

Preface

This book presents the proceedings of the THERMEC'2020/2021, the 11th International Conference on Processing and Manufacturing of Advanced Materials, which is scheduled to take place during May10-14, 2021 in Vienna, Austria, under the co-sponsorship of Technical University of Graz and the Technical University of Vienna. The Conference is also under the auspices of professional organizations from Japan, Korea, France, Italy, The Netherlands, Germany, Brazil, Austria, India, and Canada. The Conference is intended to bring together the researchers and engineers/technologists working in different aspects of processing, fabrication, structure/property evaluation and applications of both ferrous and nonferrous materials including biomaterials, and smart/intelligent materials as well as the advanced characterisation techniques. In addition to the contributed papers, the conference committee has included in the 2021 final program the invited presentations by active researchers from various countries in numerous topic areas covered at the conference.

Internationally known experts in various topic areas from several countries are invited to deliver state of the art Plenary/Keynote lectures at THERMEC'2021. Much of the credit for the success of the conference is due to the topic coordinators those devoted their time, expertise and experience in promoting/coordinating their topic symposia. The topic coordinators managing various symposia sessions devoted considerable energy in soliciting excellent papers from relevant researchers from various countries at this conference.

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Topics

Additive Manufacturing

Advanced Materials & Surface Treatments for
 Bioengineering Applications

Advanced Protective Coatings/Surface
 Engineering & Plasma Processing of Materials
 (Metallic, non-Metallic, Oxidation Resistant,
 Thermal Barrier, Refractory, Composites &
 Polymer Coatings)

Advanced Steels (HSLA/AHSS/
 IF/TRIP/HNS/Stainless) & TMP Micro Alloyed
 Steels

Al Alloys

Biomimetic Materials, Nanostructured
 Biomaterials, Medical Devices & Regenerative
 Medicine

Cold Spraying & Thermal Spraying Processes

Composites (MMC, CMC)
 /Nanocomposites/Syntactic & Foams

Fuel Cells, Hydrogen Storage Technologies,
 Batteries, Super capacitors & Thermoelectric
 Materials

High & Ultra High Temperature Materials
 (Intermetallics, Super alloys & Refractory
 Metals)

High Entropy Alloys & Related Materials

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Integrated Computational Grain Boundary Engineering (ICGBE)

Interfaces / Grain Boundaries, & Structural Characterization Techniques

LPSO/MFS Materials: Microstructure & Kink Strengthening

Materials & Technologies for Fusion Reactors

Materials Performance/Functional & Structural Properties (Mechanical Behaviour, Damage, Texture/Anisotropy, Fatigue, Fracture, Environmentally Assisted Fracture, Failure Analysis & Applications of Neutrons in Engineering

Materials Under Extreme Environments & Characterization

Metallic Glasses/ Bulk Metallic Amorphous Materials (Prof Akihisa Inoue Honor Symposium)

Mg Alloys

Modelling & Simulation

Nanomaterials for Structural & Energy Applications

Neutron Scattering & X-Ray Studies of Advanced Materials

Smart/Intelligent Materials & Processes

Technologies & Nano /Micro Materials for Health Care Applications/ Medicine (Diagnostic & Therapeutic)

Thermomechanical Treatment of Reactor Materials (Fuel & Cladding)

Ti Alloys/Aerospace Structural Metallic Materials

Ultra Fine Grained Materials

Welding & Joining of Advanced and Specialty Materials/Friction Stir Welding and Processing

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