to the wider engineering community.

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

Keywords: Computer Vision, Engineering Education, Engineering Management, Image Processing, Internet of Things, Measurements, Monitoring, Robotics, Sensing, Solar Modules Efficiency

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0651-0
 eBook Single-User: **US\$ 115.00/ EUR 115.00** eBook: 978-3-0364-1651-9
 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 138 pages, 2024

<https://www.scientific.net/978-3-0364-0651-0/book>



Functional Materials and Materials for Energy Storage and Energy Conversion Devices

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Alexander M. Korsunsky, Jav Davaasambuu and Yuri Otrosh

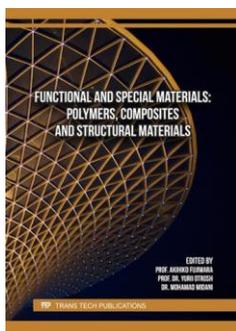
The rapid development of modern production is accompanied by an increasing demand for advanced materials that can meet the challenges of sustainability, energy efficiency, and environmental preservation. This special edition delves readers into these critical areas where material science plays a pivotal role in addressing global issues.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Adsorbent, Biodiesel, Electrode Materials, Graphene, Lithium-Ion Batteries, Solar Cells, Transport Layer, Wastewater Treatment

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0655-8
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1655-7
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 130 pages, 2024

<https://www.scientific.net/978-3-0364-0655-8/book>



Functional and Special Materials: Polymers, Composites and Structural Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Akihiko Fujiwara, Yuri Otrosh and Dr. Mohamad Midani

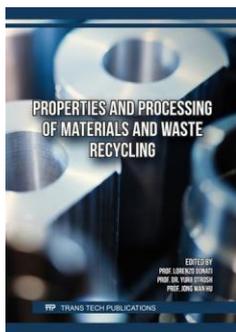
The presented special edition offers significant information about the development, processing and applications of innovative materials for modern engineering and will be interesting to a wide range of engineers.

Topics: Materials Science, Nanoscience

Keywords: Amalgam Filling Material, Biocomposite, Composite, Dielectric Properties, Heterogeneous Structures, Isolation Material, Mechanical Properties, Polymer, Steel, Thermoplastic, Welding Conditions

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0653-4
 eBook Single-User: **US\$ 150.00/ EUR 150.00** eBook: 978-3-0364-1653-3
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<https://www.scientific.net/978-3-0364-0653-4/book>



Properties and Processing of Materials and Waste Recycling

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Lorenzo Donati, Yuri Otrosh and Prof. Jong Wan Hu

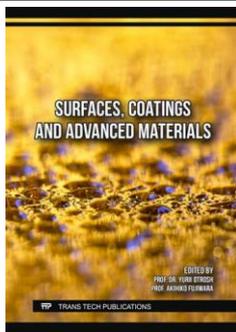
This special edition brings together a collection of articles that explore advances in materials science and environmental sustainability. The focus is on three distinct research areas: aluminium alloy properties and processing technologies, polymers and composites, and waste recycling and soil contamination analysis. The presented comprehensive examinations of technological innovations in materials science, machinery and environmental safety, make this edition an essential resource for researchers and engineers striving for sustainable progress in the modern world.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Aluminum Alloy, Ballistic Performance, Casting, Ceramics, Composite, Damage Behaviour, Extrusion, Mechanical Properties, Membrane, Polymer, Soil Contamination, Waste Recycling

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0659-6
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Surfaces, Coatings and Advanced Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Yurii Otrosh and Prof. Akihiko Fujiwara

This special edition brings together research results in nanomaterial synthesis, surface treatment and coatings of machine parts, and chemical and radiation safety technologies, offering a concise yet comprehensive overview of achievements in these critical areas.

Topics: Materials Science, Mechanics, Nanoscience

Keywords: Adsorption, Carbon Nanotube, Ceramics, Chemical Hazards, Coating, Composite, Electromagnetic Radiation, Hardening, Leaching, Mechanical Properties, Nanoemulsion, Nanofiber, Nanomaterials, Polymer, Quantum Dots, Radioactive Waste, Steel, Surface Treatment, Wear Resistance

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 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 132 pages, 2024

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Materials, Technologies and Waste Treatment

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Takashige Omatu, Prof. Lorenzo Donati, Yurii Otrosh and Prof. Jong Wan Hu

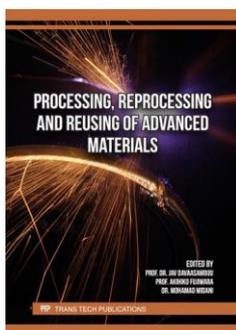
This special edition presents cutting-edge research results and insights across areas: materials and processing technologies, waste treatment, and materials and technologies in construction. The publication will be an invaluable resource for researchers and engineers whose activity is related to machine building, construction and ecological safety.

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

Keywords: Alloy, Energy Audit, Extrusion, Green Building Materials, Materials Testing, Mechanical Properties, Pavement, Process Modelling, Seismic Evaluation, Waste Treatment

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0658-9
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 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 130 pages, 2024

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Processing, Reprocessing and Reusing of Advanced Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Jav Davaasambuu, Prof. Akihiko Fujiwara and Dr. Mohamad Midani

The special edition immerses the reader in modern materials science and manufacture, offering a comprehensive exploration of modern technologies and methodologies that shape both industrial processes and environmental stewardship. This edition provides valuable insights for researchers, engineers, and professionals interested in the intersection of materials science, environmental sustainability, and technological advancement.

Topics: Building Materials, Materials Science, Nanoscience

Keywords: Adsorption Properties, Alloy, Bio-Based Materials, Bio-Waste, Coating, Composite, Magnetic Properties, Magnetocaloric Properties, Mechanical Properties, Nanomaterials, Polymers, Pyrolysis, Reprocessing, Reusing Steel, Welding

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0654-1
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1654-0
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 128 pages, 2024

<https://www.scientific.net/978-3-0364-0654-1/book>



Journal of Biomimetics, Biomaterials and Biomedical Engineering Vol. 66

Edited by: Dr. Sooraj Hussain Nandyala, Dr. David Duday and Prof. José Luis Ordóñez-Ávila

This volume comprises articles reflecting the latest achievements in designing biomedical devices and systems and also in the practice of health informatics. The biomechanics approaches to prosthetics, rehabilitation and sports activity, management of medical data and implementation of cybersecurity in healthcare institutions are investigated here. The edition will be relevant to the specialists in biomedical engineering.

Topics: Bioscience and Medicine, Information Technologies, Materials Science

Keywords: Adverse Event Management, Biomechanics, Biomedical Engineering, Clinical Data, Cybersecurity, Health Informatics, Patient Safety, Prosthetics, Rehabilitation

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0650-3
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 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 124 pages, 2024

<https://www.scientific.net/978-3-0364-0650-3/book>



Journal of Nano Research Vol. 84

Edited by: Prof. Efstathios I. Meletis

This volume collects peer-reviewed articles that reflect the results of scientific research and engineering solutions in applied nanomaterials and nanotechnologies used in mechanical engineering, mechatronics, environmental engineering and biomedicine. This edition will be interesting to specialists in many branches of production.

Topics: Materials Science, Nanoscience

Keywords: Copper Ferrite, Gas Sensor, Magnetic Hyperthermia, Mechanical Properties, Nanofiber, Nanomaterials, Nanomotor, Nanotechnology, Photocatalytic Degradation, Reactive Dye Removal, Silver Nanoparticles, Thin Film

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0442-4
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 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 124 pages, 2024

<https://www.scientific.net/978-3-0364-0442-4/book>



Environmental Transfer Processes and Heat Exchange

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Andreas Öchsner, Mihály Csüllög and Jav Davaasambuu

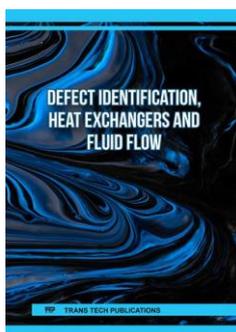
This special edition explores heat and mass transfer processes on scientific and engineering levels, focusing on the anthropogenic factors of environmental dynamics and mass and heat transfer in engineering systems and numerical and theoretical approaches to research in solid-state physics and chemistry.

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

Keywords: Anthropogenic Factor, Atmospheric Emission, Chemistry, Heat Exchanger, Heat Transfer, Mass Transfer, Modelling, Numerical Investigation, Solid-State Physics, Theoretical Approach, Thermal Analysis, Thermal Bridges, Thermal Discomfort, Thermal Properties

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 eBook Multi-User: **US\$ 298.00/ EUR 298.00** 192 pages, 2024

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Defect Identification, Heat Exchangers and Fluid Flow

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Andreas Öchsner, Mihály Csüllög and Jav Davaasambuu

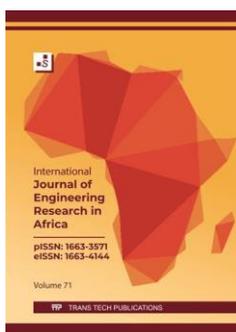
This special edition delves into the complexities and highlights some advancements in the applied approaches to investigating heat and mass transfer in various engineering systems, analyses some approaches for assessment of the structural integrity of engineering structures and investigates properties of optical materials. The edition will be helpful to a wide range of scientists and engineers.

Topics: Building Materials, Materials Science, Mechanics, Nanoscience

Keywords: Computational Modelling, Defect Identification, Earth-Air Heat Exchanger, Fault Analysis, Fluid Flow, Manning Coefficient, Optical Materials, Porous Media, Shallow Water Flow, Thermal Engineering, Thermal Performance, Thin Film, Water Treatment

Prices: Print: **US\$ 170.00/ EUR 170.00** Print: 978-3-0364-0528-5
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<https://www.scientific.net/978-3-0364-0528-5/book>



International Journal of Engineering Research in Africa Vol. 71

Edited by: Prof. Akii Okonigbon Akaehomen Ibadode

The 71st volume of the journal is dedicated to recent achievements in engineering practice and scientific research results in a wide range of industrial branches. The transport mechanism in the diffusion layer in proton exchange membrane fuel cell, mechanical characteristics and performance of various green building materials, predictive control for biomass boiler and automatic generation control in power system, and also analysis of efficient resource allocation in cloud computing are the topics of this issue. This journal's volume will be helpful to many engineers in the modern production sector and construction.

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

Keywords: Asphalt Pavement, Automatic Generation Control, Bending Load, Biomass Boiler, Bricks, Cloud Computing, Concrete, Control, Fuel Cell, Gas Diffusion, Green Building Materials, Machine Learning, Mechanical Properties, Power System, Proton Exchange Membrane, Stress Concentration Factor, Tubular Joint

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15th International Conference on Materials and Manufacturing Technology (ICMMT 2024)

Selected peer-reviewed full text papers from the 15th International Conference on Materials and Manufacturing Technology (ICMMT-2024), March 22-24, 2024, Nha Trang, Vietnam

Edited by: Nguyen Quang Liem and Prof. Vladimir Khovaylo

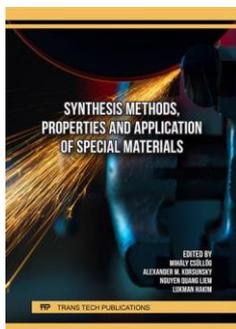
The publication contains articles presented at the 15th International Conference on Materials and Manufacturing Technologies (ICMMT 2024, Nha Trang, Vietnam, March 22-24, 2024) and will be helpful to specialists in materials science, construction, mechatronics and additive manufacturing.

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

Keywords: Additive Manufacturing, Alloy, Automation, Chemical Texturisation, Cobalt Foam, Composite, Electrode Material, Green Building Materials, Insulation Materials, Mechanical Properties, Mechatronics, Monocrystalline Silicon Wafer, Pavement, Solar Cells, Steel, Super capacitor

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Synthesis Methods, Properties and Application of Special Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Mihály Csüllög, Prof. Alexander M. Korsunsky, Nguyen Quang Liem and Dr. Lukman Hakim

This special edition is dedicated to investigating the properties and processing technologies of some materials and also focuses on the specific methods of their applications. This article collection will be helpful to many researchers and engineers from materials science.

Topics: Building Materials, Materials Science, Nanoscience

Keywords: Activated Carbon, Alloy, Clay, Composite, Deep Drawing, Electrochemical Performance, Electrode Materials, Flammable Mixture, Grinding, Manganese Dioxide, Mechanical Properties, Metal Nanoparticles, Nanomaterials, Polymer, Steel, Supercapacitor, Wire Electrical Discharge Machining

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International Scientific Applied Conference Problems of Emergency Situations (PES 2024)

Selected peer-reviewed full text papers from the International Scientific Applied Conference "Problems of Emergency Situations" (PES 2024), May 16, 2024, Kharkiv, Ukraine

Edited by: Dr. Alexey Vasilchenko, Dr. Evgeniy Rybka, Konstantinos Sotiriadis, Mykola Surianinov, Dr. Oleh Turutanov, Dr. Nina Rashkevich, Vladimir Andronov, Yuri Otrosh, Dr. Volodimir Trigub and Andrii Kondratiev

The publication contains research articles presented at the International Scientific Applied Conference "Problems of Emergency Situations" (PES 2024, May 16, 2024, Kharkiv, Ukraine) and will be interesting to specialists in construction, mechanical engineering and ecology.

Topics: Building Materials, Civil Engineering, Construction, Environmental Engineering, Mechanical Engineering

Keywords: Building Structures, Crack Resistance, Cross-Beam System, Design, Equipment, Load-Bearing Capacity, Machines, Mechanics, Mechanics of Structures, Modelling

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Book of Abstracts from the 7th International Conference on Powder Metallurgy and Additive Manufacturing of Titanium, PMTi2024

Edited by: Prof. Elena Gordo Odériz, Dr. Elisa Maria Ruiz-Navas and Juan Villemur

The 7th edition of the International Conference on Powder Metallurgy and Additive Manufacturing of Titanium, PMTi2024, is taking place for the first time in Spain after a successful series of previous conferences held in Australia, New Zealand, Germany, China, the United States and Canada. The aim of the conference is to gather researchers and professionals on the processing design and application of titanium and its alloys fabricated by powder metallurgy (PM) and additive manufacturing (AM) technologies.

Topics: Manufacturing, Materials Science, Mechanics

Keywords: Additive Manufacturing, Cold Spray, Mechanical Alloying, Mechanical Properties, Metal Injection Molding, Microstructure, Plasma Metal Deposition, Powder Consolidation, Powder Production, Powders Metallurgy, Sintering, Titanium Alloy, Titanium Aluminide, Titanium Matrix Composites

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 eBook Multi-User: **US\$ 0.00/ EUR 0.00** 176 pages, 2024

<https://www.scientific.net/978-3-0364-0466-0/book>



8th International Conference on Materials Engineering and Nano Sciences and 8th International Conference on Material Engineering and Manufacturing

Selected peer-reviewed full text papers from the 8th International Conference on Materials Engineering and Nano Sciences (ICMENS 2024) and the 8th International Conference on Material Engineering and Manufacturing (ICMEM 2024), March 22-25, 2024, Osaka, Japan

Edited by: Prof. Akihiko Fujiwara

The publication contains research articles that were represented at the 8th International Conference on Materials Engineering and Nano Sciences (ICMENS 2024) and the 8th International Conference on Material Engineering and Manufacturing (ICMEM 2024), which were held in Kansai Gakuin University, Osaka, Japan, during March 22-25, 2024. The collected articles reflect the latest engineering solutions and research results in chemical engineering, additive manufacturing and mechanical engineering and will be helpful to specialists in the mentioned production areas.

Topics: Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Additive Manufacturing, Bearing, Bearing Faults, Ceramics, Drilling Fluid, Fracture Mechanics, Gear Cutting Parameters, Hydrodynamics, Lubrication, Mechanical Properties, Modelling, Nanoemulsion, Polymer, Rheological Properties, Taguchi Method, Thermal Properties, Wastewater Treatment

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 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 124 pages, 2024

<https://www.scientific.net/978-3-0364-0643-5/book>



Book of Abstracts presented at the 12th International Conference on Fracture Fatigue and Wear (FFW 2024)

Edited by: Prof. Magd Abdel Wahab

This book contains the abstracts presented at the 12th International Conference on Fracture Fatigue and Wear (FFW 2024), which was held in Xi'an, China, during the period 28-31 July 2024. Previous conferences were celebrated in Jinan (China, 2010), Kitakyushu (Japan, 2013), Kitakyushu (Japan, 2014), Ghent (Belgium, 2015), Kitakyushu (Japan, 2016), Porto (Portugal, 2017) and Ghent (Belgium, 2018 - 2023). The overall objective of the conference is to bring together international scientists and engineers in academia and industry in fields related to fracture mechanics, fatigue of materials, tribology and wear of materials. The conference covers industrial engineering applications in the above fields, including theoretical and analytical methods, numerical simulations and experimental techniques. One of the aims of the conference is to promote cooperation between international scientists and engineers from a large number of disciplines who are involved in research related to fracture, fatigue and wear.

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

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

Prices: Print: **US\$ 75.00/ EUR 75.00** Print: 978-3-0364-0471-4
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<https://www.scientific.net/978-3-0364-0471-4/book>



Book of Abstracts Presented at the 7th International Conference on Numerical Modelling in Engineering (NME 2024)

Edited by: Prof. Magd Abdel Wahab

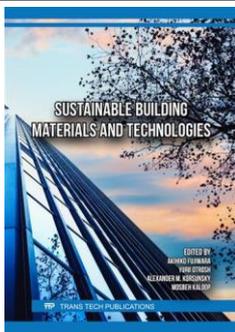
This book contains the abstracts presented at the 7th International Conference on Numerical Modelling in Engineering (NME 2024). It is the 7th NME meeting and was held at Xi'an, China, during the period 28-31 July 2024. Previous NME conferences were celebrated in Ghent, Belgium (2018), Beijing, China (2019), and Ghent, Belgium (2020-2023). The overall objective of the conference is to bring together international scientists and engineers in academia and industry in fields related to advanced numerical techniques, such as FEM, BEM, IGA, etc., and their applications to a wide range of engineering disciplines. The conference covers industrial engineering applications of numerical simulations to civil engineering, aerospace engineering, materials engineering, mechanical engineering, biomedical engineering, etc.

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

Keywords: Acoustic Analysis, Aerospace Applications, Biomechanical Applications, Contact Problems, Dynamics, Heat Transfer Analysis, Nonlinear Analysis, Structural Mechanics, Vibration, Wear

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Sustainable Building Materials and Technologies

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Akihiko Fujiwara, Yurii Otrosh, Prof. Alexander M. Korsunsky and Prof. Mosbeh Kaloop

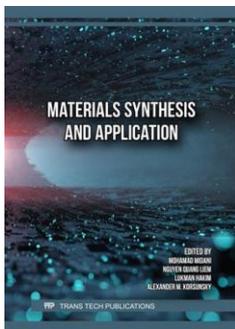
In the rapidly evolving construction, the demand for innovative and sustainable materials is growing. This special edition delves into the complexities and highlights advancements in the use of green and advanced building materials, showcasing their mechanical properties and the integration of natural and engineered materials. The publication serves as a valuable resource for engineers and researchers seeking to enhance their knowledge of cutting-edge construction materials and techniques.

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

Keywords: Asphalt Concrete, Concrete, Geopolymer, Green Building Materials, Marble, Mechanical Properties, Pavement, Polymer Concrete, Shotcrete, Soil Stabilisation, Structural Element, Structural Mechanics, Wood

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Materials Synthesis and Application

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Mohamad Midani, Nguyen Quang Liem, Dr. Lukman Hakim and Prof. Alexander M. Korsunsky

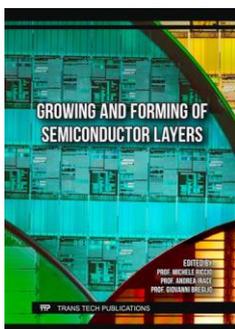
This special edition offers in-depth research on the properties of cutting-edge materials, the technologies of their synthesis and processing, and their diverse applications. The collection reflects the dynamic nature of material science, offering readers a glimpse into the innovations shaping the future of multiple industries. The presented special edition will be useful to many engineers and researchers in applied materials science.

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

Keywords: Alloy, Biocomposite, Carbon Dioxide, Crystal Structure, Gray Iron, Hematite, High-Speed Milling, Inorganic Synthesis, Martensitic Transformations, Organic Synthesis, Polymer, Steel

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Growing and Forming of Semiconductor Layers

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Michele Riccio, Prof. Andrea Irace and Prof. Giovanni Breglio

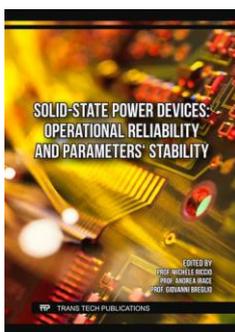
Advanced semiconductor technologies have been making significant advancements through the creation and application of new materials and processes that surpass traditional silicon's limitations. The wide-bandgap semiconductors such as Silicon Carbide and Gallium Nitride offer unprecedented opportunities for advancements in high-power and high-frequency microelectronic devices. The presented special edition will be useful to engineers and researchers whose activity is related to technologies of semiconductor structures growth for power electronics and microelectronics devices production.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Boron Carbide, Chemical Vapour Deposition, Crystal Growth, Gallium Nitride, Heteroepitaxial Growth, Layer Growth, MOSFET, Silicon Carbide, Substrate, Wafer

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Solid-State Power Devices: Operational Reliability and Parameters' Stability

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Michele Riccio, Prof. Andrea Irace and Prof. Giovanni Breglio

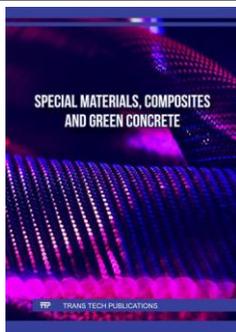
The appearance of solid-state silicon oxide high-power devices has been a cornerstone in the evolution of modern power electronics, enabling efficient processes of power conversion and power management in a wide array of applications. This special edition aims to provide engineers, researchers, and industry professionals with a deeper understanding of the challenges and solutions associated with maintaining the reliability and stability of solid-state high-power devices.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Bias Temperature Instability, Bipolar Degradation, Device Lifetime, Dielectric Breakdown, Failure Analysis, Gate Oxide Degradation, Gate Switching Instability, High Power Electronics, Irradiation, Overload Protection, Reliability, Schottky Diode, SiC MOSFET, Silicon Carbide, Stacking Faults, Threshold Voltage Instability, Total Ionizing Dose

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Special Materials, Composites and Green Concrete

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Alan Kin Tak Lau

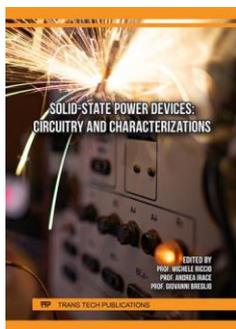
The presented special edition delves readers into the area of advanced materials, offering an analysis of the properties and synthesis technologies of both traditional and emerging functional materials.

Topics: Building Materials, Materials Science, Nanoscience

Keywords: Alloy, Composite, Corn Starch, Corrosion Resistance, Flame Retardancy, Green Concrete, Luminescence Properties, Manganese Dioxide, Mechanical Properties, Metal Oxide, Nanocomposite, Nanoparticles, Polymer, Thermoelectric Materials, Yttrium Phosphate

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Solid-State Power Devices: Circuitry and Characterizations

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Michele Riccio, Prof. Andrea Irace and Prof. Giovanni Breglio

The relentless advancement in high-power electronics has driven the need for innovative materials and new device architectures. This special edition delves readers into the cutting-edge developments and challenges in the field, with a focus on silicon carbide (SiC) technology. The edition provides a comprehensive overview of the critical aspects of SiC MOSFETs, highlighting their superior switching characteristics and robustness, etc., compared to traditional silicon-based devices. Collected articles not only focus on the theoretical underpinnings but also provide practical insights for engineers in design and real-world applications.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Gate Current, High Power Electronics, Ohmic Contact, Schottky Diode, Short Circuit, SiC MOSFET, Silicon Carbide, Switching Characteristics, Trench Gate Structure

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Book of Abstracts from the International Workshop on Positron Studies of Defects 2024 (PSD-24)

Edited by: Prof. Rafael Ferragut, Dr. Javier Schmidt, Prof. Bernardo Barbiellini, Matías Bayo, Matteo Vicini and Dr. Claudio Conci

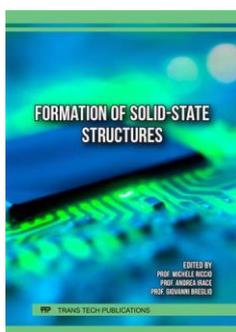
Following the long tradition that started in 1987, the International Workshop on Positron Studies of Defects 2024 (PSD-24) will be held in Como, Italy, in the period from September the 1st to 6th, 2024. The aim of the workshop is to provide an opportunity for exchange of the latest results and scientific information concerning the positron interactions with solids and surfaces, the generation of slow positron beams and their applications.

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

Keywords: Alloy, Biomaterials, Cell-Sheet Technology, Density Functional Theory Calculation, Diffusion-Reaction Model, Epitaxially Grown, Gallium Nitride, Graphene, Iron, Lithium-Ion Battery, Luminescence Properties, Metal Oxides, Microstructure Analysis, Nanoparticles, Perovskites, Phase Transition, Point Defects, Polymer, Porous Materials, Positron Annihilation Lifetime Spectroscopy, Positron Annihilation Spectroscopy, Semiconductor, Silicon, Solid-State Electronics, Spintronics, Structural Defects, Thermodynamics

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0591-9
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Formation of Solid-State Structures

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Michele Riccio, Prof. Andrea Irace and Prof. Giovanni Breglio

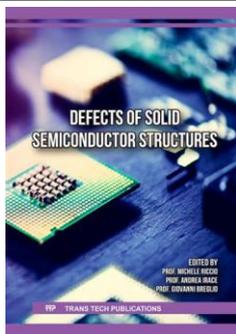
The development of solid-state semiconductor structures is at the forefront of technological innovation, driving advancements across various applications of microelectronics and high-power devices. The formation and processing of semiconductor solid-state structures involve a series of sophisticated and precision technologies that improve functionality and provide integration of finished components into complex circuits. This special edition is an essential resource for engineers and researchers involved in developing and applying semiconductor technologies.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Annealing, Crystal Damage, Epitaxial Layer, Hydrogen Etching, Ion Implantation, Laser Annealing, Laser Doping, MOS Capacitor, Nitrogen Plasma Treatment, Ohmic Contact, Plasma Treatment, SiC MOSFET, Trench Etching

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Defects of Solid Semiconductor Structures

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Michele Riccio, Prof. Andrea Irace and Prof. Giovanni Breglio

This special edition addresses one of the most critical aspects of semiconductor technology: the presence and impact of defects within solid semiconductor materials on the performance and reliability of electronic devices. It will be useful to researchers and engineers in the semiconductor industry.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Basal Plane Dislocation, Bipolar Degradation, Crystal Defects, Defect Decomposition, Defect Inspection, Epilayer, Post-Growth Thermal Treatment, SiC MOSFET

Prices: Print: **US\$ 160.00/ EUR 160.00** Print: 978-3-0364-0635-0
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Materials Application in Quantum, Sensors and Mechatronics Systems

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Michele Riccio, Prof. Andrea Irace and Prof. Giovanni Breglio

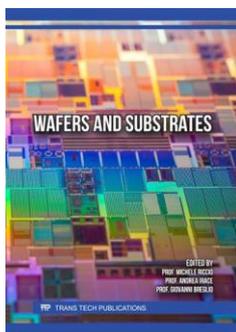
This special edition brings together articles highlighting the latest research and developments in the use of semiconductor structures based on silicon carbide in quantum and mechatronic systems and high-performance sensors. It will be useful to researchers and engineers from the mentioned branches of engineering.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Color Centers, Graphene, MEMS, Neutron Detection, Optical Chemical Sensor, Photoionisation, Plasmonics, Quantum Applications, Qubit, Resonant Microstructure, Schottky Barrier Diode, SiC Schottky Photodiode, SiC-on-Insulator Microresonator, Silicon Carbide, Silicon Vacancy, Temperature Sensor, Thermochromic Properties, Viral Biosensors

Prices: Print: **US\$ 90.00/ EUR 90.00** Print: 978-3-0364-0636-7
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Wafers and Substrates

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Michele Riccio, Prof. Andrea Irace and Prof. Giovanni Breglio

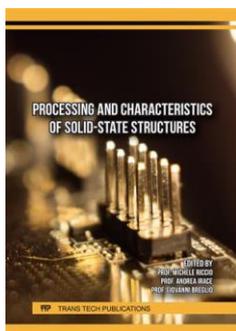
This special collection examines the intrinsic properties of semiconductor wafers and substrates, their mechanical, electrical, and thermal characteristics, and also the latest developments in SiC wafer production and processing, substrate preparation, and their integration into high-tech products which are critical to the functionality and reliability of modern electronic devices. By bringing together research and practical insights, the special edition will be a valuable resource for scientists and industry specialists seeking to harness the full potential of silicon carbide in the area of semiconductor technologies.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Chemical Mechanical Polishing, Electrical Properties, Metallisation, Plasma Chemical Vaporization Machining, Plasma Etching, Sic-on-Insulator, Silicon Carbide, SmartSiC™, Substrate, Wafer, Wafer Dicing, Wafer Planarization, Water Jet Guided Laser Dicing

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Processing and Characteristics of Solid-State Structures

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Michele Riccio, Prof. Andrea Irace and Prof. Giovanni Breglio

The processing and properties analysis of semiconductor structures are standing at the cutting edge of technological innovation, propelling advancements in the production of solid-state electronics. These technologies require a range of sophisticated and precise operations and are crucial in modifying materials to achieve the desired electrical characteristics of completed structures. The presented special edition will be an invaluable resource for engineers and researchers involved in the development in the area of semiconductor technologies.

Topics: Electronics, Materials Science, Nanoscience

Keywords: Carrier Lifetime, Channel Mobility, Doped Area, Epitaxial Layer, Forward Voltage Drop, Gate Oxide Breakdown, Gate Resistance, Hermo-Mechanical Modelling, Ion Implantation, MOS Capacitor, SiC MOSFET, Single Event Gate Rupture, Solid-State Electronics, Technology Computer Aided Design

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<https://www.scientific.net/978-3-0364-0646-6/book>



Tribology Research, Machining Tools and Mechatronics

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Spiridon (Spiros) Koutsonas, Dr. Syed Imran Shafiq and Azher M. Abed

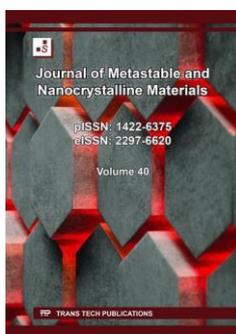
The presented special edition is dedicated to some actual issues in engineering practice in mechanical engineering and will be interesting to a wide range of engineers and researchers.

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

Keywords: Electrical Discharge Machining, Machining Tools, Mechanics of Materials, Mechatronics, Powder Bed Fusion, Tribology

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0637-4
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Journal of Metastable and Nanocrystalline Materials Vol. 40

Edited by: Dr. Konstantinos Georgarakis, Prof. Nadezhda L. Voropaeva, Dr. Lukman Hakim and Azher M. Abed

The 40th volume contains articles dedicated to the synthesis and analysis of the functional properties of ion-doped zinc oxide nanoparticles and titanium dioxide nanotubes; investigation of the corrosion behaviour of Cu-Fe alloys with a nanocrystalline structure as well as evaluation of black powder formation in natural gas transporting pipelines network. The structural, magnetic, and electrochemical properties of composite that contain conductive polymer and cobalt-manganese ferrite are also analysed here. The journal's volume will be helpful to specialists whose activity is related to functional nanomaterials and composites.

Topics: Materials Science, Nanoscience

Keywords: Black Powder, Cobalt-Manganese Ferrites, Conductive Polymer, Corrosion, Electrochemical Properties, Fluorescence Spectra, Hydrothermal Synthesis, Nanocrystalline Alloy, Nanomaterials, Nanoparticles, Nanotubes, Titanium Dioxide, Zinc Oxide

Prices: Print: **US\$ 75.00/ EUR 75.00** Print: 978-3-0364-0638-1
 eBook Single-User: **US\$ 75.00/ EUR 75.00** eBook: 978-3-0364-1638-0
 eBook Multi-User: **US\$ 131.00/ EUR 131.00** 64 pages, 2024

<https://www.scientific.net/978-3-0364-0638-1/book>



International Conference on Applied Engineering, Sciences, Technology and Innovation

Selected peer-reviewed full text papers from the 1st International Conference on Applied Engineering, Sciences, Technology and Innovation (AESTI 2023), November 06, 2023, Meulaboh, Indonesia

Edited by: Dr. Irwansyah Irwansyah, Dr. Astiah Amir, Dr. Pribadyo Pribadyo, T. M. Azis Pandria, Fachruddin Fachruddin and Mahmud Basuki

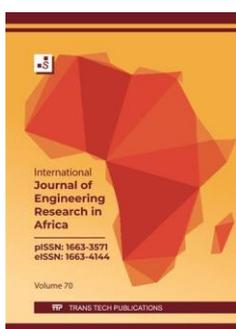
This edition comprises articles presented at the 1st International Conference on Applied Engineering, Sciences, Technology and Innovation (AESTI 2023, November 6, 2023, Universitas Teuku Umar, Meulaboh, Aceh Barat, Indonesia). The collected articles will be useful to engineers and researchers in construction and renewable energy.

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

Keywords: Coastal Engineering, Construction, Electric Drive, Engineering Management, Flood Management, Green Building Materials, Project Management, Renewable Energy

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0360-1
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 eBook Multi-User: **US\$ 175.00/ EUR 175.00** 110 pages, 2024

<https://www.scientific.net/978-3-0364-0360-1/book>



International Journal of Engineering Research in Africa Vol. 70

Edited by: Prof. Akii Okonigbo Akaehomen Ibadode

The 70th journal's volume includes articles that present the research and engineering solutions in the mechanics of materials, design of tools and equipment, semiconductors for power electronics and transient stability of photovoltaic systems, managing of construction waste and investigation of the role of concurrent engineering towards managing design changes during the architectural design process. This edition will be helpful to a wide range of engineers from various industrial branches.

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

Keywords: Architectural Design, Composite, Concurrent Engineering, Construction Waste, Cooling Channel, Crucible, Electron Gas Density, Gallium Nitride, Glass Fiber-Reinforced Polymer, High Power Electronics, Injection Molding Mechanical Properties, Mullite, Photovoltaic System, Steel, Transient Stability, Waste Management

Prices: Print: **US\$ 130.00/ EUR 130.00** Print: 978-3-0364-0626-8
 eBook Single-User: **US\$ 130.00/ EUR 130.00** eBook: 978-3-0364-1626-7
 eBook Multi-User: **US\$ 228.00/ EUR 228.00** 148 pages, 2024

<https://www.scientific.net/978-3-0364-0626-8/book>



Advanced Engineering Forum Vol. 52

Edited by: Prof. Dumitru Nedelcu and Prof. Mikkel K. Kragh

The 52nd volume of the journal presents research results and engineering solutions in green building materials, modelling and calculations by structural mechanics approaches of embankment dams, cantilever retaining walls and assessment of the hygrothermal performance of bioclimatic innovative constructions for onion bulb preservation. This publication also presents the investigation of the effectiveness of some polymer polyacrylamide-based flocculants in the process of extraction of the metal and scale particles formed in the working electroerosive machining fluids, discusses the net-zero initiative for coal-fired power plants in Southern African Development Community in perspective to 2050 and explores the creation of a simulator for addressing the problem of predicting the response of Nigeria's Kainji Hydro Power Plant to system load variations and determining parameters for stable operation. The volume will be useful to engineers in construction, machinery, power engineering and ecological safety.

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

Keywords: Concrete, Embankment Dam, Flocculants, Green Building Materials, Hydrothermal Performance, Mortar, Power Engineering, Structural Mechanics, Wastewater Treatment

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0625-1
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1625-0
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 136 pages, 2024

<https://www.scientific.net/978-3-0364-0625-1/book>



School of Engineering and Engineering Technology Annual Conference (SEET Conference)

Selected peer-reviewed full text papers from the School of Engineering and Engineering Technology Annual Conference 2023 (2023 SEET Conference), November 07-09, 2023, Akure, Nigeria

Edited by: Dr. Taiwo Ebenezer Abioye

This publication contains articles that were introduced at the 2023 School of Engineering and Engineering Technology Annual Conference (2023 SEET Conference) which was held on 7-9 November 2023 in Akure, Nigeria. Research results in structural steels and alloys, green building materials and environmental engineering, mechatronics and power engineering are presented here. The content of this edition will be interesting to specialists in materials science, machinery and construction.

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

Keywords: Additive Manufacturing, Alloys, Asphalt, Bricks, Cold Forging, Composites, Concrete, Corrosion Inhibitors, Drugs, Electrical Equipment, Electrical Load, Electricity Supply, Electronics, Explosives, Fly Ash, Green Building Materials, Grid Capacity, Power Engineering, Production Processes, Rice Husk, Sawdust, Solar Panels, Steel, Voltage Stability, Waste Treatment, Wastewater, Welding

Prices: Print: **US\$ 185.00/ EUR 185.00** Print: 978-3-0364-0409-7
 eBook Single-User: **US\$ 185.00/ EUR 185.00** eBook: 978-3-0364-1409-6
 eBook Multi-User: **US\$ 324.00/ EUR 324.00** 238 pages, 2024

<https://www.scientific.net/978-3-0364-0409-7/book>



Journal of Biomimetics, Biomaterials and Biomedical Engineering Vol. 65

Edited by: Dr. Sooraj Hussain Nandyala and Dr. David Duday

The presented journal's volume comprises articles on the latest research results of biomaterials for biomedical and pharmacological applications, bone replacement, analysis of motion control strategy during the unanticipated landing of patients with chronic ankle instability and numerical investigation of the bio-convective flow of micropolar nanofluids over an inclined permeable stretching surface with radiative activation. These articles will be helpful to many researchers and engineers whose activity is related to biomedical engineering and biomaterials.

Topics: Bioscience and Medicine, Materials Science, Mechanics

Keywords: Antimicrobial Properties, Bioceramics, Biocomposite, Biomaterials, Biomechanics, Bone Replacement, Mechanical Properties, Photodynamic Therapy, Polymer

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 eBook Multi-User: **US\$ 140.00/ EUR 140.00** 88 pages, 2024

<https://www.scientific.net/978-3-0364-0624-4/book>



Journal of Nano Research Vol. 83

Edited by: Prof. Efstathios I. Meletis

This volume of the "Journal of Nano Research" contains peer-reviewed papers that announce the research results in the area of applied and functional nanomaterials and recent nanotechnologies: heterostructures nanorods for photocatalytic degradation of dyes and pathogens in the water and wastewater; magnetic nitrogen-doped catalysts for efficient activation of peroxy monosulfate for degradation of organic pollutants; nanocomposite foams for remediation of congo red dye; researching of electron transport behaviour in InSb semiconductor; analysis of the hydrophilic self-cleaning and ultraviolet-shielding coatings for industrial and home applications, etc. The collected articles will be helpful to many specialists from various industrial branches whose activity is related to nanomaterials and nanotechnologies.

Topics: Materials Science, Nanoscience

Keywords: High Entropy Alloy, Laser Ablation, Microelectronics, Nanocomposite, Nanomaterials, Nanoparticles, Nanopowder, Nanorods, Photocatalysts, Pollutant Degradation, Self-Cleaning Coating, Thin Films, Wastewater Treatment

Prices: Print: **US\$ 105.00/ EUR 105.00** Print: 978-3-0364-0623-7
 eBook Single-User: **US\$ 105.00/ EUR 105.00** eBook: 978-3-0364-1623-6
 eBook Multi-User: **US\$ 184.00/ EUR 184.00** 116 pages, 2024

<https://www.scientific.net/978-3-0364-0623-7/book>



Recent Advancements in Materials, Design and Manufacturing (ICRAMDM-2023)

Selected peer-reviewed full text papers from the 2nd International Conference on Recent Advancements in Materials, Design and Manufacturing (ICRAMDM-2023), December 23-24, 2023, Aligarh, India

Edited by: Dr. Syed Imran Shafiq, Dr. Wasif Ullah Khan, Dr. Md. Israr Equbal and Dr. Mohd. Yunus Khan

This edition contains articles presented at the 2nd International Conference on Recent Advancements in Materials, Design and Manufacturing (ICRAMDM-2023, December 23-24, 2023, Aligarh, India). The showcased research findings will be useful to engineers and researchers in materials science, green construction and architecture, product design and industrial engineering.

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

Keywords: Architecture, Flexible Manufacturing, Food Packaging, Footwear, Green Construction, Industrial Engineering, Internet of Things, Plastics, Polymer, Product Design

Prices: Print: **US\$ 75.00/ EUR 75.00** Print: 978-3-0364-0619-0
 eBook Single-User: **US\$ 75.00/ EUR 75.00** eBook: 978-3-0364-1619-9
 eBook Multi-User: **US\$ 131.00/ EUR 131.00** 76 pages, 2024

<https://www.scientific.net/978-3-0364-0619-0/book>



The 13th International Civil Engineering Conference (ICEC)

Selected peer-reviewed full text papers from the 13th International Civil Engineering Conference (ICEC), November 10-11, 2023, Karachi, Pakistan

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

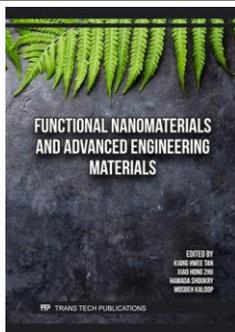
This edition comprises papers that were presented at the 13th International Civil Engineering Conference (ICEC) held on 10-11 November 2023, in Karachi, Pakistan. The International Civil Engineering Conference is a regular event jointly organized by the Institution of Engineers Pakistan and NED University of Engineering and Technology, Karachi. To date, the conference has been organized for almost two decades. Every year, the ICEC calls regular meetings dedicated to innovative themes and contemporary issues related to civil engineering and the socio-economic aspects of modern society. The 13th International Civil Engineering Conference was organized under the theme of "Creating Global Partnerships for Sustainable Development through Civil Engineering", which is aligned with the 17 Sustainable Development Goals (SDGs) of the United Nations.

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

Keywords: Coarse Aggregates, Concrete, Green Building Materials, Mechanical Properties, Natural Fiber Reinforcement, Project Management, Recycle Aggregate Concrete, Structural Element, Structure Emergency Resistance, Structure Mechanics, Sustainable City, Transportation Infrastructure, Water Resources Management

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0546-9
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<https://www.scientific.net/978-3-0364-0546-9/book>



Functional Nanomaterials and Advanced Engineering Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kiang Hwee Tan, Prof. Xiao Hong Zhu, Hamada Shoukry and Prof. Mosbeh Kaloop

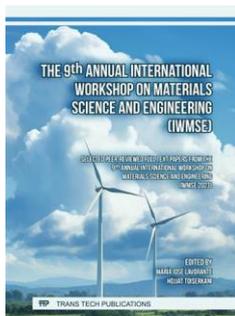
The presented special edition is dedicated to highly relevant issues of development and applications of modern sustainable materials in construction and industry and will be helpful to many specialists in building materials, composites and functional nanomaterials.

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

Keywords: Cement Replacement, Composite, Fly Ash, Green Building Materials, Green Concrete, Green Synthesis, Mechanical Properties, Nanomaterials, Polymer

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0406-6
 eBook Single-User: **US\$ 120.00/ EUR 120.00** eBook: 978-3-0364-1406-5
 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 146 pages, 2024

<https://www.scientific.net/978-3-0364-0406-6/book>



The 9th Annual International Workshop on Materials Science and Engineering (IWMSE)

Selected peer-reviewed full text papers from the 9th Annual International Workshop on Materials Science and Engineering (IWMSE 2023), November 24-26, 2023, Wuhan, China

Edited by: María José Lavarante and Dr. Hojjat Toiserkani

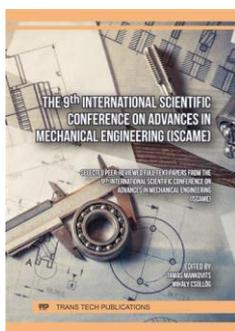
This edition contains articles presented at the 9th Annual International Workshop on Materials Science and Engineering (IWMSE 2023, November 24-26, 2023, Wuhan, Hubei, China). The showcased research findings will be useful to engineers and researchers in materials science, construction, environmental protection and natural resources management, robotics and applied mathematics.

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

Keywords: Alloys, Civil Engineering, Composites, Educational Architecture, Environmental Protection, Fibers, Genetic Algorithm, Heat Conductivity, Materials Science, Mechanical Arm, Molecular Dynamics, Natural Resource Management, Photovoltaic Systems, Robotics, Soil Stability

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0005-1
 eBook Single-User: **US\$ 100.00/ EUR 100.00** eBook: 978-3-0364-1005-0
 eBook Multi-User: **US\$ 175.00/ EUR 175.00** 114 pages, 2024

<https://www.scientific.net/978-3-0364-0005-1/book>



The 9th International Scientific Conference on Advances in Mechanical Engineering (ISCAME)

Selected peer-reviewed full text papers from the 9th International Scientific Conference on Advances in Mechanical Engineering (ISCAME), November 9-10, 2023, Debrecen, Hungary

Edited by: Dr. Tamás Mankovits and Mihály Csüllög

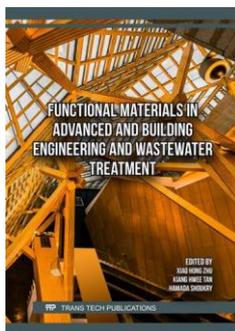
This publication contains articles that were presented at the 9th International Scientific Conference on Advances in Mechanical Engineering (ISCAME, November 9-10, 2023, Debrecen, Hungary). The collected articles will undoubtedly be useful to many engineers in the mechanical engineering industry and researchers in the field of engineering sciences.

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

Keywords: Ar In Industry 4.0, High Entropy Alloy, Industry 4.0, Machine Parts, Maturity Model, Production System, Readiness Model, Spiral Bevel Gear, Structural Analysis, Tool, Transportation Engineering, Vehicle Design

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0617-6
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1617-5
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 122 pages, 2024

<https://www.scientific.net/978-3-0364-0617-6/book>



Functional Materials in Advanced and Building Engineering and Wastewater Treatment

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Xiao Hong Zhu, Prof. Kiang Hwee Tan and Hamada Shoukry

The presented special edition contains articles on research results in applied materials and technologies for various branches of modern industry and will be helpful to engineers and researchers in machinery, biomedicine, construction and ecology engineering.

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

Keywords: Coagulant, Concrete, Conductive Ink, Construction, Functional Materials, Green Building Materials, Green Synthesis, Mechanical Properties, Nanomaterials, Photothermal Coating, Wastewater Treatment

Prices: Print: **US\$ 125.00/ EUR 125.00** Print: 978-3-0364-0616-9
 eBook Single-User: **US\$ 125.00/ EUR 125.00** eBook: 978-3-0364-1616-8
 eBook Multi-User: **US\$ 219.00/ EUR 219.00** 142 pages, 2024

<https://www.scientific.net/978-3-0364-0616-9/book>



The 5th International Conference on Chemistry and Material Sciences (IC2MS)

Selected peer-reviewed full text papers from the 5th International Conference on Chemistry and Material Sciences (IC2MS), October 11-12, 2023, Malang, Indonesia

Edited by: Dr. Lukman Hakim and Dr. Elvina Dhiaul Iftitah

This edition includes articles that were presented at the 5th International Conference on Chemistry and Material Sciences (IC2MS, October 11-12, 2023, Malang, East Java, Indonesia). The research findings showcased here will be useful to engineers and researchers in pharmaceutical chemistry, biotechnologies, wastewater treatment, and waste recycling.

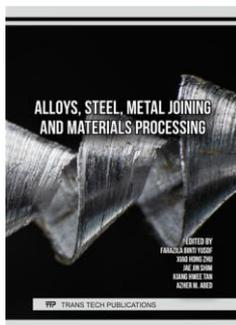
Topics: Bioscience and Medicine, Materials Science

Keywords: Bioremediation, Biotechnology, Biotransformation, Drug Delivery, Pharmaceutical Chemistry, Waste Recycling, Wastewater Treatment

Prices: Print: **US\$ 75.00/ EUR 75.00**
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Print: 978-3-0364-0618-3
 eBook: 978-3-0364-1618-2
 82 pages, 2024

<https://www.scientific.net/978-3-0364-0618-3/book>



Alloys, Steel, Metal Joining and Materials Processing

Special topic volume with invited peer-reviewed papers only

Edited by: Farazila Binti Yusof, Prof. Xiao Hong Zhu, Jae Jin Shim, Prof. Kiang Hwee Tan and Azher M. Abed

The special edition is dedicated to analysing research results of properties and processing technologies of structural metals used in modern machinery and will be useful to many specialists in this area.

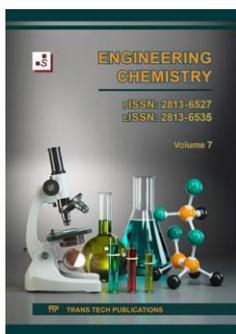
Topics: Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Additive Manufacturing, Alloy, Bending, Brazing, Corrosion, Heat Treatment, Joining, Mechanical Properties, Solder Alloy, Steel, Tool, Welding, Wire Drawing

Prices: Print: **US\$ 145.00/ EUR 145.00**
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Print: 978-3-0364-0615-2
 eBook: 978-3-0364-1615-1
 176 pages, 2024

<https://www.scientific.net/978-3-0364-0615-2/book>



Engineering Chemistry Vol. 7

Edited by: Prof. Patrizia Bocchetta, Prof. Citlalli Gaona-Tiburcio and Femiana Gapsari

The presented volume contains articles that focus on the latest achievements in modern chemical production, including biotechnologies used for biodiesel production, corrosion inhibitors and various absorbents based on natural materials, water treatment technologies, water splitting in hydrogen production, etc. The articles are targeted towards professionals in biotechnologies, waste and water treatment, and chemical synthesis.

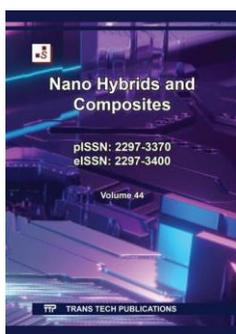
Topics: Bioscience and Medicine, Materials Science

Keywords: Absorbent, Activated Carbon, Bioceramics, Biodiesel, Biotechnology, Carbonate Hydroxyapatite, Corrosion Inhibitor, Electrocatalyst, Esterification, Heavy Metals, Liquid Waste, Photocatalysis, Water Splitting, Water Treatment

Prices: Print: **US\$ 100.00/ EUR 100.00**
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Print: 978-3-0364-0605-3
 eBook: 978-3-0364-1605-2
 106 pages, 2024

<https://www.scientific.net/978-3-0364-0605-3/book>



Nano Hybrids and Composites Vol. 44

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

The collected articles focus on the most recent research results in the synthesis and study of properties of nanomaterials and nanoparticles and some functional materials that have a wide range of uses, including water purification, sensor development, leaching of heavy metals from soil with battery waste and surface protection from corrosion. Articles will be of great use to researchers working in the field of modern nano- and functional materials.

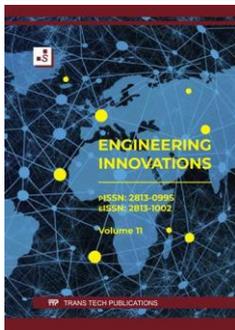
Topics: Materials Science, Nanoscience

Keywords: Battery Waste, Corrosion, Electrochemical Synthesis, Leaching Agent, Metal Oxide, Nanocomposite, Nanofluid, Nanoparticles, Nanotubes, Sensor, Water Purification

Prices: Print: **US\$ 90.00/ EUR 90.00**
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 eBook Multi-User: **US\$ 158.00/ EUR 158.00**

Print: 978-3-0364-0607-7
 eBook: 978-3-0364-1607-6
 92 pages, 2024

<https://www.scientific.net/978-3-0364-0607-7/book>



Engineering Innovations Vol. 11

Edited by: Prof. Afroz Barnoush, Prof. Elena Gordo Odériz and Femiana Gapsari

This volume of the journal Engineering Innovations collected articles that accent the reader's attention on the latest advances and results of research in the engineering design of power equipment, parts of vehicles, and a multicriteria scheduling problem in the machinery industry. The presented articles will be helpful to many mechanical engineers.

Topics: Industrial Engineering, Manufacturing, Mechanical Engineering, Mechanics

Keywords: Applied Mechanics, Design, Energy Absorption, Finite Element Analysis, Fracture Mechanics, Mechanical Properties, Multicriteria Scheduling Problem, Static Load, Topology Optimisation, Turbine, Vehicle Muffler

Prices: Print: **US\$ 100.00 / EUR 100.00** Print: 978-3-0364-0606-0
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 eBook Multi-User: **US\$ 0.00 / EUR 0.00** 106 pages, 2024

<https://www.scientific.net/978-3-0364-0606-0/book>



Book of Abstracts from the 10th International Conference on Tribology in Manufacturing Processes and Advanced Surface Engineering

Edited by: Miguel Ángel Sellés Cantó and Samuel Sánchez-Caballero

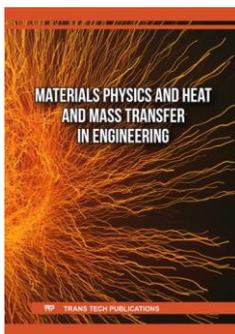
The International Conference on Tribology in Manufacturing Processes, after the disruptive era of COVID-19, announced its tenth edition (ICTMP2024) to take place in Alcoy, Spain, on 26-28 June 2024. The ICTMP serves as the prime platform to unveil the recent tribological research breakthrough by diverse groups of global investigators. In its milestone tenth edition, the ICTMP2024 conference has firmly established itself as a global reference in the field of tribology. Amid ongoing challenges, this conference proves the resilience of the scientific community and its dedication to pushing boundaries and setting the stage for a brighter tomorrow for industries and societies.

Topics: Manufacturing, Materials Science

Keywords: Coating, Friction, Lubrication, Sustainability, Tribology, Wear

Prices: Print: **US\$ 75.00 / EUR 75.00** Print: 978-3-0364-0512-4
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 eBook Multi-User: **US\$ 0.00 / EUR 0.00** 86 pages, 2024

<https://www.scientific.net/978-3-0364-0512-4/book>



Materials Physics and Heat and Mass Transfer in Engineering

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Xiao Hong Zhu, Prof. Ramesh K. Agarwal, Azher M. Abed and Femiana Gapsari

The special edition is dedicated to current issues of properties research and development of effective application methods of modern structural and functional materials and heat and mass transfer phenomena in various engineering systems. It will be useful to specialists in materials science, energy storage, energy conversion and thermal engineering.

Topics: Civil Engineering, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Computational Materials Science, Corrosion, Electrode Materials, Fuel Cell, Heat Transfer, Inhibitor, Lithium-Ion Battery, Mass Transfer, Mechanical Properties, Nanoparticles, Phase Change Material, Solar Cell, Thermal Engineering

Prices: Print: **US\$ 115.00 / EUR 115.00** Print: 978-3-0364-0597-1
 eBook Single-User: **US\$ 115.00 / EUR 115.00** eBook: 978-3-0364-1597-0
 eBook Multi-User: **US\$ 201.00 / EUR 201.00** 124 pages, 2024

<https://www.scientific.net/978-3-0364-0597-1/book>



15th International Conference on Sustainable Green Construction and Nano-Technology (NTC)

Selected peer-reviewed full text papers from the 15th International Conference on Sustainable Green Construction and Nano-Technology (NTC 2024), March 02-03, 2024, Cairo, Egypt

Edited by: Hamada Shoukry

This edition contains selected papers presented at the 15th International Conference on "Sustainable Green Construction and Nano-Technology" (NTC-2024), which was held on March 02-03, 2024, in Cairo, Egypt. This collection of articles will be helpful to many specialists in construction and architecture.

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

Keywords: Concrete, Energy Efficiency, Environmentally Friendly Buildings, Green Building Materials, Mechanical Properties, Mortar, Sustainable Architecture

Prices: Print: **US\$ 100.00 / EUR 100.00** Print: 978-3-0364-0598-8
 eBook Single-User: **US\$ 100.00 / EUR 100.00** eBook: 978-3-0364-1598-7
 eBook Multi-User: **US\$ 175.00 / EUR 175.00** 124 pages, 2024

<https://www.scientific.net/978-3-0364-0598-8/book>



2nd International Conference on the Future Sustainable Energy (ICFSE)

Selected peer-reviewed full text papers from the 2nd International Conference on the Future Sustainable Energy (ICFSE 2024), February 20-22, 2024, Babylon, Iraq

Edited by: Hasan Sh. Majdi, Azher M. Abed, Salwan Obaid Waheed Khafaji and Mustafa Baqir Hunain

The edition contains selected articles dedicated to the latest research findings in thermal engineering and machines, and equipment design, presented at the 2nd International Conference on the Future Sustainable Energy (ICSE 2024), which was held in February 2024, at Mustaqbal University, Babylon, Iraq. The collection will be helpful to the scientists and engineers involved in thermal engineering and equipment design.

Topics: Materials Science, Mechanical Engineering, Mechanics

Keywords: Applied Mechanics, Belleville Spring, Compression Ignition Engine, Fuel Blend, Heat Exchanger, Heat Transfer, Mass Transfer, Mechanical Engineering, Nanofluid, Numerical Analysis, Thermal Engineering

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0596-4
 eBook Single-User: **US\$ 150.00/ EUR 150.00** eBook: 978-3-0364-1596-3
 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 190 pages, 2024

<https://www.scientific.net/978-3-0364-0596-4/book>



2nd International Conference on the Future Sustainable Energy (ICFSE)

Selected peer-reviewed full text papers from the 2nd International Conference on the Future Sustainable Energy (ICFSE 2024), February 20-22, 2024, Babylon, Iraq (construction engineering related papers)

Edited by: Hasan Sh. Majdi, Azher M. Abed, Salwan Obaid Waheed Khafaji and Mustafa Baqir Hunain

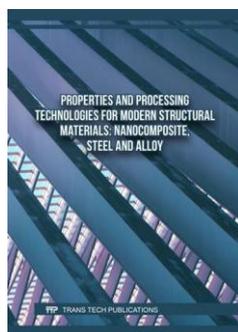
The issue contains articles that were presented at the 2nd International Conference on the Future Sustainable Energy (ICSE 2024, February 20-22, 2024, Babylon, Iraq) and are dedicated to the latest research findings in green concrete and sustainable technologies in architecture and construction.

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

Keywords: Architecture, Building Design, Carbon Fiber, Clean Energy, Crushed Glass, Geopolymer, Green Concrete, Indoor Air Quality, Mechanical Properties, Natural Lighting, Ventilation System

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0595-7
 eBook Single-User: **US\$ 100.00/ EUR 100.00** eBook: 978-3-0364-1595-6
 eBook Multi-User: **US\$ 175.00/ EUR 175.00** 132 pages, 2024

<https://www.scientific.net/978-3-0364-0595-7/book>



Properties and Processing Technologies for Modern Structural Materials: Nanocomposite, Steel and Alloy

Special topic volume with invited peer-reviewed papers only

Edited by: Azher M. Abed, Farazila Binti Yusof, Dr. Vinayak Adimule and Prof. Brahim Safi

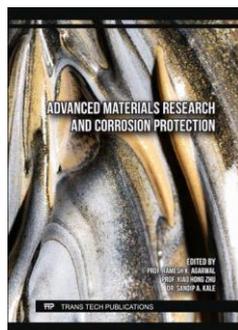
The presented special edition is dedicated to analysing properties and processing technologies for modern structural materials such as nanocomposites, steel and alloy. The edition will be helpful to a wide range of specialists in materials for various spheres of their application.

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

Keywords: Additive Manufacturing, Alloy, Antibacterial Properties, Dielectric Properties, Electrophoretic Deposition, Mechanical Properties, Nanocomposite, Numerical Simulation, Steel

Prices: Print: **US\$ 75.00/ EUR 75.00** Print: 978-3-0364-0592-6
 eBook Single-User: **US\$ 75.00/ EUR 75.00** eBook: 978-3-0364-1592-5
 eBook Multi-User: **US\$ 131.00/ EUR 131.00** 74 pages, 2024

<https://www.scientific.net/978-3-0364-0592-6/book>



Advanced Materials Research and Corrosion Protection

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Ramesh K. Agarwal, Prof. Xiao Hong Zhu and Dr. Sandip A. Kale

The special edition contains a series of scientific research articles that reflect the recent status of engineering research in materials science and will be helpful to many specialists in machinery building.

Topics: Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Composite, Computational Materials Science, Corrosion, Corrosion Protection, High Entropy Alloy, Mechanical Properties, Microstructure, Modelling, Molecular Dynamic Simulation, Polymer

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0594-0
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1594-9
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 130 pages, 2024

<https://www.scientific.net/978-3-0364-0594-0/book>



10th International Conference on Advanced Materials, Mechanics and Structural Engineering (AMMSE)

Selected peer-reviewed full text papers from the 10th International Conference on Advanced Materials, Mechanics and Structural Engineering (AMMSE 2023), December 15-17, 2023, Seoul, South Korea

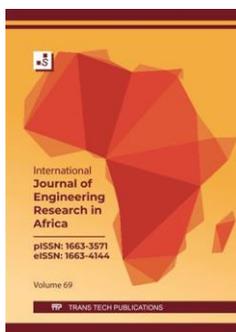
Edited by: Prof. Dong Keon Kim

This edition presents selected papers from the 10th International Conference on Advanced Materials, Mechanics and Structural Engineering (AMMSE 2023), which was successfully held on December 15-17, 2023, in Seoul, South Korea. The primary objective of AMMSE 2023 was to provide a world-class forum for exchanging original ideas and new information, the latest research and experience and provide a platform for establishment of collaborative research projects.

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

Keywords: Alloys, Batteries, Building Materials, Casting, Catalysts, Cement, Computer Equipment, Concrete, Electrolytes, Engines, Fibers, Forging, Functional Materials, Machine Parts, Metal Processing, Photocatalysis, Rice Husk Ash, Steel, Thermal Analysis, Water Treatment

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0389-2
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1389-1
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 112 pages, 2024
<https://www.scientific.net/978-3-0364-0389-2/book>



International Journal of Engineering Research in Africa Vol. 69

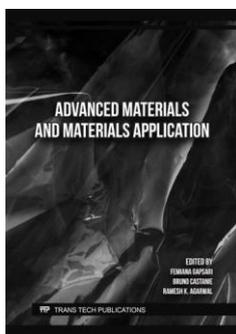
Edited by: Prof. Akii Okonigbon Akaehomen Ibadode

The 69th volume of the journal includes articles dedicated to the latest research results in properties and processing technologies of structural materials such as steel, polymers, and composites, analysis and design of sliding mode controllers and automation of centrifugal pumps, designing of geothermal heat exchangers, investigation of seismic behaviour of soil-based structure and analysis mechanics of river's sediments transfer in conditions of Wadi Skhirate, Morocco. The issue will be useful to specialists in mechanical engineering and construction.

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

Keywords: Aluminium, Automation, Centrifugal Pump, Coarse Sediment, Composite, Computational Materials Science, Corrosion Resistance, Daylighting System, Geothermal Heat Exchanger, Heat Transfer, Kevlar, Mechanical Properties, Microstructure, Molecular Dynamic Simulation, Polymer, River Management, Sediment Transport, Seismic Behaviour, Set Point Tracking, Sliding Mode Control, Soil Cohesion, Steel, Structural Mechanics, Structural Metal, Thermal Properties, Welding

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0581-0
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 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 176 pages, 2024
<https://www.scientific.net/978-3-0364-0581-0/book>



Advanced Materials and Materials Application

Special topic volume with invited peer-reviewed papers only

Edited by: Femiana Gapsari, Bruno Castanie and Prof. Ramesh K. Agarwal

The special edition is dedicated to the latest research findings in the area of materials science and modern production technologies with a focus on sustainable development aspects in engineering activity. This collection will be helpful and interesting to engineers and researchers in materials science and modern production.

Topics: Building Materials, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Casting, Coating, Composite, Friction Stir Welding, Mechanical Properties, Natural Fiber Reinforcement, Natural Materials, Polymer, Recycling, Steel

Prices: Print: **US\$ 130.00/ EUR 130.00** Print: 978-3-0364-0582-7
 eBook Single-User: **US\$ 130.00/ EUR 130.00** eBook: 978-3-0364-1582-6
 eBook Multi-User: **US\$ 228.00/ EUR 228.00** 162 pages, 2024
<https://www.scientific.net/978-3-0364-0582-7/book>



Materials and Technologies for Advanced Engineering Research

Special topic volume with invited peer-reviewed papers only

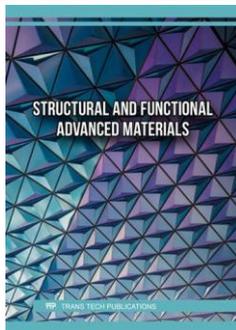
Edited by: Prof. Iulian Antoniac and Prof. Guillermo Requena

This special edition is dedicated to actual issues in the area of properties' research and treatment methods of recent structural and special materials, as well as chemical technologies in environmental protection and industrial production. It will be helpful to a wide range of specialists in materials science and applied technologies.

Topics: Materials Science, Nanoscience

Keywords: Adsorbent, Alloy, Computational Materials Science, Drilling, Electronic Structure, Friction Stir Welding, Mechanical Properties, Methanol Conversion, Nanohybrid, Optical Properties, Polymer, Solid Waste, Steel

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0573-5
 eBook Single-User: **US\$ 150.00/ EUR 150.00** eBook: 978-3-0364-1573-4
 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 186 pages, 2024
<https://www.scientific.net/978-3-0364-0573-5/book>



Structural and Functional Advanced Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Assoc. Prof. Dr. Cecilia Poletti and Prof. José Manuel Torralba

The presented special edition is dedicated to actual issues in the area of development, properties' research and treatment methods of recent structural materials. It will be helpful to specialists in mechanical engineering, electronics, biomedicine and construction.

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

Keywords: Alloy, Building Materials, Ceramics, Coating, Composite, Functional Materials, Kaolin, Mechanical Properties, Metal Oxide, Polymer, Shot Peening, Stamping, Steel, Structural Element, Welding

Prices: Print: **US\$ 210.00/ EUR 210.00** Print: 978-3-0364-0578-0
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 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 288 pages, 2024

<https://www.scientific.net/978-3-0364-0578-0/book>



Achievements in Mechanical Engineering and Green Building Materials

Volume in the series: 921

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Spiridon (Spiros) Koutsonas and Dr. Shofwatul Uyun

This special issue is dedicated to some actual engineering achievements analysis in mechanical engineering and green building materials. The edition will be helpful to specialists in machinery, construction and numerical approaches in the analysis of the mechanical properties of engineering materials.

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

Keywords: Battery Thermal Management System, Bolt Fatigue Strength, Cement Replacement, Coating, Corrosion Inhibitor, Corrosion Resistance, Extrusion, Food 3D Printer, Harmonic Analysis, Heat Transfer, Liquid Cold Plate, Machine Design, Mechanical Engineering, Mechanical Properties, Mechanics of Materials, Modal Analysis, Numerical Analysis, Pozzolan, Steel, Thermal Coating, Vibration, Wind Turbine

Prices: Print: **US\$ 80.00/ EUR 80.00** Print: 978-3-0364-0574-2
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 eBook Multi-User: **US\$ 140.00/ EUR 140.00** 96 pages, 2024

<https://www.scientific.net/978-3-0364-0574-2/book>



Total Art and Science, and Engineering and Industrial Technology (2nd SICTAS and 3rd ICEIT)

Selected peer-reviewed full text papers from the 2nd Silpakorn International Conference on Total Art and Science (SICTAS 2023) jointly with the 3rd International Conference on Engineering and Industrial Technology (ICEIT 2023), November 8-10, 2023, Thailand

Edited by: Assoc. Prof. Dr. Prasopchai Patrojansophon, Assoc. Prof. Dr. Boonnada Pamornpathomkul, Assoc. Prof. Dr. Panupun Limpachayaporn, Dr. Wasu Chaitree, Dr. Natthanon Phonchai, Dr. Peerapong Pakawanich and Dr. Kantida Pancharoen

This edition includes the articles selected from the 2nd Silpakorn International Conference on Total Art and Science 2023 (2nd SICTAS2023), held jointly with the 3rd International Conference on Engineering and Industrial Technology 2023 (3rd ICEIT 2023) on November 8-10, 2023, Thailand. The conference aimed to provide a platform for interdisciplinary dialogue and collaboration towards sustainable development goals, fostering new ideas and creative solutions through a multidisciplinary approach. The ultimate goal of the conference is to promote the integration of art and science in a way that benefits both fields and enriches sustainable development.

Topics: Materials Science, Mechanical Engineering

Keywords: Biowaste, Composite, Mechanical Properties, Monitoring System, Oil Adsorbent, Oil-Water Separation, Polymer, Recycling

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0387-8
 eBook Single-User: **US\$ 100.00/ EUR 100.00** eBook: 978-3-0364-1387-7
 eBook Multi-User: **US\$ 175.00/ EUR 175.00** 68 pages, 2024

<https://www.scientific.net/978-3-0364-0387-8/book>



Machine Building and Energy: New Concepts and Technologies (2nd MBENCT)

Selected peer-reviewed full text papers from the 2nd International Scientific-Practical Conference "Machine Building and Energy: New Concepts and Technologies" (MBENCT 2023), December 04-05, 2023, Baku, Azerbaijan

Edited by: Prof. Subhan Namazov, Prof. Nizami Yusubov and Prof. Sylvio Simon

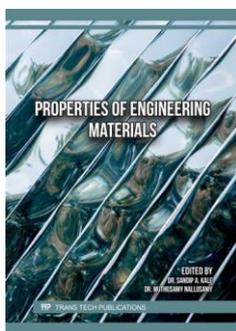
This publication includes articles that were presented at the 2nd International Scientific-Practical Conference "Machine Building and Energy: New Concepts and Technologies" (MBENCT 2023) held on December 4-5, 2023, at the Azerbaijan Technical University (AzTU) in Baku (Azerbaijan). The presented research results focused on the analysis of defects and failure prevention in various engineering structures, the practice of optimisation and modelling in engineering, the development of means of industrial measurements and the automation of technological processes and production.

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

Keywords: Automation, Blockchain Technology, Communication Engineering, Communication Network, Control, Critical Infrastructure, Defect Analysis, Engineering, Failure Prevention, Industrial Measurements, Information Security, Information Technology, Manufacturing, Mechanical Engineering, Modeling, Optimisation, Technological Process

Prices: Print: **US\$ 155.00/ EUR 155.00** Print: 978-3-0364-0036-5
 eBook Single-User: **US\$ 155.00/ EUR 155.00** eBook: 978-3-0364-1036-4
 eBook Multi-User: **US\$ 271.00/ EUR 271.00** 206 pages, 2024

<https://www.scientific.net/978-3-0364-0036-5/book>



Properties of Engineering Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Sandip A. Kale and Dr. M. Nallusamy

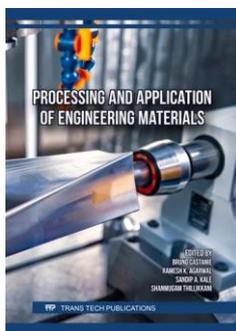
The presented special edition is dedicated to the latest research results in applied materials and their synthesis and processing technologies. The book will be helpful to specialists in the machinery and construction industry.

Topics: Building Materials, Manufacturing, Materials Science, Nanoscience

Keywords: 3D Printing, Alloy, Biocomposite, Building Materials, Composite, Concrete, Forging, Mechanical Properties, Nanocomposite, Polymer, Steel, Thermal Post Processing

Prices: Print: **US\$ 145.00/ EUR 145.00** Print: 978-3-0364-0102-7
 eBook Single-User: **US\$ 145.00/ EUR 145.00** eBook: 978-3-0364-1102-6
 eBook Multi-User: **US\$ 254.00/ EUR 254.00** 176 pages, 2024

<https://www.scientific.net/978-3-0364-0102-7/book>



Processing and Application of Engineering Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Bruno Castanie, Prof. Ramesh K. Agarwal, Dr. Sandip A. Kale and Dr. Shanmugam Thillikkani

Articles collected in this special edition reflect a modern level of materials science and materials processing technologies development and will be helpful to specialists from industrial production, construction, and environmental engineering.

Topics: Building Materials, Materials Science, Nanoscience

Keywords: Absorption, Additive Manufacturing, Alloy, Foundry Sand, Friction Stir Welding, Gas Sensor, Green Building Materials, Luminescence, Mechanical Properties, Nanocomposite, Polluted Soil, Semiconductor, Thermoelectric Properties, Thin Film, Waste Recycling, Wastewater Treatment, Wood

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0103-4
 eBook Single-User: **US\$ 150.00/ EUR 150.00** eBook: 978-3-0364-1103-3
 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 184 pages, 2024

<https://www.scientific.net/978-3-0364-0103-4/book>



6th International Conference on Science and Engineering (ICSE)

Selected peer-reviewed full text papers from the 6th International Conference on Science and Engineering (ICSE 2023), August 07-09, 2023, Yogyakarta, Indonesia

Edited by: Dr. Shofwatul Uyun, Dr. Khusna Dwijayanti, Prof. Hsiang-Lin Liu, Dr. Noor Baity Saidy, Dr. Muhammad Syafiq, Dr. Denni Kurniawan, Agessty Ika Nurlita, Andi Andi, Deddy Rahmadi, Dien F. Awaliyah, Dwi Otik Kurniawati, Gita Miranda Warsito, Mandahadi Kusuma, Priyagung Dhemi Widiakongko and Siti Fatimah

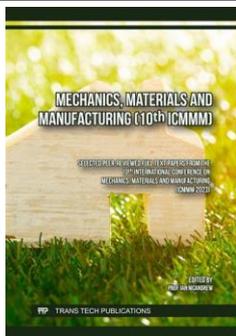
This edition presents articles from the 6th International Conference on Science and Engineering (ICSE 2023) held in Yogyakarta, Indonesia. The issue will be of interest to specialists in biomass processing, biomedical engineering, food production, information technology, and industrial engineering.

Topics: Bioscience and Medicine, Industrial Engineering, Information Technologies, Materials Science

Keywords: Agriculture, Biocomposite, Biodiesel, Biomass Processing, Biomedical Engineering, Biosynthesis, Data Processing, Food Production, Image Processing, Industrial Engineering, Information Technology, Machine Learning, Operational Research, Scheduling

Prices: Print: **US\$ 270.00/ EUR 270.00** Print: 978-3-0364-0552-0
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 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 388 pages, 2024

<https://www.scientific.net/978-3-0364-0552-0/book>



Mechanics, Materials and Manufacturing (10th ICM MM)

Selected peer-reviewed full text papers from the 10th International Conference on Mechanics, Materials and Manufacturing (ICMM 2023), August 18-20, 2023, Washington, D.C., USA

Edited by: Prof. Ian McAndrew

The issue contains articles that were presented at the 10th International Conference on Mechanics, Materials and Manufacturing (ICMM 2023) held in Washington, D. C., from August 18 to 20, 2023. The presented research results focused on the analysis properties of green building materials and their production methods, related to the analysis of the practice of development and evaluation of a vision inspection system for plastic bottle measurement and on ontology-oriented modelling of the Vickers hardness knowledge graph. Some research results were related to lean manufacturing, integrated maintenance management, etc. The edition will be helpful to specialists in construction, big data and computational materials science, mechatronics and production management.

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

Keywords: Computational Materials Science, Green Building Materials, Integrated Maintenance Management, Lean Manufacturing, Mechatronics

Prices: Print: **US\$ 75.00/ EUR 75.00** Print: 978-3-0364-0161-4
 eBook Single-User: **US\$ 75.00/ EUR 75.00** eBook: 978-3-0364-1161-3
 eBook Multi-User: **US\$ 131.00/ EUR 131.00** 92 pages, 2024

<https://www.scientific.net/978-3-0364-0161-4/book>



Machine Building and Energy: New Concepts and Technologies (MBENCT)

Selected peer-reviewed full text papers from the 2nd International Scientific-Practical Conference "Machine Building and Energy: New Concepts and Technologies" (MBENCT 2023), December 04-05, 2023, Baku, Azerbaijan

Edited by: Prof. Subhan Namazov, Prof. Nizami Yusubov and Prof. Sylvio Simon

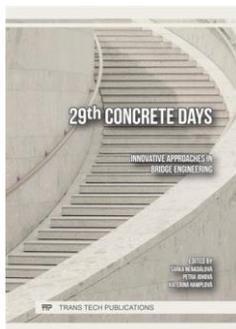
This issue includes articles that were presented at the 2nd International Scientific-Practical Conference "Machine Building and Energy: New Concepts and Technologies" (MBENCT 2023), which was held on December 4-5, 2023, at the Azerbaijan Technical University (AzTU) in Baku (Azerbaijan) and was organized by AzTU, the Brandenburg University of Technology Cottbus-Senftenberg (Brandenburg, Germany) and Gazi University (Türkiye). The presented research results focused on the search for development prospects of enterprises in the fields of machine building and energy, new scientific and production solutions, technologies, and economically efficient production areas in the current situation. The publication will be useful to engineers from mechanical engineering, ecology protection, power engineering, mechatronics and engineering management.

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

Keywords: Additive Manufacturing, Adsorption, Alloy, Composite, Design, Engineering Management, Heavy Metals, Machines, Machining, Mechanical Properties, Mechatronics, Power Engineering, Steel, Thermal Engineering, Tool, Tool Restoration, Wastewater Treatment, Water Treatment

Prices: Print: **US\$ 235.00/ EUR 235.00** Print: 978-3-0364-0034-1
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1034-0
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 298 pages, 2024

<https://www.scientific.net/978-3-0364-0034-1/book>



29th Concrete Days

Selected peer-reviewed full text papers from the 29th International Conference Concrete Days 2023 (CD 2023), November 7-8, 2023, Hradec Kralove, Czech Republic

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

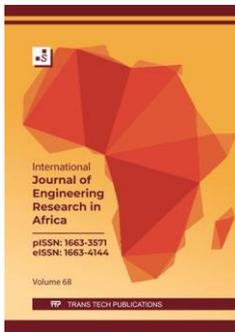
This edition contains some research results and engineering solutions that have been made public at the 29th International Conference Concrete Days 2023 (7-8 November 2023, Hradec Kralove, Czech Republic) and which can be merged under the common topic "Innovative Approaches in Bridge Engineering". The published articles present recent research results in the area of static and dynamic analysis of bridges and bridges' concrete elements, analysis of their stability and reliability, methods of inspection and diagnosis of real structures, etc. The issue will be helpful to engineers and researchers in the area of bridge design and operation.

Topics: Building Materials, Civil Engineering, Construction, Mechanics

Keywords: Bridge, Conceptual Design, Diagnostics, External Prestressing, Flat Arch, Footbridge, Inspection, Precast Segment, Saw-Cut Method, Stability, Static Analysis, Stress Ribbon Structure, Structural Reliability, Sustainable Development

Prices: Print: **US\$ 75.00/ EUR 75.00** Print: 978-3-0357-1597-2
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 eBook Multi-User: **US\$ 131.00/ EUR 131.00** 74 pages, 2024

<https://www.scientific.net/978-3-0357-1597-2/book>



International Journal of Engineering Research in Africa Vol. 68

Edited by: Prof. Akii Okonigbon Akaehomen Ibadode

This 68th issue of the journal contains articles reflecting the latest research results in powder metallurgy of cermets, green building materials for wide applications in modern construction, analysis of existing maximum solar power point tracking algorithms and components and techniques of solar radiation level prediction in Sahara region of Algeria based on machine learning. This volume will be helpful to many engineers in machinery, renewable energy production and construction.

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

Keywords: Cermet, Concrete, Friction Reduction, Green Building Materials, Hydraulic Dredging, Maximum Power Point Tracking, Mechanical Properties, Powder Metallurgy, Soil Stabilisation, Solar Energy, Solar Radiation Prediction

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0564-3
 eBook Single-User: **US\$ 150.00/ EUR 150.00** eBook: 978-3-0364-1564-2
 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 172 pages, 2024
<https://www.scientific.net/978-3-0364-0564-3/book>



Journal of Biomimetics, Biomaterials and Biomedical Engineering Vol. 64

Edited by: Dr. Sooraj Hussain Nandyala and Dr. David Duday

The journal's volume is dedicated to the latest achievements in the area of biomedical engineering such as the green synthesis of gold nanoparticles for a biomedical application, analysis of the influence of the salivary flow rate on dental caries, investigations in the area of clinical biomechanics such as modelling of mechanical performance and fractural behaviour of orthopaedic cement in total hip replacements, a dental bridge, prediction and recognition of different gait phases of walking to assist in real-time control of lower limb exoskeletons, and results of sleep apnea detection by ECG signal processing, etc. The collected articles will be helpful to many biomedical engineers and clinical researchers.

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

Keywords: Artificial Blood Vessel, Autism, Biomechanics, Biosensor, Blood Flow Resistance, Cancer Cell, Deep Learning, Dental Bridge, Dental Caries, Electrocardiogram, Fracture Behaviour, Gait Prediction, Gold Nanoparticle, Green Synthesis, Implant, Lower Limb Exoskeleton, Mechanical Properties, Medical Image Processing, Medical Signal, Modelling, MR Image, Orthopedic Cement, Saliva, Salivary Flow Rate, Sleep Apnea

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0565-0
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1565-9
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 122 pages, 2024
<https://www.scientific.net/978-3-0364-0565-0/book>



Journal of Nano Research Vol. 82

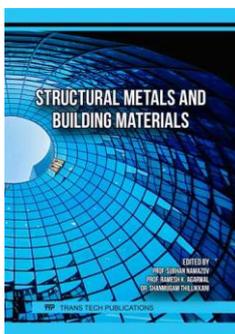
Edited by: Prof. Efstathios I. Meletis

The presented volume of the "Journal of Nano Research" includes peer-reviewed articles reflecting the latest research results in the synthesis and properties analysis of nanomaterials and nanoparticles for various engineering applications - starting from synthesis of bionanolubricants, sensor thin films for detection of azo dye, silicon nanowires for photocatalytic applications, perovskite nanorods, proton exchange membranes for fuel cells, and ending with investigation of thermal buckling behaviour of functionally graded nanobeam and application of gold and silver nanoparticles in laser cleaning of archaeology glass. The presented articles collection will be helpful to specialists from many branches of engineering whose activity is related to nanomaterials and nanotechnologies.

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

Keywords: Antibacterial Properties, Archaeology Glass, Bionanolubricant, Etching, Laser Cleaning, Nanobeam, Nanocomposite, Nanomechanics, Nanoparticles, Nanorods, Optical Properties, Perovskite, Photocatalytic Activity, Photoluminescence, Proton Exchange Membrane, Silicon Nanowires, Thin Films

Prices: Print: **US\$ 135.00/ EUR 135.00** Print: 978-3-0364-0561-2
 eBook Single-User: **US\$ 135.00/ EUR 135.00** eBook: 978-3-0364-1561-1
 eBook Multi-User: **US\$ 236.00/ EUR 236.00** 164 pages, 2024
<https://www.scientific.net/978-3-0364-0561-2/book>



Structural Metals and Building Materials

Special topic volume with invited peer-reviewed papers only

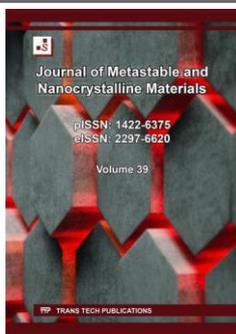
Edited by: Prof. Subhan Namazov, Prof. Ramesh K. Agarwal and Dr. Shanmugam Thillikkani

This special edition contains articles based on research results in properties and processing technologies of some structural metals and building materials and it will be useful to specialists in machinery and civil engineering.

Topics: Building Materials, Construction, Materials Science, Mechanics

Keywords: Alloy, Bricks, Cutting, Drilling, Forging, Green Building Materials, Honing, Mechanical Properties, Steel, Turning, Welding

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0357-1867-6
 eBook Single-User: **US\$ 120.00/ EUR 120.00** eBook: 978-3-0357-3856-8
 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 144 pages, 2024
<https://www.scientific.net/978-3-0357-1867-6/book>



Journal of Metastable and Nanocrystalline Materials Vol. 39

Edited by: Dr. Agus Geter Edy Sutjipto and Dr. Vinayak Adimule

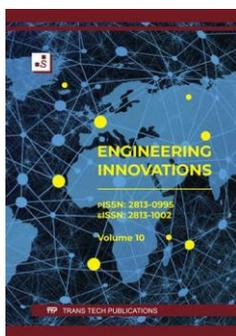
The 39th volume of the Journal of Metastable and Nanocrystalline Materials includes articles that review the zinc oxide crystal growth process with and without adding the graphene oxide, as well as analyse the microstructure and semiconductor properties of finished materials. The results of transmission electron microscope analysis of polycrystalline silicon for thin film solar cells and investigation of methods for synthesis and properties study of nickel-zinc nanoferrites and cadmium-substituted cobalt ferrite nanoparticles are also presented in this volume. This issue will be helpful to specialists in materials science and applied nanotechnologies.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Antibacterial Properties, Antifungal Properties, Crystal Growth, Electric Current Heating Method, Graphene Oxide, Low-Temperature Synthesis, Nanoferrites, Nanomaterials, Nanoparticles, Polycrystalline Silicon, Semiconductors, Solar Cell, Thin Film, Zinc Oxide

Prices: Print: **US\$ 75.00 / EUR 75.00** Print: 978-3-0364-0163-8
 eBook Single-User: **US\$ 75.00 / EUR 75.00** eBook: 978-3-0364-1163-7
 eBook Multi-User: **US\$ 131.00 / EUR 131.00** 56 pages, 2024

<https://www.scientific.net/978-3-0364-0163-8/book>



Engineering Innovations Vol. 10

Edited by: Prof. Magd Abdel Wahab, Dr. Sheila Tobing and Prof. Mosbeh Kaloop

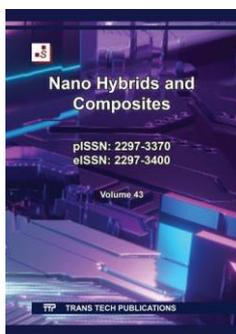
The presented volume of the journal Engineering Innovations includes articles on research results and engineering solutions in the strength of materials, including analysis of crack initiation and propagation in an aluminium alloy in a corrosive environment, investigation of fatigue life of recycled asphalt pavements, etc. and some new developments in architecture and solutions in construction management. These articles are aimed at specialists in materials science, machinery, architecture, and construction and are sure to be of interest to them.

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

Keywords: Alloy, Architecture, Building Materials, Construction Management, Corrosive Environment, Fatigue Life, Mechanical Properties, Strength of Materials

Prices: Print: **US\$ 85.00 / EUR 85.00** Print: 978-3-0364-0555-1
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 eBook Multi-User: **US\$ 0.00 / EUR 0.00** 90 pages, 2024

<https://www.scientific.net/978-3-0364-0555-1/book>



Nano Hybrids and Composites Vol. 43

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

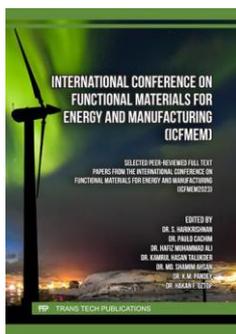
The following articles focus on the most recent results in the area of synthesis and study of properties of nanomaterials and nanoparticles. These materials have a wide range of applications, including in micro- and optoelectronics, solar cells, biomedical engineering, biofuel production catalysts, gas sensors, and photocatalytic processes. This edition will be of great use to researchers working in the field of modern nanomaterials.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Biosynthesis, Catalyst, Dielectrics, Magnetite, Monocrystalline Silicon Solar Cell, Nanocomposite, Nanocrystals, Nanotube, Perovskite-Type Structure, Photocatalyst, Silicon Oxide, Spark Plasma Sintering, Thin Films, Transesterification

Prices: Print: **US\$ 95.00 / EUR 95.00** Print: 978-3-0364-0554-4
 eBook Single-User: **US\$ 95.00 / EUR 95.00** eBook: 978-3-0364-1554-3
 eBook Multi-User: **US\$ 166.00 / EUR 166.00** 106 pages, 2024

<https://www.scientific.net/978-3-0364-0554-4/book>



International Conference on Functional Materials for Energy and Manufacturing (ICFMEM)

Selected peer-reviewed full text papers from the International Conference on Functional Materials for Energy and Manufacturing (ICFMEM2023), July 26, 2023, Kancheepuram, India

Edited by: Dr. S. Harikrishnan, Dr. Paulo Cachim, Dr. Hafiz Muhammad Ali, Dr. Kamrul Hasan Talukder, Dr. Md. Shamim Ahsan, Dr. K.M. Pandey and Dr. Hakan F. Oztop

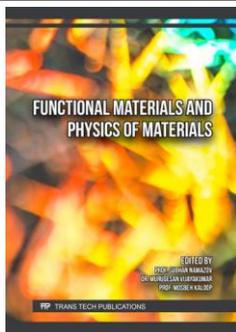
This issue features articles that showcase research findings presented at the International Conference on Functional Materials for Energy and Manufacturing (ICFMEM 2023) held on July 26, 2023, at the Pallavan College of Engineering in Kancheepuram, Tamil Nadu, India. The collection of articles is intended to be useful for specialists in the areas of energy transition, environmental engineering, mechatronics, and sensors.

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

Keywords: Autonomous Drones, Biosensor, Energy Transition, Fossil Fuel, Mechatronics, Phase Change Material, Renewable Energy, Solar Energy, Thermal Energy Storage, Thermal Properties, Warming

Prices: Print: **US\$ 85.00 / EUR 85.00** Print: 978-3-0364-0550-6
 eBook Single-User: **US\$ 85.00 / EUR 85.00** eBook: 978-3-0364-1550-5
 eBook Multi-User: **US\$ 149.00 / EUR 149.00** 90 pages, 2024

<https://www.scientific.net/978-3-0364-0550-6/book>



Functional Materials and Physics of Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Subhan Namazov, Dr. Murugesan Vijayakumar and Prof. Mosbeh Kaloop

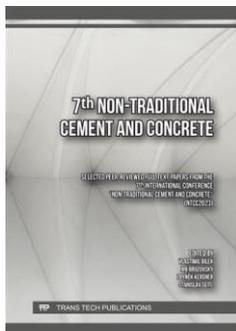
The presented special issue contains articles based on research results in functional materials, special composites and some methods of chemical synthesis using pyrolysis, ultrasound-assisted anthocyanins extraction, etc. This special edition will be helpful to many specialists in materials science and chemical synthesis.

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

Keywords: Biological Properties, Catalytic Pyrolysis, Composite, Dielectric Properties, Electrochemical Behaviour, Extraction, Functional Materials, Mechanical Properties, Microstructure, Nanotubes, Optical Properties, Pig Iron, Spurt Pyrolysis, Surface Adsorption, Synthesis, Thermodynamic Properties, Thin Films

Prices: Print: **US\$ 125.00/ EUR 125.00** Print: 978-3-0357-2895-8
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 eBook Multi-User: **US\$ 219.00/ EUR 219.00** 144 pages, 2024

<https://www.scientific.net/978-3-0357-2895-8/book>



7th Non-Traditional Cement and Concrete

Selected peer-reviewed full text papers from the 7th International Conference "Non-Traditional Cement and Concrete" (NTCC2023), June 25-28, 2023, Brno, Czech Republic

Edited by: Vlastimil Bilek, Jiri Brozovsky, Zbyněk Keršner and Dr. Stanislav Seitl

It is with great pleasure that we present the compilation of the papers selected from the 7th International Conference "Non-Traditional Cement and Concrete" (NTCC 2023), which took place at the Continental Hotel in Brno, Czech Republic, from June 25 to June 28, 2023. The collected articles introduce to readers the latest research results and decisions in green building materials and related technologies in civil engineering. The edition will be helpful to specialists in the construction industry.

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

Keywords: 3D Printing, Additive Manufacturing, Cement, Civil Engineering, Concrete, Fly Ash, Geopolymer, Green Building Materials, Reinforcement Materials, Slag, Strength of Materials

Prices: Print: **US\$ 135.00/ EUR 135.00** Print: 978-3-0357-1718-1
 eBook Single-User: **US\$ 135.00/ EUR 135.00** eBook: 978-3-0357-3718-9
 eBook Multi-User: **US\$ 236.00/ EUR 236.00** 158 pages, 2024

<https://www.scientific.net/978-3-0357-1718-1/book>



22nd Autex World Textile Conference

Selected peer-reviewed full text papers from the 22nd Autex World Textile Conference (Autex 2023), June 26-28, 2023, Melbourne, Australia)

Edited by: Prof. Li Jing Wang

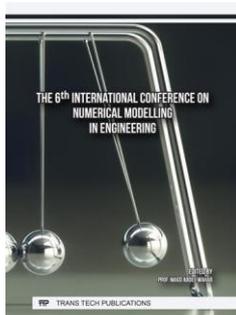
This book is a collection of selected papers submitted to the Autex 2023 conference held at RMIT University, Melbourne, 26-28 June 2023. The themes of this edition are ecological aspects of textile production, supply chain management practice and training processes in the apparel industry, and some solutions and concepts in modern fashion design. The presented articles will be interesting and useful to specialists whose activity is related to the textile and apparel industry.

Topics: Environmental Engineering, Industrial Engineering, Manufacturing, Materials Science

Keywords: Aesthetic Factors, Apparel Industry, Dye Removing, Dyeing, Fashion Design, Garment Comfort, Microplastic Pollution, Mobility, Supply Chain Management, Textile, Training

Prices: Print: **US\$ 125.00/ EUR 125.00** Print: 978-3-0357-1670-2
 eBook Single-User: **US\$ 125.00/ EUR 125.00** eBook: 978-3-0357-3597-0
 eBook Multi-User: **US\$ 219.00/ EUR 219.00** 142 pages, 2024

<https://www.scientific.net/978-3-0357-1670-2/book>



The 6th International Conference on Numerical Modelling in Engineering

Selected peer-reviewed full text papers from the 6th International Conference on Numerical Modelling in Engineering (NME 2023), August 29-31, 2023, Ghent, Belgium

Edited by: Prof. Magd Abdel Wahab

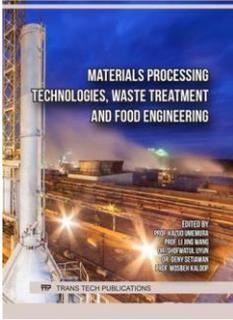
This volume contains research results that were presented at the 6th International Conference on Numerical Modelling in Engineering NME 2023 (Ghent, Belgium, 29-31 August 2023). The collected articles are dedicated to the results of the development and experiences of applications of analytical and numerical methods for research in various engineering sciences, starting from models of mathematical physics and applied mathematics to model approaches in remote sensing, structural mechanics, etc. The edition will be interesting and helpful to specialists in various branches of engineering sciences.

Topics: Bioscience and Medicine, Information Technologies, Materials Science, Mechanical Engineering, Mechanics

Keywords: Biomaterials, Biomechanics, Computational Model, Control Theory, Data Processing, Deep Learning, Fractal, Information Technology, Kalman Filter, Knowledge Diffusion, Machine Learning, Mathematical Physics, Mechatronics, Navigation System, Numerical Analysis, Remote Sensing, Satellite Image, Signal Processing Structural Mechanics

Prices: Print: **US\$ 180.00/ EUR 180.00** Print: 978-3-0357-1806-5
 eBook Single-User: **US\$ 180.00/ EUR 180.00** eBook: 978-3-0357-3806-3
 eBook Multi-User: **US\$ 315.00/ EUR 315.00** 186 pages, 2024

<https://www.scientific.net/978-3-0357-1806-5/book>



Materials Processing Technologies, Waste Treatment and Food Engineering

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura, Prof. Li Jing Wang, Dr. Shofwatul Uyun, Dr. Deny Setiawan and Prof. Mosbeh Kaloop

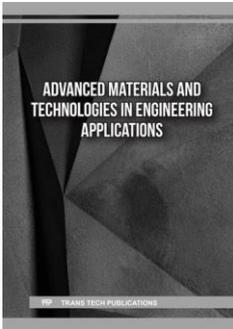
The following special edition is dedicated to the latest research findings and practical solutions in the field of structural materials and their processing, as well as chemical technologies for waste and biomass processing, food processing and industrial measurements in textile manufacturing and will be valuable to many specialists in the field of recent manufacturing.

Topics: Information Technologies, Manufacturing, Materials Science, Nanoscience

Keywords: Additive Manufacturing, Alloy, Biomass Treatment, Chemical Process, Composite, Drying, Electrical Conductivity, Food Production, Forming, Graphene, Industrial Measurement, Mechanical Properties, Monitoring, Oxide Semiconductor, Plasma Arc Machining, Polymer, Steel, Testing, Textile Production, Thin Films, Waste Recycling

Prices: Print: **US\$ 145.00/ EUR 145.00** Print: 978-3-0357-1837-9
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 eBook Multi-User: **US\$ 254.00/ EUR 254.00** 174 pages, 2024

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Advanced Materials and Technologies in Engineering Applications

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Šárka Nenadlová, Prof. Kazuo Umemura, Prof. Ian McAndrew and Dr. S. Harikrishnan

This special edition presented to the readers' attention is dedicated to research results related to advanced materials and technologies, including high-performance concrete and concrete production, recent composite materials, the results of the designing of micro/nano-structured white organic light-emitting diodes for lighting, and the investigation of thermal performance of some types of heat transfer fluids. The special edition will be useful to a wide range of engineers whose activity is related to construction, machinery, optoelectronics and thermal engineering.

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

Keywords: Composite, Concrete, Fibre Reinforced Concrete, Fly Ash, Heat Transfer, Mechanical Properties, Nanofluid, Nanoparticles, Organic Light-Emitting Diode, Steel Fibres, Thermal Engineering, Thermo-Physical Properties

Prices: Print: **US\$ 125.00/ EUR 125.00** Print: 978-3-0357-1665-8
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 eBook Multi-User: **US\$ 219.00/ EUR 219.00** 138 pages, 2024

<https://www.scientific.net/978-3-0357-1665-8/book>



7th International Conference on Nanomaterials and Biomaterials (ICNB) and 5th Asia Conference on Material and Manufacturing Technology (ACMMT)

Selected peer-reviewed full text papers from the 7th International Conference on Nanomaterials and Biomaterials (ICNB 2023) and 5th Asia Conference on Material and Manufacturing Technology (ACMMT 2023), November 22 -24, 2023, hybrid

Edited by: Prof. Steven Y. Liang

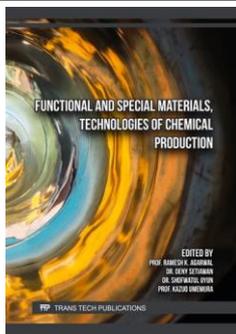
The edition contains articles on research results that were presented at the 2023 7th International Conference on Nanomaterials and Biomaterials (ICNB 2023) and the 2023 5th Asia Conference on Material and Manufacturing Technology (ACMMT 2023) which were successfully held in Chiang Mai, Thailand during November 22-24, 2023. The collected articles will be useful to specialists in materials science, biomedicine, pharmacology and mechatronics.

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

Keywords: Biomaterials, Biopolymer, Bone Regeneration, Magnetic Hyperthermia, Manipulator, Mechatronics, Nanomaterials

Prices: Print: **US\$ 90.00/ EUR 90.00** Print: 978-3-0364-0441-7
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 eBook Multi-User: **US\$ 158.00/ EUR 158.00** 92 pages, 2024

<https://www.scientific.net/978-3-0364-0441-7/book>



Functional and Special Materials, Technologies of Chemical Production

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Ramesh K. Agarwal, Dr. Deny Setiawan, Dr. Shofwatul Uyun and Prof. Kazuo Umemura

The special edition focuses on the latest research findings and practical solutions in the fields of materials engineering, chemical technologies, and functional materials and will be helpful to a wide range of specialists in materials science and chemical production.

Topics: Materials Science, Nanoscience

Keywords: 3D Printing, Carbon Catalyst, Composite, Dye-Sensitized Solar Cells, Electrode Materials, Glass, Hydrogel, Lignin, Mechanical Properties, Nanocomposite, Nanowires, Optical Property, Polymer, Silver Nanoparticles, Thermal Stability

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0357-1856-0
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 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 144 pages, 2024

<https://www.scientific.net/978-3-0357-1856-0/book>



Smart Textile and Advanced Materials Technologies

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura, Prof. Li Jing Wang and Prof. Ramesh K. Agarwal

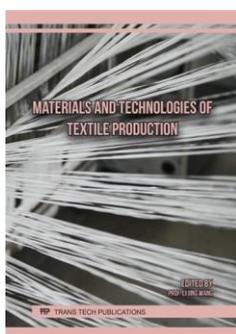
The presented special edition is dedicated to the latest research results and practical solutions in the area of applied materials and materials processing technologies used in many branches of modern production, biomedicine, etc. This special issue will be helpful to specialists in mechanical engineering, mechatronics, sensors and biomedical engineering.

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

Keywords: Alloy, Antimicrobial Agent, Biocompatibility, Biomaterials, Composite, Drug Carrier, Fabric, Hydrogel, Hydroxyapatite, Mechanical Properties, Nanocomposite, Polyester Fiber, Polymer, Protective Coating, Sensor, Smart Textile, Unctional Clothing, Yarn

Prices: Print: **US\$ 160.00/ EUR 160.00** Print: 978-3-0357-1786-0
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 eBook Multi-User: **US\$ 280.00/ EUR 280.00** 192 pages, 2024

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Materials and Technologies of Textile Production

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Li Jing Wang

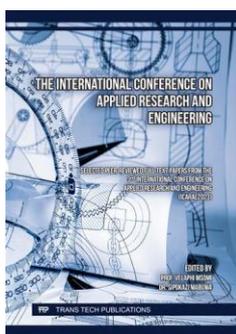
This special edition is dedicated to recent issues in the area of textile production. Modern textile production is a specialised and innovative industrial branch. Conventional and technical textiles are developed according to the precise requirements for their functional purpose and are produced using advanced materials and cutting-edge technologies, and the choice of materials is crucial, as end products are designed for specific functions. This special edition will be interesting and helpful to specialists in the textile industry.

Topics: Manufacturing, Materials Science, Nanoscience

Keywords: Composite, Cotton Fabrics, Knit Structure, Mechanical Properties, Plain Woven Fabric, Polymer, Spinning, Textile, Weaving Process, Yarn

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0357-1842-3
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0357-3837-7
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 98 pages, 2024

<https://www.scientific.net/978-3-0357-1842-3/book>



The International Conference on Applied Research and Engineering

Selected peer-reviewed full text papers from the 3rd International Conference on Applied Research and Engineering (ICARAE2023), November 17-19, 2023, Cape Town, South Africa

Edited by: Prof. Velaphi Msomi and Dr. Sipokazi Mabuwa

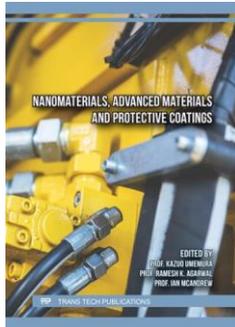
The book is a compilation of articles that were presented at the 3rd International Conference on Applied Research and Engineering held in Cape Town, South Africa, from 17 to 19 November 2023. The latest achievements in the field of applied materials and also engineering research results and design solutions in machinery are analysed in this edition. This publication is anticipated to provide valuable insights to many specialists engaged in research in engineering science.

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

Keywords: Alloy, Artificial Neural Network, Coating, Flood Phenomena, Heat Transfer, Mechanical Engineering, Mechanical Properties, Simulation, Steel, Structural Mechanics, Topological Optimisation, Tribological Properties

Prices: Print: **US\$ 75.00/ EUR 75.00** Print: 978-3-0357-1899-7
 eBook Single-User: **US\$ 75.00/ EUR 75.00** eBook: 978-3-0357-3843-8
 eBook Multi-User: **US\$ 131.00/ EUR 131.00** 100 pages, 2024

<https://www.scientific.net/978-3-0357-1899-7/book>



Nanomaterials, Advanced Materials and Protective Coatings

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Kazuo Umemura, Prof. Ramesh K. Agarwal and Prof. Ian McAndrew

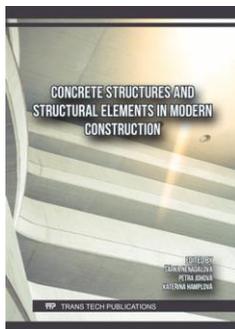
This special issue presents the latest research results on structural materials and nanomaterials, which have various applications in modern machinery, electronics, environmental engineering, and chemical production. The special edition will be highly useful for a wide range of specialists.

Topics: Materials Science, Nanoscience

Keywords: Alloy, Coating, Composite, Electrochemical Metallisation, Heat Treatment, High Entropy Alloy, Mechanical Properties, Nanofiber, Nanoparticles, Polymer, Pulse Current Electroplating, Superalloy, Transition-Metal Dichalcogenides, Turning

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0357-1748-8
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 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 130 pages, 2024

<https://www.scientific.net/978-3-0357-1748-8/book>



Concrete Structures and Structural Elements in Modern Construction

Special topic volume with invited peer-reviewed papers only

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

The special edition focuses on the important aspects of designing, researching and analyzing the load-bearing properties of concrete-based structural elements and functional structures used in modern construction and will undoubtedly be useful to civil engineers and architects.

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

Keywords: Beam, Blast Resistance, Column, Concrete, Concrete Reinforcement, Concrete Structure, Crack, Façade, Flat Slab, Hydration Heat, Masonry, Mechanical Properties, Shear Loading, Steel-Concrete Composite

Prices: Print: **US\$ 135.00/ EUR 135.00** Print: 978-3-0357-1679-5
 eBook Single-User: **US\$ 135.00/ EUR 135.00** eBook: 978-3-0357-3665-6
 eBook Multi-User: **US\$ 236.00/ EUR 236.00** 140 pages, 2024

<https://www.scientific.net/978-3-0357-1679-5/book>



Africa International Conference on Clean Energy and Energy Storage

Selected peer-reviewed full text papers from the 1st Africa International Conference on Clean Energy and Energy Storage (AICCEES), November 23-24, 2023, Port Harcourt, Nigeria

Edited by: Prof. Roland Uhumwangho, Prof. Sunday Olayinka Oyedepo, Dr. Ogheneruona Endurance Diemuodeke, Prof. Fidelis Ibiang Abam, Dr. Veronica Edeminam and Dr. Anthony Akpasoh

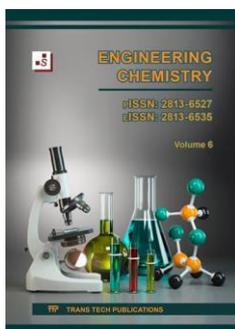
This book from the 1st Africa International Conference on Clean Energy and Energy Storage (AICCEES) 2023 includes the selected articles from the conference encompassing a diverse array of research results presented at the conference and providing readers with a condensed yet thorough overview of ideas and innovations in the clean energy sector. The highlighted topics range from contemporary research findings to innovative solutions within the clean energy and energy storage sectors in Africa. This book serves as a valuable resource for researchers, industry experts, and policymakers, contributing to the ongoing dialogue and advancements in the clean energy and energy storage field.

Topics: Environmental Engineering, General Engineering, Industrial Engineering, Mechanical Engineering

Keywords: Chemical Production, Clean Mobility, Energy Access, Energy Supply, Energy Transition, Hydrogen, Mini-Grid, Renewable Energy, Sustainable Manufacturing

Prices: Print: **US\$ 200.00/ EUR 200.00** Print: 978-3-0357-1794-5
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0357-3771-4
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 206 pages, 2024

<https://www.scientific.net/978-3-0357-1794-5/book>



Engineering Chemistry Vol. 6

Edited by: Gaanty Pragas Maniam

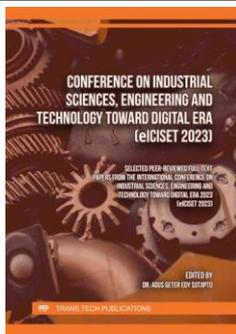
This volume contains articles that focus on recent advancements in several fields including the chemical synthesis of fluoroacrylate palm oil polyurethane, the production of silicon nanoparticles from beach sand, analysis of resin-based water pipeline cathodic protection's impact on cancerogenesis, and various biotechnologies used in agriculture and food production. These articles are targeted towards professionals in the fields of biotechnologies, nanosynthesis and chemical production.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Cathodic Protection, Coating, Emulsification, Etching, Germination, Kaolin, Neutron Radiation, Polymer, Polyurethane, Repellent Activity, Resin, Rise Seed, Silica Nanoparticles, Synthesis

Prices: Print: **US\$ 60.00/ EUR 60.00** Print: 978-3-0364-0553-7
 eBook Single-User: **US\$ 0.00/ EUR 0.00** eBook: 978-3-0364-1553-6
 eBook Multi-User: **US\$ 0.00/ EUR 0.00** 78 pages, 2024

<https://www.scientific.net/978-3-0364-0553-7/book>



Conference on Industrial Sciences, Engineering and Technology toward Digital Era (eICISSET 2023)

Selected peer-reviewed full text papers from the International Conference on Industrial Sciences, Engineering and Technology toward Digital Era 2023 (eICISSET 2023), August 8-9, 2023, Palembang, Indonesia

Edited by: Dr. Agus Geter Edy Sutjipto

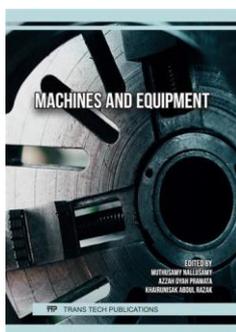
The International Conference on Industrial Sciences, Engineering and Technology toward Digital Era 2023 (eICISSET2023) was successfully held offline and online on August 8-9, 2023, at UIGM, Palembang, South Sumatra, Indonesia. The conference was dedicated specifically to the advancement of industrial sciences, engineering and technology in related industries such as membrane, biotechnology, biodiversity, biocomposite, industrial chemistry, electroceramics, photonics, renewable energy, mechatronics, sensor, environment, and others. In this proceeding were included the selected articles from the eICISSET2023 with a special focus on modern aspects of sustainable development in biotechnologies, robotics, machine learning, management and engineering risk assessment.

Topics: Bioscience and Medicine, Civil Engineering, Environmental Engineering, Industrial Engineering, Information Technologies, Materials Science, Mechanical Engineering

Keywords: Biotechnology, Conflict Management, Convolutional Neural Networks, Deep Learning, Environmental Engineering, Mechatronics, Natural Language Processing, Public Management, Risk Assessment, Robotics

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Machines and Equipment

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. M. Nallusamy, Dr. Azzah Dyah Pramata and Khairunisak Abdul Razak

The special issue is dedicated to recent achievements in hydrometallurgy and materials processing, research and design in machinery, engineering management, construction technologies and natural resource management and will be helpful to specialists in the mentioned branches of modern production.

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

Keywords: Additive Manufacturing, Beam, Cement, Construction, Design, Equipment, Ferronickel, Filament, Finite Element Analysis, Hydrometallurgy, Industrial Engineering, Leaching, Machine, Mechanical Properties, Mechatronics, Natural Resource Management, Polymer, Steel, Structure Element, Structures

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 eBook Multi-User: **US\$ 324.00/ EUR 324.00** 238 pages, 2024

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Metalworking Technologies and Building Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Steven Y. Liang, Prof. Hisaki Watari and Dr. Abiodun Ayodeji Abioye

The special edition is dedicated to recent achievements in the analysis of properties, investigation of technologies synthesis, preparation and processing of modern structural alloys, steel and some sustainable building materials. The presented special edition will interest specialists in machinery, metallurgy and construction.

Topics: Building Materials, Materials Science

Keywords: Alloy, Casting, Cement, Concrete, Geopolymer, Green Building Materials, High Entropy Alloy, Mechanical Properties, Metalworking, Milling, Plastic Deformation, Steel, Superalloy, Surface Cracking, Thermal Stability

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<https://www.scientific.net/978-3-0364-0531-5/book>



6th International Conference on Advanced Materials Science

Selected peer-reviewed full text papers from the 6th International Conference on Advanced Materials Science (ICoAMS 2023), August 23-24, 2023, Surakarta, Indonesia

Edited by: Sarjito Sarjito, Waluyo Adi Siswanto, Assoc. Prof. Dr. Mohammad Sukri Mustapa, Assoc. Prof. Dr. Agus Dwi Anggono and Assoc. Prof. Dr. Tri Widodo Besar Riyadi

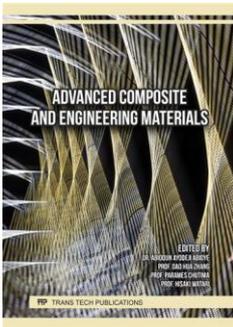
This comprehensive book offers a selection of full text papers from the 6th International Conference on Advanced Materials Science (ICoAMS 2023), held on August 23-24, 2023, in Surakarta, Indonesia in a hybrid format (online presentations conducted via Zoom). The presented papers provide an in-depth exploration of metallurgy and materials science, giving a robust understanding of their foundational principles and wide-ranging industrial applications. It meticulously examines the complexities of nanomaterials and nanotechnology, shedding light on their dynamic advancements and significant potentials within diverse sectors.

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

Keywords: Boiler, Cast Iron, Coal Screener, Composite, Geopolymer, Graphene Oxide, High Entropy Alloy, Mechanical Properties, Metal Arc Welding, Nanoparticle, Polymer, Steel, Wear Failure, Wind Tunnel

Prices: Print: **US\$ 140.00/ EUR 140.00** Print: 978-3-0364-0226-0
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Advanced Composite and Engineering Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Abiodun Ayodeji Abioye, Prof. Dao Hua Zhang, Prof. Parames Chutima and Prof. Hisaki Watari

This special edition presents research results on the properties of composite and electrical engineering materials including biocomposites and materials with nanostructured components. The publication will interest many specialists whose activities are related to applied materials science, machinery and energy.

Topics: Materials Science, Nanoscience

Keywords: Biocomposite, Ceramics, Composite, Fiber Reinforcement, Insulation Materials, Mechanical Properties, Metal Matrix Composite, Nanomaterials, Polymer, Thermal Properties, Transformer Oil Substitute

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0537-7
 eBook Single-User: **US\$ 115.00/ EUR 115.00** eBook: 978-3-0364-1537-6
 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 130 pages, 2024

<https://www.scientific.net/978-3-0364-0537-7/book>



5th International Conference on Science and Technology Applications (ICoSTA)

Selected peer-reviewed full text papers from the 5th International Conference on Science and Technology Applications (ICoSTA 2023), November 02, 2023, virtual

Edited by: Bornok Sinaga, Dr. Deny Setiawan and Dr. Juniastel Rajaguguk

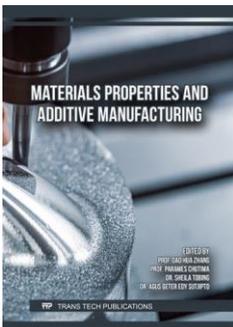
The issue presents articles from the 5th International Conference on Science and Technology Applications (ICoSTA-2023), and will benefit to construction, engineering geology, and applied geophysics researchers and engineers.

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

Keywords: Computational Research, Concrete, Earthquake Resistance, Engineering Geology, Geophysics, Heat Treatment, Remote Sensing, Steel, Welding

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<https://www.scientific.net/978-3-0364-0551-3/book>



Materials Properties and Additive Manufacturing

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Dao Hua Zhang, Prof. Parames Chutima, Dr. Sheila Tobing and Dr. Agus Geter Edy Sutjipto

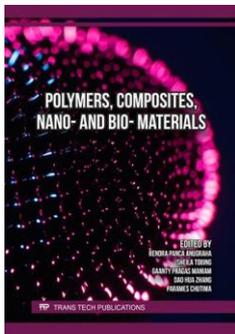
This special edition presents research results on the properties and processing technologies of structural materials such as steel, alloys, biocomposites, ceramics and polymers. The issue will interest many specialists whose activity is related to metallurgy, machinery, and materials science.

Topics: Manufacturing, Materials Science, Nanoscience

Keywords: Additive Manufacturing, Alloy, Biocomposite, Ceramics, Corrosion, Friction Welding, Mechanical Properties, Nanoclay, Polymer, Steel, Welding

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<https://www.scientific.net/978-3-0364-0536-0/book>



Polymers, Composites, Nano- and Bio- Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Rendra Panca Anugraha, Dr. Sheila Tobing, Gaanty Pragas Maniam, Prof. Dao Hua Zhang and Prof. Parames Chutima

The special issue is dedicated to research results in applied materials science and materials processing technologies in modern manufacturing and will interest many engineers and researchers in materials science, machinery, biomedical engineering and sensor design.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Biocomposite, Biodegradation, Biomaterials, Biopolymer, Biosensor, Bone Cement Composite, Composite, Epoxy Adhesive, Fiber Layer, Green Synthesis, Hydroxyapatite, Laminate, Magnetic Properties, Mechanical Properties, Nanoparticles, Poly Lactic Acid, Polymer, Sensor, Shape Memory Alloy

Prices: Print: **US\$ 165.00/ EUR 165.00** Print: 978-3-0364-0530-8
 eBook Single-User: **US\$ 165.00/ EUR 165.00** eBook: 978-3-0364-1530-7
 eBook Multi-User: **US\$ 289.00/ EUR 289.00** 174 pages, 2024

<https://www.scientific.net/978-3-0364-0530-8/book>



9th International Conference on Advanced Engineering and Technology (ICAET)

Selected peer-reviewed full text papers from the 2023 9th International Conference on Advanced Engineering and Technology (ICAET 2023), May 19-21, 2023, Incheon, South Korea

Edited by: Prof. Jong Wan Hu and Prof. Mosbeh Kaloop

This edition contains articles that were presented at the annual International Conference on Advanced Engineering and Technology (ICAET 2023) which was held in Incheon, South Korea, May 19-21, 2023. The articles cover engineering research and design results in the area of equipment and technological machines, building materials and analysing and designing an optimisation system for in-plant complex production based on Industry 4.0. This ICAET edition will be interesting and useful to many engineers and researchers whose activity is related to machinery, construction and industrial engineering.

Topics: Building Materials, Industrial Engineering, Materials Science, Mechanical Engineering

Keywords: Automotive Heat Exchanger, Design, Equipment, Industry 4.0, In-Plant Complex Production, Limestone Block, Machinery, Material Selection, Modelling, Simulation, Turbine Performance

Prices: Print: **US\$ 60.00/ EUR 60.00** Print: 978-3-0364-0497-4
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Wastewater Treatment and Green Technologies

Special topic volume with invited peer-reviewed papers only

Edited by: Gaanty Pragas Maniam, Dr. Abiodun Ayodeji Abioye, Prof. Dao Hua Zhang and Prof. Parames Chutima

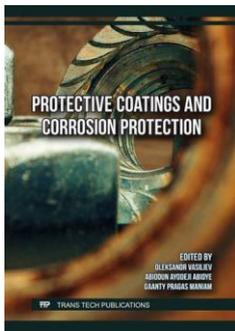
The topic of this special issue is an analysis of some engineering aspects of sustainable development conception namely green construction, water treatment, clean manufacturing, biofuel production, and renewable energy transition. The special edition will be helpful to many specialists whose activity is connected to issues of sustainable development.

Topics: Building Materials, Environmental Engineering, Industrial Engineering, Materials Science, Nanoscience

Keywords: Absorption, Biodiesel, Carbon Dioxide Capture, Green Building Materials, Heavy Metals, Membrane, Nanocomposite, Photodegradation, Renewable Energy Transition, Transesterification, Wastewater Treatment, Water Treatment, Wood Waste

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Protective Coatings and Corrosion Protection

Volume in the series: 355

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Oleksandr Vasiliev, Dr. Abiodun Ayodeji Abioye and Gaanty Pragas Maniam

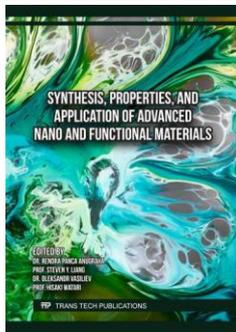
The main topics of this special issue are corrosion, corrosion protection and protective coatings of machines and equipment components. The special edition will be useful for many engineers in mechanical engineering.

Topics: Materials Science, Nanoscience

Keywords: Alloy, Coating, Corrosion, Corrosion Protection, Detonation Spraying, Dielectric Elastomer, Friction, Graphene, Hardness, Inhibitor, Nanocomposite, Plasma Spraying, Self-Lubrication, Steel, Tribology, Vacuum Arc Deposition, Wear Protective Coating

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<https://www.scientific.net/978-3-0364-0533-9/book>



Synthesis, Properties, and Application of Advanced Nano and Functional Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Rendra Panca Anugraha, Prof. Steven Y. Liang, Dr. Oleksandr Vasiliev and Prof. Hisaki Watari

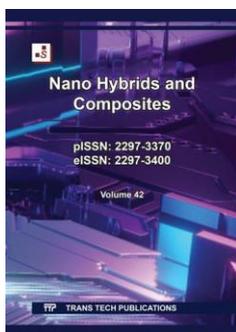
The presented special issue is dedicated to recent achievements in applied materials science and materials processing technologies for modern manufacture and will interest many engineers and researchers in materials science, machinery and chemical production.

Topics: Materials Science, Nanoscience

Keywords: Catalysis, Ceramics, Chemical Engineering, Composite, Graphene, Green Synthesis, Mechanical Properties, Microstructure, Nanomaterials, Optical Properties, Photocatalytic Properties, Shape Memory Natural Rubber, Supercapacitor

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Nano Hybrids and Composites Vol. 42

Edited by: Gaanty Pragas Maniam, Prof. Yi Cheng Chen, Dr. Rendra Panca Anugraha and Dr. Sheila Tobing

The edition is dedicated to the analysis of properties and investigation of technologies synthesis of some nanomaterials, materials for biomedical applications and mineral extraction processes and will interest specialists in nanotechnologies, biomedicine and chemical engineering.

Topics: Materials Science, Nanoscience

Keywords: Antibacterial Properties, Biocomposite, Biomaterials, Graphene, Ilmenite Leachate, Lithium Extraction, Mechanical Properties, Nanocomposite, Nanomaterials, Nanoparticles, Photocatalytic Performance

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 eBook Multi-User: **US\$ 140.00/ EUR 140.00** 102 pages, 2024

<https://www.scientific.net/978-3-0364-0532-2/book>



Engineering Innovations Vol. 9

Edited by: Khairunisak Abdul Razak, Dr. Anif Jamaluddin and Prof. Dong Keon Kim

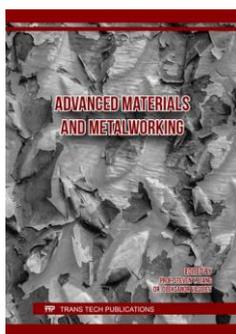
This volume of the journal Engineering Innovations contains articles that accent the reader's attention on the latest advances and results of research in materials science, electrochemistry, engineering design, power engineering, facial recognition technology and industrial engineering. The presented articles will be helpful to many researchers from the mentioned branches of engineering sciences.

Topics: Electronics, General Engineering, Industrial Engineering, Information Technologies, Manufacturing, Materials Science, Mechanical Engineering

Keywords: Battery, Business Model, Capacitor Placement, Cascading Classifier, Compensation, Cost Efficiency, Data Collection, Dip Coating, Electrocatalyst, Face Recognition, Logistics, Oxygen Evolution, Radial Distribution System, Reactive Power, Solid Polymer Electrolyte, Startup Project, Transparent Conductive Coating

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Advanced Materials and Metalworking

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Steven Y. Liang and Dr. Oleksandr Vasiliev

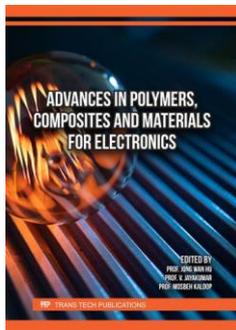
This special edition presents research results on the properties and processing technologies of structural materials such as steel, alloys, polymers and composites. The issue will interest many specialists whose activity is related to metallurgy, machinery, and materials science.

Topics: Manufacturing, Materials Science

Keywords: Alloy, Co-Extrusion, Composite, Corrosion Behaviour, Deep Drawing, Forming, Laser Quenching Forming, Lubrication Performance, Mechanical Properties, Metalworking, Polymer, Powder Metallurgy, Steel, Welding

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<https://www.scientific.net/978-3-0364-0535-3/book>



Advances in Polymers, Composites and Materials for Electronics

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Jong Wan Hu, Prof. V. Jayakumar and Prof. Mosbeh Kalooop

The presented special issue is dedicated to recent problems and achievements in applied materials science and materials processing technologies in modern manufacturing and will be interesting to many engineers and researchers in materials science, machinery and chemical production.

Topics: Building Materials, Electronics, Materials Science, Nanoscience

Keywords: Additive Manufacturing, Combustion Synthesis, Composite, Compression Moulding, Dye Removal, Hydrodesulfurisation Catalyst, Mechanical Properties, Metal Matrix Composite, Metal-Organic Frameworks, Nanomaterials, Natural Fiber, Phosphors, Photoluminescence, Polymer, Stir Casting, White Sugar

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 eBook Multi-User: **US\$ 306.00/ EUR 306.00** 186 pages, 2024

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4th International Conference on Machining, Materials and Mechanical Technologies (IC3MT)

Selected peer-reviewed full text papers from the 2022 International Conference on Machining, Materials and Mechanical Technologies (2022 IC3MT), November 11-14, 2022, Taipei, Taiwan

Edited by: Keiji Yamada, Prof. Yi Cheng Chen and Prof. Li-Gang Lin

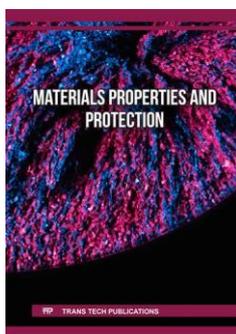
The edition includes articles that were presented at the 4th International Conference on Machining, Materials and Mechanical Technologies (IC3MT2022) which was held in Taipei, Taiwan, on November 11-14, 2022. Collected articles represent engineering research and design results in the area of tools for materials processing, technological machines and mechatronics. The publication will be helpful to many specialists in machinery.

Topics: General Engineering, Manufacturing, Mechanical Engineering, Mechanics

Keywords: Actuator, Fatigue Analysis, Machine, Mechanical Design, Mechatronics, Modelling, Numerical Investigation, On-Machine Measurement, Tool, Tool Life, Tool Wear

Prices: Print: **US\$ 80.00/ EUR 80.00** Print: 978-3-0364-0496-7
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Materials Properties and Protection

Special topic volume with invited peer-reviewed papers only

Edited by: Dr. Oleksandr Vasiliev, Prof. Paulo Mendonca, Prof. Soon Hyung Hong, Dr. Agus Geter Edy Sutjipto and Dr. Azzah Dyah Pramata

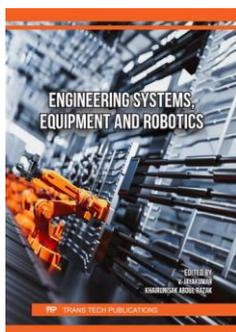
This special issue includes articles that reflect the latest results of scientific and engineering research in high-performance structural metals, means of structural materials corrosion protection, strength of materials and heat and mass transfer phenomena. The presented special edition will be useful to engineers in mechanical engineering and researchers in materials science.

Topics: Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Amorphous Alloy, Austempering, Coating, Corrosion Protection, Creep, Fatigue Crack, Heat and Mass Transfer, High-Entropy Alloy, Inhibitor, Mechanical Properties, Microstructure, Steel, Strength of Materials, Surface Defect

Prices: Print: **US\$ 180.00/ EUR 180.00** Print: 978-3-0364-0518-6
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Engineering Systems, Equipment and Robotics

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. V. Jayakumar and Khairunisak Abdul Razak

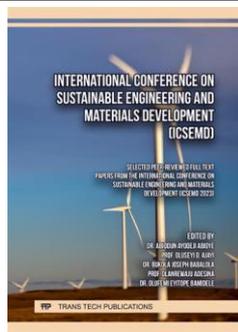
The presented special edition is dedicated to actual issues of modern manufacturing starting from materials processing technologies and issues of waste treatment ending with the design of technological equipment, analysis processes of heat and mass transfer in engineering systems, and mechatronics and robotics. It will be helpful to specialists in machines design, materials processing, robotics and environmental engineering.

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

Keywords: Alloy, Applied Mechanics, Compression Ignition Engine, Conveying Pipe, Coplanar Rails, Electrical Discharge Machining, Heat Transfer, Mass Transfer, Mechatronics, Parametric Optimization, Robotics, Superalloy, Tribological Properties, Waste Treatment

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International Conference on Sustainable Engineering and Materials Development (ICSEMD)

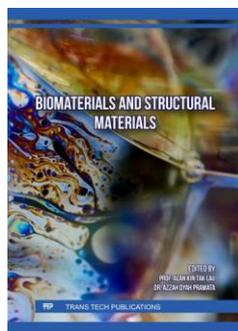
Selected peer-reviewed full text papers from the International Conference on Sustainable Engineering and Materials Development (ICSEMD 2023), May 28-30, 2023, Waterloo, Canada

Edited by: Dr. Abiodun Ayodeji Abioye, Prof. Oluseyi O. Ajayi, Dr. Bukola Joseph Babalola, Prof. Olanrewaju Adesina and Dr. Olufemi Eytipe Bamidele

This compilation presents carefully selected peer-reviewed papers from the 2023 International Conference on Sustainable Engineering and Materials Development (ICSEMD 2023) which was successfully held in Waterloo, Ontario, Canada, from May 28 to May 30, 2023. The conference brought together a diverse community of experts and leading researchers and provided a dynamic platform for engaging discussions and insightful presentations on various facets of sustainable engineering.

Topics: Industrial Engineering, Manufacturing, Materials Science, Mechanical Engineering, Mechanics, Nanoscience
Keywords: Additive Manufacturing, Copper Poisoning, Electrical Conductivity, Environmental Impact Assessment, Green Manufacturing, Lean Manufacturing, Machine Design, Nanofluid, Nitrate, Nitrogen Distribution, Renewable Energy Technology, Sustainability

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<https://www.scientific.net/978-3-0364-0519-3/book>



Biomaterials and Structural Materials

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Alan Kin Tak Lau and Dr. Azzah Dyah Pramata

The presented special edition will be useful to specialists whose activity is related to modern biotechnologies, materials processing in machinery, biomedicine, chemical production, electrochemistry, electronics and construction.

Topics: Bioscience and Medicine, Building Materials, Construction, Materials Science, Nanoscience
Keywords: Alloy, Biocomposite, Biodiesel, Biomaterials, Bone Cement, Building Materials, Coating, Dissimilar Metals Joint, Food Chemistry, Fuel Cell, Hydroxyapatite, Hyperthermia Therapy, Mechanical Properties, Nanocomposite, Oxygen Reduction, Solid Propellant

Prices: Print: **US\$ 175.00 / EUR 175.00** Print: 978-3-0364-0521-6
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4th International Seminar on Fundamental and Application of Chemical Engineering (ISFACHe)

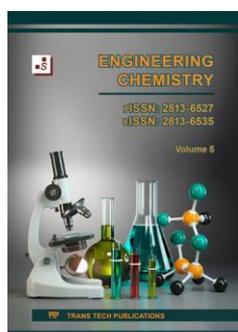
Selected peer-reviewed full text papers from the 4th International Seminar on Fundamental and Application of Chemical Engineering (ISFACHe 2022), October 26-27, 2022, Surabaya, Indonesia (virtual)

Edited by: Dr. Hikmatun Ni'mah, Prof. Jan Degreve, Prof. Manabu Shimada, Prof. Yi-Hsu Ju, Prof. Arshad Ahmad, Dr. Rendra Panca Anugraha, Dr. Fahmi Fahmi, Dr. Wahyu Meka, Dr. Mohammad Irwan Fatkhur Rozy, Annas Wiguno and Rizky Tetrysanda

This edition includes articles that were presented at the 4th International Seminar on Fundamental and Application of Chemical Engineering (ISFACHe 2022, October 26-27, 2022, Surabaya, Indonesia) and represents engineering research results in chemical engineering including biotechnologies, food technologies, wastewater treatment and some achievements in process systems development. The publication will be helpful to many specialists in chemical engineering.

Topics: Bioscience and Medicine, Environmental Engineering, Manufacturing, Materials Science, Mechanical Engineering
Keywords: Biomass Conversion, Biomass Processing, Biotechnology, Chemical Production, Food Chemistry, Optimisation, Simulation, Waste Recycling, Wastewater Treatment

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0495-0
 eBook Single-User: **US\$ 125.00 / EUR 125.00** eBook: 978-3-0364-1495-9
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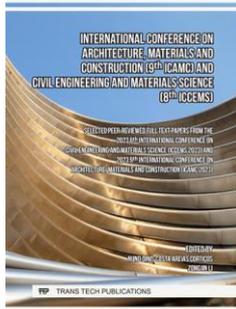
Engineering Chemistry Vol. 5

Edited by: Dr. Azzah Dyah Pramata

This journal volume is dedicated to current issues in developing modern effective energy storage devices. Synthesis of biobased solid polymer electrolytes for various types of batteries and materials for electrodes, analysis of electrochemical performance and capacitive properties of supercapacitors, etc. are topics of research the results of which are here presented. The edition will be helpful to specialists in electrochemistry whose activities are related to the design of energy storage devices.

Topics: Materials Science
Keywords: Battery, Biopolymer, Capacitive Properties, Electrochemical Performance, Electrode Materials, Energy Storage, Ionic Conductivity, Solid Polymer Electrolyte, Supercapacitor, Synthesis

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<https://www.scientific.net/978-3-0364-0502-5/book>



International Conference on Architecture, Materials and Construction (9th ICAMC) and Civil Engineering and Materials Science (8th ICCEMS)

Selected peer-reviewed full text papers from the 2023 8th International Conference on Civil Engineering and Materials Science (ICCEMS 2023) and 2023 9th International Conference on Architecture, Materials and Construction (ICAMC 2023), June 14-16, 2023, Singapore

Edited by: Nuno Dinis Costa Areias Cortiços and Prof. Zongjin Li

The presented edition contains articles that were presented at the 9th International Conference on Architecture, Materials and Construction (ICAMC 2023) and the 8th International Conference on Civil Engineering and Materials Science (ICCEMS 2023), Singapore, June 14 to 16, 2023 and are dedicated to structural engineering, geotechnics, sustainable architecture, design of the thermal and light comfort of buildings and architectural heritage protection and spatial planning. The edition will be helpful to specialists in civil engineering and architecture.

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

Keywords: Architectural Heritage, Architecture, Building Design, Cooling, Daylighting Environment, Energy Efficiency, Geotechnics, Light Comfort, Phase Change Material, Protection, Spatial Planning, Structural Engineering, Structural Mechanics, Thermal Comfort of Buildings

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Journal of Metastable and Nanocrystalline Materials Vol. 38

Edited by: Dr. Azzah Dyah Pramata

The 38th volume of the Journal of Metastable and Nanocrystalline Materials presents articles that review the crystal structure, morphology, and magnetic properties of various magnetic nanocomposites and nanoparticles, as well as nanoimprint lithography technology for optoelectronics and method of obtaining the porous anodic aluminium oxide used as a template for nanomaterials synthesis. This issue will be helpful to many specialists in applied materials science and nanotechnologies.

Topics: Manufacturing, Materials Science, Nanoscience

Keywords: Crystal Structure, Ferromagnetic Properties, Magnetic Materials, Magnetic Properties, Nanocomposite, Nanoimprint Lithography, Nanomaterials, Nanotechnology, Porous Anodic Aluminum Oxide

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<https://www.scientific.net/978-3-0364-0501-8/book>



Advanced Engineering Forum Vol. 51

Edited by: Prof. Mikkel K. Kragh, Prof. Dumitru Nedelcu and Khairunisak Abdul Razak

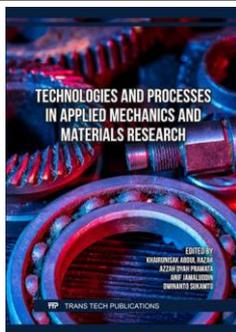
The 51st volume of the journal contains articles representing the latest research results in electrospinning and additive manufacturing technologies with the use and production of biodegradable polymer materials for wide applications, mining wastewater treatment and processing sludge from water treatment. This publication presents also the numerical investigation of methods for the settlement reduction of a light-weight highway embankment on soft soils, the study of the dynamic behaviour of a distributed static synchronous compensator installed in a distribution network, the design of a pantograph for railway overhead power lines, and results of experimental investigation performances of diesel generator fueled by biodiesel. This volume will be helpful to many engineers in the chemical industry, geotechnics, machinery and power engineering.

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

Keywords: Acid Mine Drainage, Additive Manufacturing, Compressible Soil, Cottonseed Biodiesel, Design, Diesel Engine Generator, Distributed Static Synchronous Compensator, Distribution Network, Electrospinning, Embankment, Engine Performance, Fuel Quality, Geotechnics, Halochromic Filament, Highway, Hydroxide Sludge, Kinetics of Solar Drying, Pantograph, Polymer, TRIZ, Wastewater Treatment, Water Treatment

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Technologies and Processes in Applied Mechanics and Materials Research

Special topic volume with invited peer-reviewed papers only

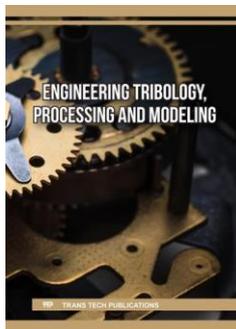
Edited by: Khairunisak Abdul Razak, Dr. Azzah Dyah Pramata, Dr. Anif Jamaluddin and Dr. Dwinanto Sukamto

The special edition is dedicated to actual issues of modern engineering practice starting from materials science and production processes, energy storage devices, sensor engineering and production equipment and ending with materials and technologies in prosthetics. The presented edition will be useful to a wide range of specialists in mechanical engineering and biomedicine.

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

Keywords: Alloy, Automatic Speed Control, Battery Management System, Biomaterials, Biosensor, Direct-Chill Casting, Equipment, Flettner Rotor, Hip Prosthesis, Implant, Lithium-Ion Battery, Machinery, Mechanical Properties, Metal Injection Molding, Passive Treatment System, Prosthetics, Sensor, Steel

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Engineering Tribology, Processing and Modeling

Special topic volume with invited peer-reviewed papers only

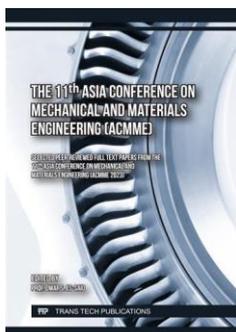
Edited by: Prof. Yunn Lin Hwang and Dr. Thangaprakash Sengodan

The presented special issue is dedicated to the recent achievements in materials science and materials processing technologies used in modern mechanical engineering. It will be helpful to researchers and engineers involved in modern manufacturing.

Topics: Electronics, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Convective Flow, Defect Identification, Erosion, Fatigue Crack Propagation, Fluid Flow, Forging, Friction, Heat Transfer, Laser Surface Modification, Lubrication, Magneto-hydrodynamics, Nanofluid, Numerical Investigation, Phosphor, Photoluminescence, Semiconductor Processing, Sliding, Steel, Superalloy, Tribology

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<https://www.scientific.net/978-3-0357-1888-1/book>



The 11th Asia Conference on Mechanical and Materials Engineering (ACMME)

Selected peer-reviewed full text papers from the 11th Asia Conference on Mechanical and Materials Engineering (ACMME 2023), June 8-11, 2023, Sapporo, Japan

Edited by: Prof. Omar S. Es-Said

The presented book comprised the selected peer-reviewed full-text papers from the 11th Asia Conference on Mechanical and Materials Engineering (ACMME 2023, Sapporo, Japan, during June 8-11, 2023). The issue is dedicated to recent problems and engineering solutions in the area of mechanical engineering and engineering management and will be helpful to many specialists in the mentioned branches of engineering sciences.

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

Keywords: Aerodynamic Analysis, Design, Engineering Management, Fiber-Reinforced Composite, Inventory Management, Linear Motor, Mechanical Properties, Simulation, Supply Disruption, Techno-Economic Feasibility, Underwater Shock Loading, Wing Profile

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Engineering Innovations Vol. 8

Special topic volume with invited peer-reviewed papers only

Edited by: Prof. Santina Di Salvo

This volume is a special issue with the aim to disseminate knowledge on research studies, projects, processes and methodologies carried out by academics, researchers and expert professionals on issues involving various scales: from the object to the building to the city, to the landscape, to the processes. The authors' contributions address contemporary issues identifying a new empathetic approach to architecture and design, providing insights on issues including: systemic-relational design, biocomposites, innovative lighting systems, challenges for addressing global warming and pollution, trends of 3D printing for architecture, innovation for medical devices.

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

Keywords: Architecture, Construction Tradition, Design, Energy Saving, Environment, Lighting Design, Smart City, Urban

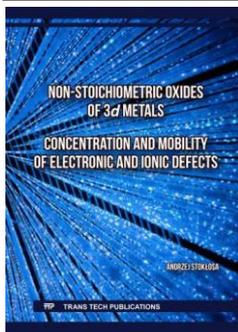
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Monographs

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Non-Stoichiometric Oxides of 3d Metals. Concentration and Mobility of Electronic and Ionic Defects.

Volume in the series: 105

Edited by: Andrzej Stokłosa

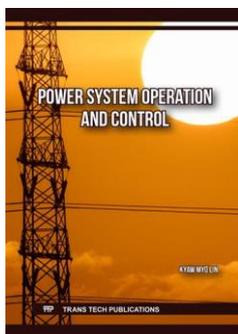
The advancement of material engineering over the last few decades has allowed for the development of modern metallic and ceramic construction materials, composites, nanomaterials and various kinds of coatings with desired performance characteristics. They form the basis for the development of the automotive industry, the aviation industry, the chemical equipment industry, etc. They can function in ever higher temperatures and aggressive environments. On the other hand, the advancement of electronics requires the development of new and cheaper materials: semiconductors, insulators, materials with magnetic, ferrimagnetic or piezoelectric properties, etc. The desired properties of materials or their surface layers depend on chemical composition, dopants, and the concentration of point defects, through which the transport of ions and electrons takes place. The functional properties also depend on the nuances of production technologies which allow to obtain a specific texture and a desired concentration of ionic and electronic point defects. The monograph follows up on the issues related to the concentration of charge carriers in pure and doped oxides. Based on the diagrams of the concentration of point defects, the calculation results of the concentration of charge carriers and their mobility are presented, using the results of the studies on the electrical conductivity and the thermoelectric power in some specific oxides of 3d metals. In turn, the results of calculations of the ionic defect diffusion coefficients, conducted using the coefficients of self-diffusion and chemical diffusion as well as the concentration of ionic defects in these oxides, are presented. The given material will be useful to a wide range of researchers and developers of new materials with a wide range of required properties.

Topics: Materials Science, Nanoscience

Keywords: 3d Metals, Chemical Diffusion, Co1-δO, Cu2-δO, Defect Diffusion Coefficients, Deviation from Stoichiometry, Diagram of the Concentrations of Point Defects, Electrical Conductivity, Electronic and Ionic Defects, Fe1-δO, Material Science, Mn1-δO, Mobility, Ni1-δO, Non-Stoichiometric Oxides, Self-Diffusion, Thermoelectric Power, Tio2-δ, Yba2cu3o6+δ

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Power System Operation and Control

Volume in the series: 104

Edited by: Kyaw Myo Lin

The presented publication will be useful not only to everyone who is just studying the principles and methods of organizing modern energy supply but also to specialists in power engineering as a short guide or reference. All the material in the presented publication is presented by the author in an accessible form, with a sufficient number of illustrations, appropriate programs for computer modelling and tasks for self-testing of knowledge. This edition undoubtedly will be popular with readers whose activity is related to the operation of power systems.

Topics: General Engineering, Industrial Engineering, Manufacturing, Mechanical Engineering

Keywords: Automatic Generation Control, Economic Load Dispatch, Hydro-Thermal Scheduling, Load Frequency Control, Power System Control, Power System Operation, Power System Security, Reactive Power Control, State Estimation, Unit Commitment

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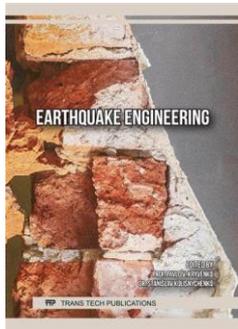
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Earthquake Engineering

Volume in the series: 38

Aggregated Book

Edited by: Prof. Pavlo V. Kryvenko and Dr. Stanislav Kolisnychenko

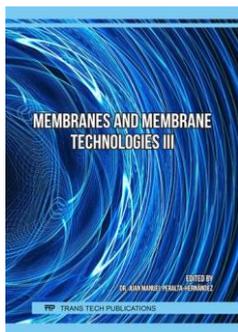
The book provides an overview of the latest achievements and engineering solutions in earthquake engineering. This edition features articles published between 2019 and 2023 by Trans Tech Publications Ltd., covering various aspects of the behaviour of buildings and infrastructural objects under seismic loads, as well as the development of engineering methods to enhance their seismic resistance.

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

Keywords: Architectural Heritage, Beam, Bridge, Column, Composite Strengthening, Concrete, Damage Assessment, Damper, Earthquake Engineering, Flexible Materials, Frame, Masonry, Masonry Building, Mechanical Properties, Multi-Story Building, Numerical Simulation, Pile, Rehabilitation, Reinforced Concrete, Retrofitting, Seismic Design, Seismic Isolation, Seismic Reinforcement, Seismic Resistance, Seismic Vulnerability, Shake Table Test, Shear Wall, Slab, Soil Settlements, Steel, Strengthening, Structural Member, Structure, Textile Reinforced Mortar, Wall Panel

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Membranes and Membrane Technologies III

Volume in the series: 37

Aggregated Book

Edited by: Dr. Juan Manuel Peralta-Hernández

We are introducing the third volume of a special book series on membranes and membrane technologies, which contains articles published by Trans Tech Publications Ltd. in 2020-2023 years. "Membranes and Membrane Technologies III", like the previous two editions, covers a wide range of engineering solutions in the development and production of various types of membranes and their use in water and wastewater treatment, gas separation, and technological flow separation in the chemical industry. The edition will be helpful to specialists in water purification, wastewater treatment, petrochemical and chemical industries.

Topics: Environmental Engineering, Manufacturing, Materials Science, Nanoscience

Keywords: Composite Membrane, Desalination, Distillation, Filtration, Gas Separation, Hybrid Membrane, Inorganic Membrane, Liquid Membrane, Membrane Technology, Mixed Matrix Membrane, Pervaporation, Polymeric Membrane, Reverse Osmosis, Separation, Wastewater Treatment, Water Purification

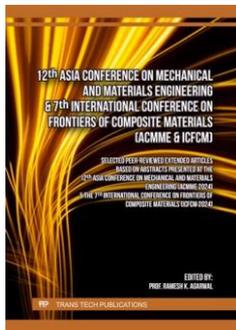
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Scientific Books Collection

Published 2024





12th Asia Conference on Mechanical and Materials Engineering & 7th International Conference on Frontiers of Composite Materials (ACMME & ICFCM)

Volume in the series: 161

Aggregated Book

Edited by: Prof. Ramesh K. Agarwal

This compilation includes the papers selected from two notable conferences: the 12th Asia Conference on Mechanical and Materials Engineering (ACMME 2024) and the 7th International Conference on Frontiers of Composite Materials (ICFCM 2024). Both conferences were held in 2024: ACMME 2024 took place in Kyoto, Japan (June 14-17), while ICFCM 2024 was hosted in Singapore (June 14-16). The presented here research results and engineering solutions will be helpful to specialists in materials and materials processing techniques from various branches of manufacturing.

Topics: Building Materials, Electronics, Materials Science, Nanoscience

Keywords: Additive Manufacturing, Alloy, Ceramics, Composite, Computational Materials Science, Electrochemistry, Electrode Materials, Green Concrete, Materials Informatics, Mechanical Properties, Microelectronics, Nanocomposite, Nanoparticles, Polymer, Post-Processing, Semiconductor, Shot Peening, Steel, Surface Engineering, Welding

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15th International Conference on Materials and Manufacturing Technology (ICMMT)

Volume in the series: 160

Aggregated Book

Edited by: Nguyen Quang Liem and Prof. Vladimir Khovaylo

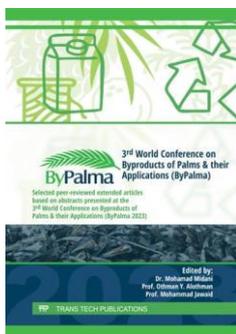
We are pleased to introduce you to the collection of articles that were presented at the 15th International Conference on Materials and Manufacturing Technology (ICMMT 2024), which was successfully held in Nha Trang, Vietnam, on March 22-24, 2024. The selected papers provide advances and the latest research results on structural metals, technologies of additive manufacturing and metalworking, nanomaterials and chemical engineering, synthesis and analysis of properties of advanced polymer and composite materials, green building materials, mechatronics and automation.

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

Keywords: Additive Manufacturing, Alloy, Automation, Composite, Computational Materials Science, Friction Stir Processing, Gray Iron, Green Building Materials, High-Speed Milling, Magnetic Properties, Mechanical Properties, Mechatronics, Nanomaterials, Polymer, Steel, Thermoelectric Properties

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3rd World Conference on Byproducts of Palms & their Applications (ByPalma)

Volume in the series: 159

Aggregated Book

Edited by: Dr. Mohamad Midani, Prof. Othman Y. Alothman and Prof. Mohammad Jawaid

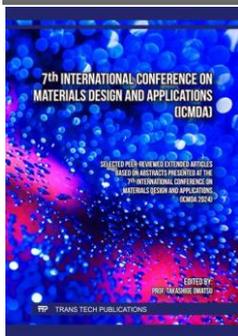
This edition contains articles based on research results presented at the 3rd World Conference on Byproducts of Palms and their Applications (BYPALMA 2023, Riyadh, Saudi Arabia, 05-08 December 2023). The research results cover a wide range of trends and directions on applications of date palm production byproducts as composite reinforcements, in biotechnologies, chemical and environmental engineering, etc.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Biochar, Biocomposite, Biomass Treatment, Biopolymer, Biosurfactants, Crystalline Nanocellulose, Date Palm Fibre Reinforcement, Date Palm Waste, Mechanical Properties, Nanocomposite

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0364-0294-9
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<https://www.scientific.net/978-3-0364-0294-9/book>



7th International Conference on Materials Design and Applications (ICMDA)

Volume in the series: 158

Aggregated Book

Edited by: Prof. Takashige Omatsu

This book contains articles based on research results that were presented at the 7th International Conference on Materials Design and Applications (ICMDA 2024, Tokyo, Japan, 09-12 April 2024). The research results cover a wide range of trends and directions in properties research, methods and technologies of synthesis and processing of a wide spectrum of modern materials starting from functional nanomaterials, advanced polymers and composites, and green building materials and finishing with waste recycling, materials for optoelectronics and energy storage and engineering research in mechanics of materials.

Topics: Bioscience and Medicine, Building Materials, Information Technologies, Materials Science, Mechanics, Nanoscience

Keywords: 3D Printing, Applied Mechanics, Catalysts, Cement, Clay Tiles, Coatings, Cocoa Husks, Composites, Electrolytes, Epoxy Resin, Fibers, Functional Materials, Glass Cullet, Green Building Materials, Luminescent Properties, Mechanical Properties, Mechanics of Materials, Nanoparticles, Polymers, Pyrolysis, Quantum Dots, Rubber, Sensors, Slag, Waste Recycling

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<https://www.scientific.net/978-3-0364-0458-5/book>



International Conference on Science, Technology and Innovation (CONICIETI)

Volume in the series: 157

Aggregated Book

Edited by: Reyna Durón, Prof. José Luis Ordóñez-Ávila, Mariela Contreras and Dr. Manuel Cardona

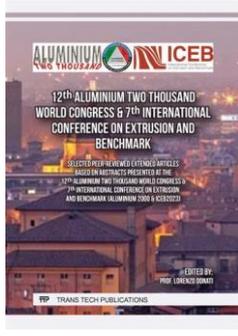
The edition contains articles based on scientific and engineering research results that were presented at the 1st International Conference of Science, Technology and Innovation (CONICIETI, 29-30 May 2024, Tegucigalpa, Honduras) hosted by Universidad Tecnológica Centroamericana (UNITEC) in Honduras. This articles collection will be useful to specialists in biomedical engineering, information technology, measurements and sensing, robotics and engineering management.

Topics: Bioscience and Medicine, Industrial Engineering, Information Technologies, Mechanical Engineering, Mechanics

Keywords: Biomechanics, Biomedical Engineering, Computer Vision, Convolutional Neural Networks, Cybersecurity, Data Processing, Engineering Management, Health Informatics, Internet of Things, Radioisotope Classifier, Robotics, Sensors

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12th Aluminium Two Thousand World Congress & 7th International Conference on Extrusion and Benchmark

Volume in the series: 156

Aggregated Book

Edited by: Prof. Lorenzo Donati

The 12th Aluminium Two Thousand World Congress and the 7th International Conference on Extrusion and Benchmark (Aluminium 2000 & ICEB, 26-30 September 2023, Rome, Modena, Italy) was a prestigious event that brought together leading experts from academia and industry to discuss the latest advancements in aluminum and light alloys' processing and applications. Keynote speakers and contributors presented a wide range of topics, including technical aspects of extrusion, casting, forming, anodizing and coating linked to metallurgical and chemical aspects.

Topics: Manufacturing, Materials Science, Mechanical Engineering, Mechanics

Keywords: Aging, Aluminum Alloys, Anodizing, Benchmark, Casting, Coating, Damage Behaviour, Direct Hot Rolling, Extrusion, Homogenisation, Mechanical Properties, Microstructure, Modelling, Quench Rate, Simulation, Surface Segregation

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11th International Conference on Materials Science (ICMS)

Volume in the series: 155

Aggregated Book

Edited by: Jav Davaasambuu

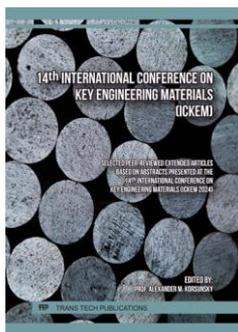
This book contains peer-reviewed papers presented at the 11th International Conference on Materials Science (ICMS 2023) held in Hohhot, China, on October 13-16, 2023, which focused on the study of structure, properties, and applications of new materials as well as techniques of materials characterisation. The conference was organized by Inner Mongolia Association of Science and Technology (China), Inner Mongolia Normal University (China), Inner Mongolia Physical Society (China), the Mongolian Physical Society (Mongolia), the National University of Mongolia, the Institute of Physics and Technology, Mongolian Academy of Sciences (Mongolia), and the Institute of Physical Material Science, SB RAS (Russia).

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

Keywords: Adsorption, Ball-Milling, Biochar, Coatings, Composites, Density Functional Theory, Electrodes, Energy Storage, Functional Materials, Hartree-Fock Equations, HCP Crystals, Lithium-Ion Battery, Luminophores, Magnetic Refrigeration, Magnetocaloric Effect, Nanomaterials, Numerical Investigations, Optical Materials, Photoconductive Antennas, Porous Materials, Rare Earth Elements, Schrodinger Equation, Solar Cells, Thin Films, Young's Modulus

Prices: Print: **US\$ 190.00/ EUR 190.00** Print: 978-3-0357-1144-8
 eBook Single-User: **US\$ 190.00/ EUR 190.00** eBook: 978-3-0357-3144-6
 eBook Multi-User: **US\$ 333.00/ EUR 333.00** 238 pages, 2024

<https://www.scientific.net/978-3-0357-1144-8/book>



14th International Conference on Key Engineering Materials (ICKEM)

Volume in the series: 154

Aggregated Book

Edited by: Prof. Alexander M. Korsunsky

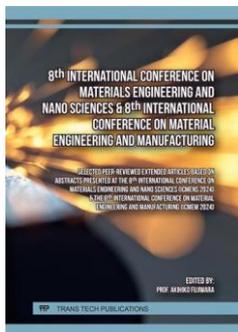
The articles in this book were presented at the 14th International Conference on Key Engineering Materials (ICKEM 2024). This annual conference has been held for fourteen years and aims to provide an international platform for researchers to exchange ideas and achievements in the development and research of materials for various branches of modern manufacturing and construction.

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

Keywords: 3D Printing, Asphalt, Biochar, Biodiesel, Biomass, Biomaterials, Bricks, Building Materials, Carbon Dots, Cement, Composites, Concrete, Damage Energy, Electrodes, Encapsulation, Fibers, Finite Element Simulation, Functional Materials, High Strain, Nanoparticles, Pyrolysis, Rice Husk, Slag, Soil Stabilization, Titanium, Transesterification, Viscoelastic Materials, Wastewater Treatment

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0515-5
 eBook Single-User: **US\$ 150.00/ EUR 150.00** eBook: 978-3-0364-1515-4
 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 154 pages, 2024

<https://www.scientific.net/978-3-0364-0515-5/book>



8th International Conference on Materials Engineering and Nano Sciences & 8th International Conference on Material Engineering and Manufacturing

Volume in the series: 153

Aggregated Book

Edited by: Prof. Akihiko Fujiwara

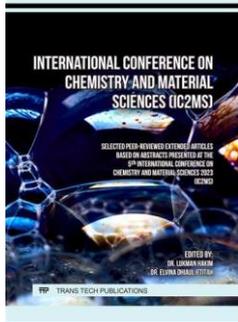
This edition presents the compilation of research papers from the 8th International Conference on Materials Engineering and Nano Sciences (ICMENS 2024) and the 8th International Conference on Material Engineering and Manufacturing (ICMEM 2024), which were successfully held in Kwansai Gakuin University, Osaka, Japan, during March 22-25, 2024, to serve as a platform for experts, researchers, and practitioners from around the world to convene and exchange ideas and the latest advancements in materials science, mechanical engineering and construction. The book will be helpful to specialists in the mentioned branches of engineering practice.

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

Keywords: Additive Manufacturing, Alloys, ANSYS Simulation, Biochar, Building Materials, Carbon Nanotubes (CNT), Ceramics, Chemical Engineering, Coatings, Composites, Concrete, Corrosion, Cutting Parameters, Defects, Dielectric Properties, Electrical Conductivity, Energy Storage, Films, Fly Ash, Geopolymer, Mechanical Engineering, Mechanical Strength, Nanoemulsions, Nanofibers, Nanomaterials, Photocatalysts, Polymerizations, Polymers, Quantum Dots, Resistive Photomemory, Steel, Stereolithography, Stress Intensity Factor, Ultrasonic Vibration, Wastewater Treatment, Wear Resistance, Welding

Prices: Print: **US\$ 230.00/ EUR 230.00** Print: 978-3-0364-0457-8
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1457-7
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 266 pages, 2024

<https://www.scientific.net/978-3-0364-0457-8/book>



International Conference on Chemistry and Material Sciences (IC2MS)

Volume in the series: 152

Aggregated Book

Edited by: Dr. Lukman Hakim and Dr. Elvina Dhiaul Iftitah

This publication includes the articles from the 5th International Conference on Chemistry and Materials Science (IC2MS 2023) held on October 11-12, 2023, in Malang, Indonesia. The IC2MS series was launched in 2017, with the first meeting that attracted more than 200 participants from over 40 universities/institutions representing such countries as Indonesia, Malaysia, Singapore, Thailand, Japan, Taiwan, Brunei Darussalam, and Australia. Since then, the IC2MS meetings have been held biennially as a joint conference organized by Brawijaya University, Jember University, State University of Malang, and Universiti Teknologi Mara with the aim to build up strong academic relationships and united scientific community. The 2023 event was organized by the Department of Chemistry, Faculty of Mathematics and Natural Sciences, Brawijaya University, which was the initial host of the conference inaugural meeting.

Topics: Bioscience and Medicine, Materials Science, Nanoscience

Keywords: Absorbent, Antibacterial Properties, Biochemistry, Biocomposite, Biopolymer, Bioremediation, Electrochemical Properties, Electrode Material, Inorganic Chemistry, Microplastic, Nanomaterials, Nanoparticles, Organic Synthesis, Pharmacology, Separation, Waste Recycling, Wastewater Treatment

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0453-0
 eBook Single-User: **US\$ 150.00/ EUR 150.00** eBook: 978-3-0364-1453-9
 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 168 pages, 2024

<https://www.scientific.net/978-3-0364-0453-0/book>



9th International Scientific Conference on Advances in Mechanical Engineering

Volume in the series: 151

Aggregated Book

Edited by: Dr. Tamás Mankovits and Mihály Csüllög

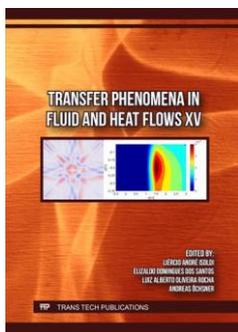
The 9th International Scientific Conference on Advances in Mechanical Engineering (ISCAME, November 9-10, 2023, Debrecen, Hungary) was organized by the Department of Mechanical Engineering (Faculty of Engineering, University of Debrecen) and the Working Commission of Mechanical Engineering (Specialized Committee in Engineering, Regional Committee in Debrecen, Hungarian Academy of Sciences). The main goal of ISCAME is to yearly bring together engineers, scientists, researchers, practitioners from academia and industry to present their original works and share experiences regarding all aspects of mechanical engineering sciences.

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

Keywords: Additive Manufacturing, Alloys, Composites, Computational Fluid Dynamics, Cracks, Defect Identification, Fault Analysis, Grinding, Heat Transfer, Industry 4.0, Machines, Processing Technologies, Special Materials, Steel, Structural Materials, Surface Roughness, Tools, Transportation Engineering, Vehicles, Vibroacoustics, Wire Electrical Discharge Machining (WEDM)

Prices: Print: **US\$ 225.00/ EUR 225.00** Print: 978-3-0364-0444-8
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1444-7
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 264 pages, 2024

<https://www.scientific.net/978-3-0364-0444-8/book>



Transfer Phenomena in Fluid and Heat Flows XV

Volume in the series: 150

Aggregated Book

Edited by: Liércio André Isoldi, Elizaldo Domingues dos Santos, Luiz Alberto Oliveira Rocha and Prof. Andreas Öchsner

The special publication entitled "Transfer Phenomena in Fluid and Heat Flows XV" continues a series of themed volumes. It presents a collection of articles associated with heat transfer, fluid flow, and related phenomena. The continuous need for improved machines, higher efficiencies, and more detailed and accurate theoretical modeling approaches makes it necessary to showcase the latest trends regularly with small intervals between the different volumes in this topical series. The design of flow systems also plays a significant role in this special issue.

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

Keywords: Atmospheric Emission, Atmospheric Studies, Earth-Air Heat Exchangers, Flow Dynamics, Fluid Flow, Heat Transfer, Wave Energy Converter

Prices: Print: **US\$ 200.00/ EUR 200.00** Print: 978-3-0364-0577-3
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1577-2
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 218 pages, 2024

<https://www.scientific.net/978-3-0364-0577-3/book>



15th International Conference on Sustainable Green Construction and Nano-Technology "Advances in Fire Safety, HVAC-R, and Built Environment"

Volume in the series: 149

Aggregated Book

Edited by: Hamada Shoukry

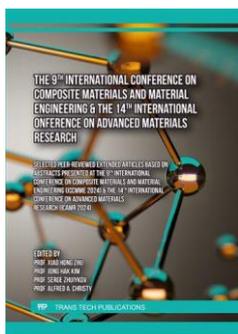
This book contains selected papers presented at the 15th International Conference on Sustainable Green Construction and Nano-Technology (NTC-2024, 02-03 March 2024, Cairo, Egypt), which focus on issues in modern construction and environmental engineering.

Topics: Building Materials, Materials Science, Mechanics, Nanoscience

Keywords: Cement, Compressive Strength, Concrete, Construction, Corrosion Inhibitors, Durability, Energy Efficiency, Green Building Materials, Industrial Waste, Magnetic Water Treatment, Nanoparticles, Natural Materials, Pollutant Removal, Slag, Soil Stabilization, Sustainable Buildings, Wastewater Treatment

Prices: Print: **US\$ 150.00/ EUR 150.00** Print: 978-3-0364-0390-8
 eBook Single-User: **US\$ 150.00/ EUR 150.00** eBook: 978-3-0364-1390-7
 eBook Multi-User: **US\$ 263.00/ EUR 263.00** 180 pages, 2024

<https://www.scientific.net/978-3-0364-0390-8/book>



The 9th International Conference on Composite Materials and Material Engineering & The 14th International Conference on Advanced Materials Research

Volume in the series: 148

Aggregated Book

Edited by: Prof. Xiao Hong Zhu, Prof. Jong Hak Kim, Prof. Serge Zhuiykov and Prof. Alfred A. Christy

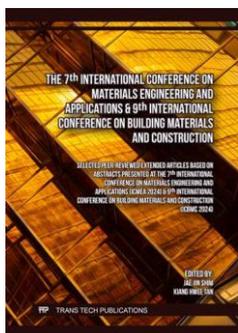
This book contains articles comprising the research results presented at the 9th International Conference on Composite Materials and Material Engineering (ICCMME 2024) and the 14th International Conference on Advanced Materials Research (ICAMR 2024) held in January 2024 in Singapore and Phuket, Thailand, respectively. The collected research results will be helpful to many specialists in materials science, mechanical engineering and construction.

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

Keywords: Additive Manufacturing, Alloys, Antibacterial Properties, Cathodes, Composite Materials, Concrete, Corrosion, Energy Conversion, Energy Storage Devices, Epoxy Resin, Fatigue Strength, Food Packaging, Functional Materials, Gas Desulfurization, Green Building Materials, Heat Transfer, Impact Toughness, Lithium-Ion Batteries, Microstructure, Modeling, Nanoparticles, Natural Fibers, Numerical Investigations, Polymers, Shot Peening, Steel, Thermal Resistance, Waste, Wastewater Treatment

Prices: Print: **US\$ 165.00/ EUR 165.00** Print: 978-3-0364-0477-6
 eBook Single-User: **US\$ 165.00/ EUR 165.00** eBook: 978-3-0364-1477-5
 eBook Multi-User: **US\$ 289.00/ EUR 289.00** 204 pages, 2024

<https://www.scientific.net/978-3-0364-0477-6/book>



The 7th International Conference on Materials Engineering and Applications & 9th International Conference on Building Materials and Construction

Volume in the series: 147

Aggregated Book

Edited by: Jae Jin Shim and Prof. Kiang Hwee Tan

This edition includes articles presented at the 7th International Conference on Materials Engineering and Applications (ICMEA 2024) and the 9th International Conference on Building Materials and Construction (ICBMC 2024) held on 19-21 January and 26-29 February 2024. The collected research results will be helpful to many civil engineers.

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

Keywords: Building Energy Saving, Cement Replacement, Composite, Concrete, Electromagnetic Shielding, Fly Ash, Green Building Materials, Green Concrete, Mechanical Properties, Mortar, Photothermal Coating, Polymer, Radiative Cooling Materials, Recycled Aggregate

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0456-1
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1456-0
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 148 pages, 2024

<https://www.scientific.net/978-3-0364-0456-1/book>



20th International Conference on Silicon Carbide and Related Materials (ICSCRM 2023)

Volume in the series: 146

Aggregated Book

Edited by: Prof. Michele Riccio, Prof. Andrea Irace and Prof. Giovanni Breglio

The presented book includes articles on research results in the area of semiconductors based on silicon carbide, gallium nitride and related materials that are widely used today for the production of power solid-state electronic devices. The recent technologies of crystal growth and wafer production and processing techniques, properties of completed semiconductor solid-state structures and devices circuitry, including their applications in sensors, mechatronics, and quantum systems, are explored and analysed in this edition. The book will be valuable to engineers and researchers whose activity is related to the development and production of solid-state electronics. The collected here articles were presented at the 20th International Conference on Silicon Carbide and Related Materials (ICSCRM 2023, 17-22 September 2023, Sorrento, Italy).

Topics: Electronics, Materials Science, Nanoscience

Keywords: Annealing, Bulk Growth, Characterisation, Defects, Dislocation, Doping, Epilayer, Epitaxial Growth, Etching, Gallium Nitride, Power Electronics, Processing, Semiconductor Devices, Silicon Carbide, Silicon Carbide Polytypes, Silicon Oxide Interface, Substrate, Wafer, Wide Bandgap Semiconductor

Prices: Print: **US\$ 630.00/ EUR 630.00** Print: 978-3-0364-0203-1
 eBook Single-User: **US\$ 0.00/ EUR 0.00** eBook: 978-3-0364-1203-0
 eBook Multi-User: **US\$ 0.00/ EUR 0.00** 1110 pages, 2024

<https://www.scientific.net/978-3-0364-0203-1/book>



The 2nd International Conference on the Future Sustainable Energy

Volume in the series: 145

Aggregated Book

Edited by: Hasan Sh. Majdi, Azher M. Abed, Salwan Obaid Waheed Khafaji and Mustafa Baqir Hunain

The aim of the Second International Conference on the Future Sustainable Energy (February 20-22, 2024, Al-Mustaqbal University, Iraq) was to create a platform for discussing coherent and coordinated efficient ways of developing new and renewable energy resources, developing green materials and sustainable technologies in architecture and construction, implementing metallic materials to biomedical practice, designing tools and analysing materials processing technologies. The engineering research and design of machines and equipment and investigation of heat and mass transfer phenomena in engineering systems were also presented in this edition. This collection will be interesting to many specialists in materials science and mechanical engineering.

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

Keywords: Alloy, Architecture, Ceramics, Coating, Construction, Cutting Tool, Design, Electrophoretic Deposition, Fuel Cells, Green Concrete, Heat Transfer, Mass Transfer, Mechanical Engineering, Mechanical Properties, Powder Metallurgy, Renewable Energy, Solar Cells, Steel, Sustainable Development, Thermal Properties

Prices: Print: **US\$ 270.00/ EUR 270.00** Print: 978-3-0364-0408-0
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1408-9
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 438 pages, 2024

<https://www.scientific.net/978-3-0364-0408-0/book>



12th International Conference on Nano and Materials Science & 8th International Conference on Manufacturing Technologies

Volume in the series: 144

Aggregated Book

Edited by: Prof. Ramesh K. Agarwal

The edition contains articles that were presented at the 12th International Conference on Nano and Materials Science (ICNMS 2024) and the 8th International Conference on Manufacturing Technologies (ICMT 2024) which successfully took place on January 12-15, 2024, in Bangkok, Thailand. Collected scientific findings and engineering solutions will be interesting to specialists in materials science and machinery.

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

Keywords: Alloy, Composite, Computational Materials Science, Corrosion, Friction Stir Welding, Green Building Materials, Mechanical Properties, Nanocomposite, Optoelectronics, Photovoltaics, Polymer, Thermal Engineering, Tribological Properties, Wastewater Treatment

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0455-4
 eBook Single-User: **US\$ 120.00/ EUR 120.00** eBook: 978-3-0364-1455-3
 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 158 pages, 2024

<https://www.scientific.net/978-3-0364-0455-4/book>



The 2nd Eco-Materials Conference in Africa (CEMA)

Volume in the series: 143

Aggregated Book

Edited by: Prof. Abdellatif Imad, Vincent Sambou, Salam Sawadogo and Bruno Castanie

The edition contains articles that were presented at the 2nd Eco-Materials Conference in Africa (CEMA'2022) organized by the African Eco-Materials Society (ECOMAT-AFRICA) from June 15 to 17, 2022, in Saly, Senegal. The presented research results are linked to problems of ecology safety, waste utilisation, applications of natural materials and biowaste for building materials and biogas production, analysis of wood materials applications in construction, etc. This edition will be useful to many specialists whose activity relates to materials science, environmental engineering, construction and biomass processing.

Topics: Building Materials, Materials Science

Keywords: Biochar, Biogas, Biomass, Building Materials, Cement, Construction, Heavy Metal Pollution, Natural Fibers, Natural Materials, Rice Husk, Soil, Stabilised Earth Bricks, Waste, Wastewater Treatment, Water Pollutant, Wood

Prices: Print: **US\$ 115.00/ EUR 115.00** Print: 978-3-0357-1780-8
 eBook Single-User: **US\$ 115.00/ EUR 115.00** eBook: 978-3-0357-2489-9
 eBook Multi-User: **US\$ 201.00/ EUR 201.00** 138 pages, 2024

<https://www.scientific.net/978-3-0357-1780-8/book>



Nanostructures, Nanomaterials and Nanoengineering & Materials Technology and Applications

Volume in the series: 142

Aggregated Book

Edited by: Prof. Kazuo Umemura

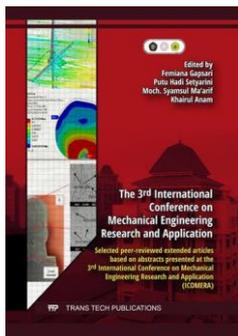
The 2023 12th International Conference on Nanostructures, Nanomaterials and Nanoengineering and the 2023 8th International Conference on Materials Technology and Applications were jointly held in Fukuoka, Japan, from October 27th to October 29th, 2023. These conferences were platforms for the wide exchanges of views on actual issues in modern materials science and development technologies of materials synthesis and processing.

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

Keywords: Acidic Catalyst, Additive Manufacturing, Alloy, Antibacterial Properties, Biomedical Materials, Chemical Technology, Coating, Composite, Forming, Graphene, Hydrogel, Matrix Composite, Mechanical Properties, Nanocomposite, Nanofluid, Nanomaterials, Polymer, Steel, Thermal Properties, Thin Films

Prices: Print: **US\$ 170.00/ EUR 170.00** Print: 978-3-0364-0423-3
 eBook Single-User: **US\$ 170.00/ EUR 170.00** eBook: 978-3-0364-1423-2
 eBook Multi-User: **US\$ 298.00/ EUR 298.00** 250 pages, 2024

<https://www.scientific.net/978-3-0364-0423-3/book>



The 3rd International Conference on Mechanical Engineering Research and Application

Volume in the series: 141

Aggregated Book

Edited by: Femiana Gapsari, Putu Hadi Setyarini, Moch. Syamsul Ma'arif and Khairul Anam

The iCOMERA conference series is a global event focused on advanced research in mechanical engineering that has provided a glimpse into the future by bringing together some of the world's brightest minds. The iCOMERA 2023 was organised and hosted by the Department of Mechanical Engineering of Brawijaya University, Indonesia, Malang, on October 19-21, 2023. The results of research and innovative engineering and industrial solutions were presented at this event.

Topics: Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Activated Carbon, Alloy, Applied Mechanics, Bioadsorbent, Carbon Electrode, Casting, Casting Defects, Coating, Composite, Corrosion, Corrosion Inhibitor, Direct Current Sputtering, Esterification, Fracture Mechanics, Friction Welding, Hardness, Hydrogen Evolution Reaction, Machine Design, Mechanical Properties, Metal, Nickel Ferrite, Polymer, Reinforcement, Turbine

Prices: Print: **US\$ 210.00/ EUR 210.00** Print: 978-3-0364-0347-2
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1347-1
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 260 pages, 2024

<https://www.scientific.net/978-3-0364-0347-2/book>



The 3rd International Conference on Advances in Materials Science (ICAMS)

Volume in the series: 140

Aggregated Book

Edited by: Dr. Sandip A. Kale and Prof. Sunday Olayinka Oyedepo

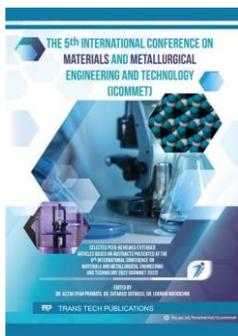
This book presents the selected papers from the Third International Conference on Advances in Materials Science (ICAMS 2023) held on 09-10 May 2023, in Ahmednagar, India. The articles included in this edition describe advanced research on mechanical properties and some technologies of processing, corrosion behaviour and corrosion protection of metal materials; materials properties and technologies for sensor engineering; polymer and composite materials, including bio- and nanocomposites. This edition will be helpful to specialists in materials engineering.

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

Keywords: Alloy, Biocomposite, Composite, Corrosion, Corrosion Inhibitor, Corrosion Protection, Mechanical Properties, Nanocomposite, Polymer, Sensor, Steel, Thin Film, Tribology

Prices: Print: **US\$ 145.00/ EUR 145.00** Print: 978-3-0364-0115-7
 eBook Single-User: **US\$ 145.00/ EUR 145.00** eBook: 978-3-0364-1115-6
 eBook Multi-User: **US\$ 254.00/ EUR 254.00** 172 pages, 2024

<https://www.scientific.net/978-3-0364-0115-7/book>



The 5th International Conference on Materials and Metallurgical Engineering and Technology (ICOMMET)

Volume in the series: 139

Aggregated Book

Edited by: Dr. Azzah Dyah Pramata, Dr. Sutarsis Sutarsis and Dr. Lukman Noerochim

This book features the peer-reviewed selected papers from the 5th International Conference on Materials and Metallurgical Engineering and Technology (ICOMMET). This fifth edition of the conference aimed to analyse the role of innovative materials and technologies in the digital transformation era to reach sustainable development.

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

Keywords: Additive Manufacturing, Alloy, Bioceramics, Biofuel, Biomaterials, Carbon Capture, Casting, Ceramics, Coating, Composite, Corrosion Protection, Dye Degradation, Electrode Materials, Electrolytes, Food Chemistry, Hydrogen Production, Metal Injection Moulding, Nanomaterials, Polymer, Solar Cell, Steel, Supercapacitor, Surface Treatment

Prices: Print: **US\$ 320.00/ EUR 320.00** Print: 978-3-0364-0117-1
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1117-0
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 494 pages, 2024

<https://www.scientific.net/978-3-0364-0117-1/book>



7th International Conference on Recent Advances in Materials, Minerals and Environment (RAMM)

Volume in the series: 138

Aggregated Book

Edited by: Khairunisak Abdul Razak, Prof. Zuhailawati Hussain, Dr. Arjulizan Rusli and Dr. Hareyani Zabidi

This book contains research papers that were presented at the 7th International Conference on Recent Advances in Materials, Minerals and Environment (RAMM 2022). This meeting was the 7th in the series of RAMM Conferences organised by the School of Materials and Mineral Resources Engineering (SMMRE), Universiti Sains Malaysia (USM). The conference was attended by local and international academics, postgraduate students, scientists, researchers, engineers, managers, product developers, and business leaders. It was a perfect platform to share, discuss and exchange ideas on the latest developments and recent findings in research studies related to advanced materials and processing technologies, minerals resources, and environmental safety.

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

Keywords: 3D Printing, Additive Manufacturing, Alloys, Aluminium, Biomedical Materials, Cement, Composites, Concrete, Energy Storage, Green Building Materials, Nanomaterials, Nanowires, Natural Resource Management, Polymer Materials, Production Processes, Renewable Resources, Sensors, Solar Energy, Waste Treatment

Prices: Print: **US\$ 310.00/ EUR 310.00** Print: 978-3-0364-0105-8
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1105-7
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 452 pages, 2024

<https://www.scientific.net/978-3-0364-0105-8/book>



2nd International Conference on Sustainable Design, Manufacturing and Materials Engineering

Volume in the series: 137

Aggregated Book

Edited by: Dr. M. Nallusamy

This edition is compiled from articles presented at the 2nd International Conference on Sustainable Design, Manufacturing and Materials Engineering (ISDMME, 5-6 April 2023, Coimbatore, India) and will be useful to a wide range of specialists in industry and construction.

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

Keywords: Activated Carbon, Additive Manufacturing, Adsorption, Aggregate, Alloy, Anaerobic Digestion, Automation, Cement, Composite, Concrete, Friction Stir Welding, Industrial Engineering, Machine Design, Mechanical Properties, Mechatronics, Polymer, Sintering, Steel, Structural Engineering, Water Quality

Prices: Print: **US\$ 220.00/ EUR 220.00** Print: 978-3-0364-0262-8
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1262-7
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 310 pages, 2024

<https://www.scientific.net/978-3-0364-0262-8/book>



The 18th International Conference on Quality in Research

Volume in the series: 136

Aggregated Book

Edited by: Dr. Sheila Tobing and Dr. Mohammad Akita Indianto

These selected high-quality articles were presented at the 8th International Conference on Quality in Research (QIR 2023, October 23-25, 2023), hosted by the Faculty of Engineering at Universitas Indonesia and were comprised in the current book. This compilation showcases the latest research and achievements in materials and industrial development. Encompassing diverse topics, the book delves into advanced material synthesis, characterization techniques, and innovative technological processes. It will be a valuable resource for academics, scientists, and industry professionals, offering insights into the forefront of these pivotal disciplines.

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

Keywords: Alloy, Composite, Construction, Corrosion, Engineering Management, Mechanical Properties, Minerals Extraction, Nanomaterials, Polymer, Steel

Prices: Print: **US\$ 145.00/ EUR 145.00** Print: 978-3-0364-0314-4
 eBook Single-User: **US\$ 145.00/ EUR 145.00** eBook: 978-3-0364-1314-3
 eBook Multi-User: **US\$ 254.00/ EUR 254.00** 174 pages, 2024

<https://www.scientific.net/978-3-0364-0314-4/book>



The 6th International Conference on Science and Engineering

Volume in the series: 135

Aggregated Book

Edited by: Dr. Shofwatul Uyun, Dr. Khusna Dwijayanti, Prof. Hsiang-Lin Liu, Dr. Noor Baity Saidy, Dr. Muhammad Syafiq, Dr. Denni Kurniawan, Agessty Ika Nurlita, Andi Andi, Deddy Rahmadi, Dien F. Awalyah, Dwi Otik Kurniawati, Gita Miranda Warsito, Mandahadi Kusuma, Priyagung Dhemi Widiakongko and Siti Fatimah

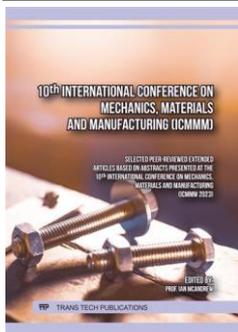
The International Conference on Science and Engineering 2023 (ICSE2023, 7-9 August 2023) was organised by the Faculty of Science and Technology, UIN Sunan Kalijaga Yogyakarta, and was focused on "Current Trends on Science and Engineering for Sustainable Society" as the theme. The conference aimed to explore the latest research and trends in science and engineering, with a strong emphasis on creating a sustainable environment by responsibly using resources and ensuring social and economic equity for future generations.

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

Keywords: Additive Manufacturing, Agriculture, Biocomposite, Biofuel, Biomass, Biomedical Engineering, Biopolymer, Data Processing, Food Production, Glass, Image Processing, Industrial Engineering, Information Technology, Mechanical Properties, Operational Research, Plasma Arc Machining, Steel

Prices: Print: **US\$ 290.00/ EUR 290.00** Print: 978-3-0364-0263-5
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1263-4
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 454 pages, 2024

<https://www.scientific.net/978-3-0364-0263-5/book>



10th International Conference on Mechanics, Materials and Manufacturing (ICMMM)

Volume in the series: 134

Aggregated Book

Edited by: Prof. Ian McAndrew

The 10th International Conference on Mechanics, Materials and Manufacturing (ICMMM 2023) was held in Washington, D. C., USA, August 18-20, 2023. The conference provided a platform for engineers and scientists to present research results in applied materials, materials processing technologies, machinery, production engineering and management.

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

Keywords: Alloy, Coating, Composite, Computational Mechanics, Electrochemical Plating, Green Building Materials, Heat Treatment, Lean Manufacturing, Mechanical Properties, Mechatronics, Production Management, Rolling, Vickers Hardness

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0043-3
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1043-2
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 132 pages, 2024

<https://www.scientific.net/978-3-0364-0043-3/book>



International Conference on Advanced Materials, Modern Manufacturing and Computerized Automation (IAMMCA)

Volume in the series: 133

Aggregated Book

Edited by: Dr. Shanmugam Thillikkani

This edition includes articles presented at the International Conference on Advanced Materials, Modern Manufacturing and Computerized Automation (IAMMCA2023, 23-24 June 2023, Tirunelveli, India). The collection will be useful to engineers and researchers in mechanical engineering, applied materials and chemical production.

Topics: Manufacturing, Materials Science, Mechanical Engineering, Nanoscience

Keywords: Additive Manufacturing, Alloy, Carbon Nanotube, Composite, Dissimilar Joining, Forging, Friction Stir Welding, Functional Materials, Mechanical Properties, Milling, Polymer, Steel

Prices: Print: **US\$ 110.00/ EUR 110.00** Print: 978-3-0364-0346-5
 eBook Single-User: **US\$ 110.00/ EUR 110.00** eBook: 978-3-0364-1346-4
 eBook Multi-User: **US\$ 193.00/ EUR 193.00** 138 pages, 2024

<https://www.scientific.net/978-3-0364-0346-5/book>



The 5th International Conference on Science and Technology Applications

Volume in the series: 132

Aggregated Book

Edited by: Bornok Sinaga, Dr. Deny Setiawan and Dr. Juniastel Rajagukguk

In the presented edition based on results of the 5th International Conference on Science and Technology Applications (ICoSTA-2023), the reader can find the latest research results in the field of application of materials and modern technologies. Synthesis techniques, properties, and structural analysis of various types of materials, such as nanocomposites, optical materials, structural materials, etc., are analysed in this collection of articles. Technologies of waste treatment, biomass processing and computational research in geology and geophysics are also presented in this edition. This book will be helpful to a wide range of specialists in the fields of materials sciences, environmental engineering, and geophysics.

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

Keywords: Biomass Processing, Bioplastic, Catalysts, Computational Research, Concrete, Conductive Materials, Data Processing, Electrodes, Fuel, Functional Materials, Geology, Geophysics, Glasses, Nanomaterials, Pyrolysis, Stainless Steel, Structural Materials, Supercapbatteries, Waste Treatment, Welding

Prices: Print: **US\$ 135.00/ EUR 135.00** Print: 978-3-0364-0383-0
 eBook Single-User: **US\$ 135.00/ EUR 135.00** eBook: 978-3-0364-1383-9
 eBook Multi-User: **US\$ 236.00/ EUR 236.00** 170 pages, 2024

<https://www.scientific.net/978-3-0364-0383-0/book>



8th International Conference on Material Engineering and Application (ICMEA)

Volume in the series: 131

Aggregated Book

Edited by: Prof. Mosbeh Kaloop

This publication contains articles that were presented at the 8th International Conference on Material Engineering and Application (ICMEA), held on August 18-20, 2023 in Incheon, South Korea. Published articles cover research results in the area of materials science and materials processing technologies in the various branches of the modern industry. We believe this edition will be interesting and useful to many engineers, academics as well as students.

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

Keywords: Architecture, Biosensors, Chemical Engineering, Civil Engineering, Electrochemistry, Food Engineering, Functional Materials, Heat Pump, Production, Renewable Energy, Solar Dryer

Prices: Print: **US\$ 75.00/ EUR 75.00** Print: 978-3-0364-0303-8
 eBook Single-User: **US\$ 75.00/ EUR 75.00** eBook: 978-3-0364-1303-7
 eBook Multi-User: **US\$ 131.00/ EUR 131.00** 60 pages, 2024

<https://www.scientific.net/978-3-0364-0303-8/book>



2nd International Scientific-Practical Conference Machine Building and Energy: New Concepts and Technologies (MBENCT)

Volume in the series: 130

Aggregated Book

Edited by: Prof. Subhan Namazov, Prof. Nizami Yusubov and Prof. Sylvio Simon

This edition includes selected articles presented at the 2nd International Scientific-Practical Conference "Machine Building and Energy: New Concepts and Technologies" (MBENCT 2023, December 4-5, 2023, AzTU, Baku, Azerbaijan). The purpose of the Conference was to formulate new challenges that create a scientific and technological basis that determines the increase in environmental safety and the economic efficiency of the infrastructure in connection with the development of production and energy fields. The publication will be useful to specialists in machine-building, energy and modern communication and information technologies.

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

Keywords: Additive Manufacturing, Alloys, Applied Mechanics, Automation, Communication, Composite, Control, Crack, Defect, Electric Network, Electronics, Energy Efficiency, Energy Production, Engine, Environmental Protection, Equipment, Fault, Functional Materials, Heat Transfer, Heavy Metals, Hot Stamping, Information Security, Information Technology, Machines, Materials Processing, Mechatronics, Metrology, Nanoparticles, Polymer, Production Engineering, Pyrolysis, Renewable Energy, Steel, Thin Films, Tools, Traffic Safety, Transportation, Waste Treatment, Wastewater

Prices: Print: **US\$ 310.00/ EUR 310.00** Print: 978-3-0364-0317-5
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1317-4
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 594 pages, 2024

<https://www.scientific.net/978-3-0364-0317-5/book>



12th International Conference on Material Science and Engineering Technology

Volume in the series: 129

Aggregated Book

Edited by: Prof. Ramesh K. Agarwal

This edition contains papers presented at 2023 the 12th International Conference on Material Science and Engineering Technology (ICMSET 2023, Fukuoka, Japan) held in a hybrid format on November 24-26, 2023. We hope these research results will be useful to many engineers and researchers in their practical activities.

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

Keywords: 3D Printing, Biomaterials, Composite, Green Building Materials, High Entropy Alloy, Hydroxyapatite, Mechanical Properties, Mesoporous Silica, Nanomaterials, Polymer, Shape Memory Alloy, Transition-Metal Dichalcogenides

Prices: Print: **US\$ 105.00/ EUR 105.00** Print: 978-3-0357-1790-7
 eBook Single-User: **US\$ 105.00/ EUR 105.00** eBook: 978-3-0357-2501-8
 eBook Multi-User: **US\$ 184.00/ EUR 184.00** 138 pages, 2024

<https://www.scientific.net/978-3-0357-1790-7/book>



International Conference on Industrial Sciences, Engineering and Technology toward Digital Era (eICISSET)

Volume in the series: 128

Aggregated Book

Edited by: Dr. Agus Geter Edy Sutjipto

This edition collects the selected peer-reviewed full-text papers from the International Conference on Industrial Sciences, Engineering and Technology toward Digital Era 2023 (eICISSET 2023) held at Universitas Indo Global Mandiri, Palembang, Indonesia, on 08-09 August 2023. The eICISSET 2023 was a conference event attended by postgraduate students and researchers from four countries to share their research activities and exchange new knowledge based on current applied developments and achievements in engineering sciences.

Topics: Bioscience and Medicine, Industrial Engineering, Information Technologies, Materials Science, Mechanical Engineering, Mechanics, Nanoscience

Keywords: Biocomposites, Biodiversity, Biotechnology, Ceramics, Conflict Management, Corrosion Protection, Cracking Protection, Deep Learning, Electronics, Machine Learning, Mechatronics, Nanocrystalline Materials, Natural Language Processing, Neural Networks, Risk Assessment, Robotics, Thin Films

Prices: Print: **US\$ 125.00 / EUR 125.00** Print: 978-3-0364-0261-1
 eBook Single-User: **US\$ 125.00 / EUR 125.00** eBook: 978-3-0364-1261-0
 eBook Multi-User: **US\$ 219.00 / EUR 219.00** 154 pages, 2024

<https://www.scientific.net/978-3-0364-0261-1/book>



5th International Conference on Nanomaterials, Materials and Manufacturing Engineering & 7th International Conference on Sensors, Materials and Manufacturing

Volume in the series: 127

Aggregated Book

Edited by: Prof. Dao Hua Zhang and Prof. Parames Chutima

This book offers to the readers' attention the research results presented at the 5th International Conference on Nanomaterials, Materials and Manufacturing Engineering (ICNMM 2023) and 7th International Conference on Sensors, Materials and Manufacturing (ICSMM 2023) that were successfully held in Tokyo, Japan (October 16-18, 2023), and Chiang Mai, Thailand (November 22-24, 2023), respectively. The events brought together researchers from Asian Pacific nations, North America and Europe to exchange their research results and address open issues in nanomaterials, sensors, carbon materials, biomaterials, manufacturing engineering and many other fields.

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

Keywords: Additive Manufacturing, Alloy, Biocomposite, Biomaterials, Composite, Friction Welding, Hydroxyapatite, Magnetic Properties, Mechanical Properties, Membrane, Nanocomposite, Nanomaterials, Pharmacology, Polymer, Steel, Wastewater Treatment, Water Purification

Prices: Print: **US\$ 150.00 / EUR 150.00** Print: 978-3-0364-0474-5
 eBook Single-User: **US\$ 150.00 / EUR 150.00** eBook: 978-3-0364-1474-4
 eBook Multi-User: **US\$ 263.00 / EUR 263.00** 184 pages, 2024

<https://www.scientific.net/978-3-0364-0474-5/book>



7th International Conference on Nanomaterials and Biomaterials & 5th Asia Conference on Material and Manufacturing Technology

Volume in the series: 126

Aggregated Book

Edited by: Prof. Steven Y. Liang

This edition represents a selection of the contributions from the 2023 7th International Conference on Nanomaterials and Biomaterials and the 2023 5th Asia Conference on Material and Manufacturing Technology held in Chiang Mai, Thailand, during November 22-24, 2023, in the hybrid form.

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

Keywords: Alloy, Artificial Saliva, Biomedical Materials, Building Materials, Composite, Drug Delivery, Electrospun Membrane, Extrusion, Forming, Geopolymer, Green Synthesis, Hot Forging, Laser Quenching, Magnetic Hyperthermia, Mechanical Properties, Mechatronics, Mortar, Nanocomposites, Nanomaterials, Nanoparticles, Optical Properties, Photocatalytic Activity, Polymer, Steel, Thermodynamic Properties, Welding

Prices: Print: **US\$ 210.00 / EUR 210.00** Print: 978-3-0364-0258-1
 eBook Single-User: **US\$ 198.00 / EUR 198.00** eBook: 978-3-0364-1258-0
 eBook Multi-User: **US\$ 347.00 / EUR 347.00** 262 pages, 2024

<https://www.scientific.net/978-3-0364-0258-1/book>



5th International Conference on Advances in Materials, Mechanical and Manufacturing & 12th International Conference on Engineering and Innovative Materials

Volume in the series: 125

Aggregated Book

Edited by: Prof. Hisaki Watari, Prof. Sergei Alexandrov and Prof. Muhammad Yahaya

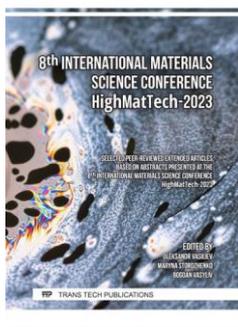
This edition comprises articles presented at the 5th International Conference on Advances in Materials, Mechanical and Manufacturing (AMMM 2023) and the 12th International Conference on Engineering and Innovative Materials (ICEIM 2023). These conferences were held on September 1-3, 2023, in Osaka, Japan. The included articles represent the latest research results in materials science and materials processing technologies used in various industrial branches, including construction and electrical engineering.

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

Keywords: 3D Concrete Printing Technology, Alloy, Biomechanics, Composite, Concrete, Electrical Materials, Mechanical Properties, Metalworking, Nanomaterials, Phase Change Material, Polymer, Shape Memory Material, Structural Mechanics, Superalloy

Prices: Print: **US\$ 120.00/ EUR 120.00** Print: 978-3-0364-0248-2
 eBook Single-User: **US\$ 120.00/ EUR 120.00** eBook: 978-3-0364-1248-1
 eBook Multi-User: **US\$ 210.00/ EUR 210.00** 146 pages, 2024

<https://www.scientific.net/978-3-0364-0248-2/book>



8th International Materials Science Conference HighMatTech-2023

Volume in the series: 124

Aggregated Book

Edited by: Dr. Oleksandr Vasiliev, Maryna Storozhenko and Dr. Bogdan Vasylyv

This book comprises the selected peer-reviewed papers presented at the 8th International Materials Science Conference HighMatTech-2023, Kyiv, Ukraine, held on October 2-6, 2023. This edition is dedicated to the latest research in the development and application of metals and alloys, ceramics and composite materials, low-dimensional and nanomaterials, films, and coatings. This collection will be useful to researchers and engineers in materials science.

Topics: Materials Science, Nanoscience

Keywords: Amorphous Alloy, Ceramics, Composite, Corrosion, Crystallization, Forming, High-Entropy Alloy, Microstructure, Nanocomposite, Nanomaterials, Protective Coating, Steel, Structural Metal, Welding

Prices: Print: **US\$ 230.00/ EUR 230.00** Print: 978-3-0364-0290-1
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1290-0
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 278 pages, 2024

<https://www.scientific.net/978-3-0364-0290-1/book>



The 2023 9th International Conference on Advanced Engineering and Technology

Volume in the series: 123

Aggregated Book

Edited by: Prof. Jong Wan Hu and Prof. Mosbeh Kaloo

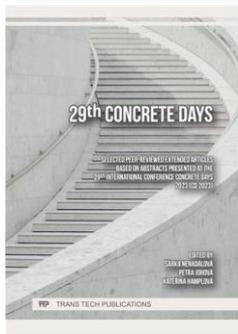
This edition contains articles that were presented at an annual 9th International Conference on Advanced Engineering and Technology (ICAET 2023) held in Incheon, South Korea, on May 19-21, 2023. Published articles cover research results in materials science and materials processing and synthesis, designing and researching functional possibilities of machines, machine parts and equipment, and analysing and designing an optimisation production system based on Industry 4.0. We hope that this edition will be interesting and useful to many engineers, academics and also students.

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

Keywords: Additive Manufacturing, Construction, Food Production, Machine Design, Mechatronics, Production System, Synthesis

Prices: Print: **US\$ 100.00/ EUR 100.00** Print: 978-3-0364-0233-8
 eBook Single-User: **US\$ 100.00/ EUR 100.00** eBook: 978-3-0364-1233-7
 eBook Multi-User: **US\$ 175.00/ EUR 175.00** 108 pages, 2024

<https://www.scientific.net/978-3-0364-0233-8/book>



29th Concrete Days 2023

Volume in the series: 122

Aggregated Book

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

The 29th International Conference Concrete Days 2023 was organised by the Czech Concrete Society and was successfully held in Hradec Kralove on November 7-8, 2023. The published papers from the Conference presented in this edition showcase recent research results in the area of modern concretes and concrete structures, discuss the modelling and design of concrete structures, bridges, tunnels, and buildings, properties of concretes as well as significant structural projects and their realisations.

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

Keywords: Bridge Engineering, Bridge Monitoring, Cement, Column, Composite, Concrete, Durability, Fiber, Flat Slab, Fly Ash, Mechanical Properties, Post-Tensioned Structures, Precast Segment, Prestressing Analysis, Reinforcement, Steel, Structural Mechanics

Prices: Print: **US\$ 230.00 / EUR 230.00** Print: 978-3-0364-0313-7
 eBook Single-User: **US\$ 198.00 / EUR 198.00** eBook: 978-3-0364-1313-6
 eBook Multi-User: **US\$ 347.00 / EUR 347.00** 266 pages, 2024

<https://www.scientific.net/978-3-0364-0313-7/book>



International Conference on Sustainable Engineering and Materials Development

Volume in the series: 121

Aggregated Book

Edited by: Dr. Abiodun Ayodeji Abioye, Prof. Oluseyi O. Ajayi, Dr. Bukola Joseph Babalola, Prof. Olanrewaju Adesina and Dr. Olufemi Eyiotope Bamidele

The articles in this edition were presented at the 2023 International Conference on Sustainable Engineering and Materials Development (ICSEMD 2023) held in Canada on 28-30 May 2023. These articles have been carefully selected for their extensive coverage of recent advancements in advanced materials and sustainable materials processing technology, technical systems research and design, and industrial engineering practices. This edition will be useful to specialists involved in modern industrial production.

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

Keywords: Alloy, Biofuel, Composite, Corrosion, Corrosion Protection, Environmental Engineering, Green Building Materials, Industrial Engineering, Lean Manufacturing, Machine Design, Mechanical Properties, Nanofluid, Nanomaterials, Renewable Energy, Steel, Sustainability

Prices: Print: **US\$ 260.00 / EUR 260.00** Print: 978-3-0364-0153-9
 eBook Single-User: **US\$ 198.00 / EUR 198.00** eBook: 978-3-0364-1153-8
 eBook Multi-User: **US\$ 347.00 / EUR 347.00** 384 pages, 2024

<https://www.scientific.net/978-3-0364-0153-9/book>



22nd AUTEX World Textile Conference

Volume in the series: 120

Aggregated Book

Edited by: Prof. Li Jing Wang

This book is a collection of selected full text peer-reviewed papers abstracts of which were presented at the Autex 2023 conference held at RMIT University in Melbourne. The theme of the book is about Textiles Innovation and Future Fashion. The topics include Advanced Materials and Applications, Wearable Technologies and Digital Applications, Future Fashion, Textile Biomaterials and Engineering, and Textile Supply Chain, Circularity and Sustainability. The book covers the results of research work in textile and clothing science, technology and design.

Topics: Environmental Engineering, Industrial Engineering, Manufacturing, Materials Science, Nanoscience

Keywords: 3D Non-Crimp Fabric Manufacturing, Apparel Industry, Composite, Cotton, Dying, Fabric, Fashion, Fiber, Friction Spun Yarn, Functional Clothing, Knit Structure, Mechanical Properties, Mercerising, Polymer, Smart Textile, Textile Finishing, Training, Weave Fabric, Yarn

Prices: Print: **US\$ 210.00 / EUR 210.00** Print: 978-3-0364-0301-4
 eBook Single-User: **US\$ 198.00 / EUR 198.00** eBook: 978-3-0364-1301-3
 eBook Multi-User: **US\$ 347.00 / EUR 347.00** 322 pages, 2024

<https://www.scientific.net/978-3-0364-0301-4/book>



Symposium on Industrial Science and Technology

Volume in the series: 119

Aggregated Book

Edited by: Gaanty Pragas Maniam, Dr. Farah Hanani Zulkifli, Jose Rajan and Assoc. Prof. Dr. Ahmad Salihin Samsudin

This book presents the selected research papers which were presented at the 4th Symposium on Industrial Science and Technology (SISTEC2022) organised by the Faculty of Industrial Sciences and Technology, Universiti Malaysia Pahang Al-Sultan Abdullah, held from 23rd to 24th of November, 2022. The published articles cover a diverse range of research topics in bio-based polymers and composites, advanced functional materials, biotechnology, green chemistry, renewable energy and biomedicine. This collection of research papers should indeed be valuable to researchers in materials sciences and chemical technologies.

Topics: Bioscience and Medicine, Environmental Engineering, Materials Science, Nanoscience

Keywords: Biocomposite, Biodiesel, Biopolymer, Biotechnology, Food Production, Functional Materials, Graphene, Green Chemistry, Heavy Metals, Kaolin, Nanomedicine, Nanoparticles, Phytomedicine, Pollutants Removal, Wood Waste Blending

Prices: Print: **US\$ 175.00/ EUR 175.00** Print: 978-3-0364-0054-9
 eBook Single-User: **US\$ 175.00/ EUR 175.00** eBook: 978-3-0364-1054-8
 eBook Multi-User: **US\$ 306.00/ EUR 306.00** 230 pages, 2024

<https://www.scientific.net/978-3-0364-0054-9/book>



2022 International Conference on Machining, Materials and Mechanical Technologies

Volume in the series: 118

Aggregated Book

Edited by: Keiji Yamada, Prof. Yi Cheng Chen and Prof. Li-Gang Lin

This edition contains articles that were presented at the 4th International Conference on Machining, Materials and Mechanical Technologies (IC3MT 2022, Taipei, Taiwan, 11-14 November 2022) which address the latest developments in materials science, nanomaterials and nanotechnologies, coatings and surface treatment procedures, as well as metal processing technologies and engineering solutions in the design of machines and mechatronics systems. The publication will be helpful to specialists in mechanical engineering.

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

Keywords: Burnishing, Coating, Composite, Cutting, Drilling, Electropolishing, Fatigue Analysis, Friction Welding, Hydrostatic Bearing, Machine, Machine Measurement, Mechanical Properties, Mechatronics, Nanomaterials, Nanoprocessing, Single Point Incremental Sheet Forming, Steel, Surface Treatment, Tool

Prices: Print: **US\$ 145.00/ EUR 145.00** Print: 978-3-0364-0152-2
 eBook Single-User: **US\$ 145.00/ EUR 145.00** eBook: 978-3-0364-1152-1
 eBook Multi-User: **US\$ 254.00/ EUR 254.00** 194 pages, 2024

<https://www.scientific.net/978-3-0364-0152-2/book>



The 4th International Seminar on Fundamental and Application of Chemical Engineering

Volume in the series: 117

Aggregated Book

Edited by: Dr. Hikmatun Ni'mah, Prof. Jan Degreve, Prof. Manabu Shimada, Prof. Yi-Hsu Ju, Prof. Arshad Ahmad, Dr. Rendra Panca Anugraha, Dr. Fahmi Fahmi, Dr. Wahyu Meka, Dr. Mohammad Irwan Fatkhur Rozy, Annas Wiguno and Rizky Tetrisyanda

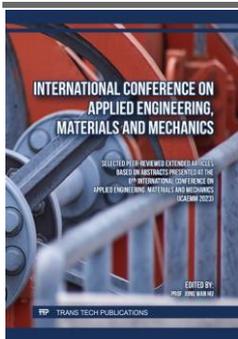
This edition comprises articles that were presented at the 4th International Seminar on Fundamental and Application of Chemical Engineering (ISFACHe 2022, Surabaya, Indonesia, October 26-27, 2022, Indonesia, online). Articles showcase the latest research findings in the field of chemical engineering, biotechnologies, bio-based materials and technologies of biofuel production, waste recycling, wastewater treatment and energy storage. The publication will be relevant to many specialists of various profiles.

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

Keywords: Biocomposites, Biofuel Production, Biomaterials, Biopolymers, Bioprocess Engineering, Biotechnology, Catalysis, Chemical Engineering, Energy Storage, Food Production, Functional Nanomaterials, Waste Recycling, Wastewater Treatment

Prices: Print: **US\$ 225.00/ EUR 225.00** Print: 978-3-0364-0175-1
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0364-1175-0
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 402 pages, 2024

<https://www.scientific.net/978-3-0364-0175-1/book>



International Conference on Applied Engineering, Materials and Mechanics

Volume in the series: 116

Aggregated Book

Edited by: Prof. Jong Wan Hu

This edition contains articles that were presented at the 8th International Conference on Applied Engineering, Materials and Mechanics (8th ICAEMM 2023, Seoul, South Korea, on July 14-16, 2023) and represents the latest research results in materials science and materials processing technologies that used in many industrial branches, including construction and environmental engineering.

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

Keywords: Building Materials, Catalysts, Composites, Concrete, Environmental Protection, Functional Materials, Metal-Organic Frameworks, Nanomaterials, Sensors, Wastewater Treatment, Water Purification

Prices: Print: **US\$ 105.00/ EUR 105.00** Print: 978-3-0364-0291-8
 eBook Single-User: **US\$ 105.00/ EUR 105.00** eBook: 978-3-0364-1291-7
 eBook Multi-User: **US\$ 184.00/ EUR 184.00** 134 pages, 2024

<https://www.scientific.net/978-3-0364-0291-8/book>



International Conference on Advancements in Materials, Manufacturing & Automation

Volume in the series: 115

Aggregated Book

Edited by: Prof. V. Jayakumar, Prof. J. Paulo Davim and Dr. V. Dhinakaran

The presented edition contains articles presented at the First International Conference on Advancements in Materials, Manufacturing and Automation (AMMA-2023, 7-8 April 2023) organised by the Department of Mechanical Engineering, Amrita School of Engineering, Chennai, India. The book focuses on recent achievements in materials science, manufacturing technologies, and machinery. The edition will be helpful to engineers from the industrial sector and academic researchers.

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

Keywords: Additive Manufacturing, Alloy, Artificial Intelligence, Composite, Electro Discharge Machining, Emission Characteristic, Engine, Extruding, Friction Stir Welding, Heat Transfer, Laser Cladding, Machine Designing, Mass Transfer, Mechanical Properties, Mechatronics, Polymer, Solid Lubricant, Steel, Stir Casting, Tribology

Prices: Print: **US\$ 245.00/ EUR 245.00** Print: 978-3-0357-1602-3
 eBook Single-User: **US\$ 198.00/ EUR 198.00** eBook: 978-3-0357-2528-5
 eBook Multi-User: **US\$ 347.00/ EUR 347.00** 282 pages, 2024

<https://www.scientific.net/978-3-0357-1602-3/book>



Building Materials and Materials Engineering & Nanoscience and Technology

Volume in the series: 114

Aggregated Book

Edited by: Prof. Paulo Mendonca and Prof. Soon Hyung Hong

This compilation of papers encompasses the results of two conferences, namely, the 7th International Conference on Building Materials and Materials Engineering (ICBMM 2023) and the 6th International Conference on Nanoscience and Technology (ICNST 2023) which were successfully held in Porto, Portugal, and Tokyo, Japan, respectively. The edition will be helpful to specialists in materials science, electrochemistry, building materials and construction.

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

Keywords: Additive Manufacturing, Battery, Cement, Concrete, Electrode Materials, Geopolymer, Geotechnics, Green Building Materials, Mechanical Properties, Metal Creep, Mortar, Steel, Structural Elements, Supercapacitor, Surface Defect, Wood

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The International Conference on Energy Storage Technology and Applications

Volume in the series: 113

Aggregated Book

Edited by: Dr. Anif Jamaluddin, Dr. Hendri Widiyandari and Dr. Agus Purwanto

The International Conference on Energy Storage Technology and Applications (ICESTA-2022) was organized by the Centre of Excellence for Electrical Energy Storage Technology, Universitas Sebelas Maret, Surakarta, Indonesia, and held on October 27, 2022. The conference focused on activities related to the development of advanced and state-of-the-art energy storage technologies to support electric vehicles and renewable energy. It caters as a strategic platform for researchers to gather and exchange ideas in realizing an innovation-driven approach to conducting applied research through collaboration with industry, research institutes, private organizations, and public organizations.

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

Keywords: Battery, Electrochemistry, Energy Management System, Energy Storage Materials, Fuel Cell, Industrial Engineering, Photocatalysis, Solar Cell, Supercapacitor

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8th International Conference on Civil Engineering and Materials Science & 9th International Conference on Architecture, Materials and Construction

Volume in the series: 112

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Edited by: Nuno Dinis Costa Areias Cortiços and Prof. Zongjin Li

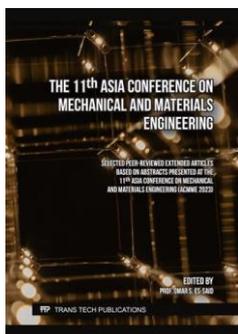
This book contains articles based on scientific and engineering research results in modern building materials, construction technologies and architecture that were presented at the 8th International Conference on Civil Engineering and Materials Science (ICCEMS 2023) and the 9th International Conference on Architecture, Materials and Construction (ICAMC 2023), co-held in Singapore, from June 14th to 16th, 2023. The edition will be helpful to a wide range of specialists in construction and architecture.

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

Keywords: Architectural Heritage, Cement, Concrete, Corrosion, Energy Efficiency, Geotechnics, Green Building Materials, Mechanical Properties, Protection, Spatial Planning, Structural Engineering, Structural Metals, Sustainable Architecture, Thermal Comfort, Tiles

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The 11th Asia Conference on Mechanical and Materials Engineering

Volume in the series: 111

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Edited by: Prof. Omar S. Es-Said

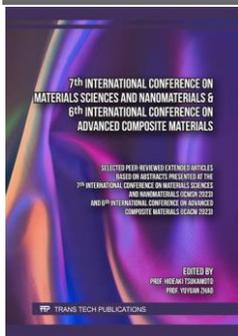
This book presents scientific and engineering research results in materials science, materials processing technologies, mechanical engineering and manufacturing that were presented at the 11th Asia Conference on Mechanical and Materials Engineering (Sapporo, Japan, June 8-11, 2023). The edition will be helpful to a wide range of specialists in modern production.

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

Keywords: Additive Manufacturing, Alloys, Bio-Based Materials, Defect Identification, Design of Machine Parts, Engineering Management, Fluid Dynamics, Functional Materials, Heat Transfer, Nanomaterials, Processing Technologies, Sensor Materials, Steel, Waste, Water Treatment, Wear of Materials, Welding

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7th International Conference on Materials Sciences and Nanomaterials & 6th International Conference on Advanced Composite Materials

Volume in the series: 110

Aggregated Book

Edited by: Prof. Hideaki Tsukamoto and Prof. Yuyuan Zhao

We are pleased to present the selection of contributions from the 2023 7th International Conference on Materials Sciences and Nanomaterials (ICMSN 2023) which was held in Cambridge, United Kingdom, during July 11-13, 2023, and the 2023 6th International Conference on Advanced Composite Materials (ICACM 2023) which was held in Hosei University, Tokyo, Japan, during August 23-25, 2023. These contributions from the ICMSN 2023 and ICACM 2023 included submissions from universities, research institutes and industries. All of the papers were peer-reviewed by the conference committee members and international reviewers. They were selected based on their quality and relevance to the subjects of the conferences. The fields of this selection included structural materials, nanomaterials, electronic materials, material chemistry, polymers and composites, mechanics of composite materials, materials processing engineering, and so on.

Topics: Materials Science, Mechanics, Nanoscience

Keywords: Additive Manufacturing, Applied Mechanics, Ceramics, Composite, Forming, Graphene, Mechanical Properties, Metallization, Nanomaterials, Nanoparticles, Perovskite, Physicochemical Properties, Polymer, Steel, Structural Mechanics, Welding

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The 4th Research, Invention, and Innovation Congress (RI2C 2023)

Volume in the series: 109

Aggregated Book

Edited by: Prof. Somrerck Chandra-Ambhorn, Dr. Kampanart Theinnoi and Wanlop Kitisatorn

This book is a collection of the selected peer-reviewed papers presented at the 2023 4th Research, Invention, and Innovation Congress (RI2C), organized by the Science and Technology Research Institute (STRI), King Mongkut's University of Technology North Bangkok, during August 24-25, 2023. The RI2C 2023 was aimed at highlighting and sharing new knowledge as well as contributing to the Innovation for Better Life. 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. The insights presented in this edition promise to provide valuable knowledge and perspectives to professionals within these disciplines and 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, Materials Science, Mechanics, Nanoscience

Keywords: Alloy, Biocomposite, Biomaterials, Biopolymer, Composite, Corrosion, Failure Criteria, Mechanical Properties, Mechanics of Materials, Nanomaterials, Oxidation, Polymer, Steel, Tool Wear

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International Conference of Food Security, Livelihoods, and Technology

Volume in the series: 108

Aggregated Book

Edited by: Dr. Dwinanto Sukamto and Dr. Mekro Permana Pinem

This conference book contains the written versions of the selected peer-reviewed contributions presented during the International Conference of Food Security, Livelihoods, and Technology (ICFSL 2022), held by Universitas Sultan Ageng Tirtayasa on December 6, 2022. The Conference provided a forum for discussing recent developments in various engineering and life science topics, including food security, agriculture, food engineering, material science, and engineering. The Conference provided a good opportunity for participants to present and discuss topics in their respective research areas.

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

Keywords: Biocomposite, Biomaterials, Chemical Engineering, Functional Materials, Green Building Materials, Mechatronics, Natural Fiber, Production Processes, Steel Slag, Waste Treatment

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5th International Conference on Materials Science and Manufacturing Technology

Volume in the series: 107

Aggregated Book

Edited by: Dr. Ramya Muthusamy and Thangaprakash Sengodan

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 technologies, communications, and network technology, the traditional manufacturing process has evolved into intelligent, more technologically flexible and efficient manufacturing. This book is a collection of research articles on recent materials science, manufacturing technologies, and machine design advancements. The articles presented here were selected from the Fifth International Conference on Materials Science and Manufacturing Technology 2023 (ICMSMT 2023, April 13-14, 2023, Coimbatore, Tamil Nadu, India).

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

Keywords: Alloys, Biomaterials, Ceramics, Civil Engineering, Coatings, Composites, Corrosion Protection, Cutting, Defects, Electrochemistry, Failures, Friction Stir Processing, Glasses, Green Building Materials, Liquid-Crystals, Manufacturing Engineering, Materials Processing, Mechanical Properties, Microstructure, Nanomaterials, Nanoparticles, Photoluminescence, Quantum Dots, Steel, Thin Films, Waste Treatment, Welding

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