

Key words for Selection of Appropriate Symposium

1. Advanced Steels and Processing

Microstructure, Mechanical Properties, Phase Transformation, Alloy Design, Heat Treatment, Thermomechanical Processing, HSLA Steels

2. Advanced High Temperature Structural Materials

Heat Resistant Alloys, Ni and Co-Based Superalloys, Intermetallic Compounds, Structural Ceramics

3. Light Metals and Alloys

Al Alloys, Mg Alloys, Ti Alloys, Microstructure and Properties, Alloy and Processing Design, Wrought Products, Cast and Die Cast Products

4. Solidification, Deformation and Related Processing

Solidification, Plastic Deformation, Welding and Joining, Thermomechanical Processing, Advanced Processing for Enhanced Performance

5. Thin Films and Surface Engineering

Thin Films, Multilayers and Nanotextures, Functional Ceramics and Nanomaterials, Corrosion and Oxidation, Coating, Surface Modification and Treatment, Synthesis and Characterization

6. Biomaterials, Smart Materials and Structures

Biomaterials, Health Care Materials, Shape Memory/Superelasticity, Intelligent Materials

7. Materials Characterization and Evaluation

Advanced Electron Microscopy, 3D/4D Imaging, In-Situ Observation, Advanced Neutron and Synchrotron, Other Advanced Characterization Techniques

8. Composites and Hybrid Materials

Particulate Composites, Fiber-reinforced Composites, Laminates and Sandwich Panels, Foams and Porous Materials, Reinforcements

9. Bulk Metallic Glasses, Nanocrystalline Materials and Ultrafine-Grained Materials

Amorphous, Metallic Glasses and Quasi-Crystals, High Entropy Alloys, Ultrafine-Grained and Nanostructured Metals, Processes (including Severe Plastic Deformation), Nano/Microstructure and Properties

10. Modeling and Simulation of Microstructures and Processing

First Principle, Molecular Dynamics, Phase Field Modeling, Other Computational Modelling, Thermodynamics and Mechanical-Behavior of Interfaces, Mathematics and Data Science

11. Materials for Energy and Environment

Hydrogen Related Materials, Materials for Batteries and Fuel Cells, Photovoltaic Materials, Thermoelectric Materials, Nuclear Materials, Materials for Low-Carbon Energy and Green Energy, Recycling Technology,

12. Electronic and Magnetic Materials

Electronic Materials, Rare Earth Doped Electronic Materials, Optical Materials, Hard Magnetic Materials, Soft Magnetic Materials, Spintronics, Magnetic Functions and Properties

13. Additive Manufacturing

3D Printing, Rapid Prototyping, Electron Beam Melting (EBM), Selective Laser Melting (SLM), Electron Beam Processing, Laser Beam Processing, Direct Metal Deposition (DMD), Directed Energy Deposition (DED), Powder Metallurgy, Additive Layer Manufacturing