

TMS2017 Symposium and Session List
Updated February 1, 2017

2017 EPD Distinguished Lecture

Mon 02/27/2017 8:30 AM Keynote session

2017 Light Metals Keynote Session

Mon 02/27/2017 8:30 AM Global Aluminum Industry 2017: A Look Forward

2017 Symposium on Functional Nanomaterials: Emerging Nanomaterials and Nanotechnology

Mon 02/27/2017 8:30 AM Novel Nanomaterials and Techniques

Mon 02/27/2017 2:00 PM 2D Nanomaterials for Nanoelectronics

Tues 02/28/2017 8:30 AM Materials Design

Tues 02/28/2017 2:00 PM Nanomaterials for Nanoelectronics

Wed 03/01/2017 8:30 AM Nanomaterials for BT Applications

Wed 03/01/2017 8:30 AM Nanomaterials for ET Applications

Wed 03/01/2017 2:00 PM Nanomaterials Generals

Wed 03/01/2017 2:00 PM Low Dimensional Nanomaterials

8th International Symposium on High Temperature Metallurgical Processing

Mon 02/27/2017 9:20 AM Energy Efficient Clean Metallurgical Technology

Mon 02/27/2017 2:00 PM Simulation of High Temperature Process

Tues 02/28/2017 8:30 AM Fundamental Research of Metallurgical Process

Tues 02/28/2017 2:00 PM Alloys and Materials Preparation

Wed 03/01/2017 8:30 AM Extraction and Recovery of Metals

Wed 03/01/2017 2:00 PM Ironmaking and Steelmaking

Thur 03/02/2017 8:30 AM Treatment and Recycling of Slag/Wastes

Thur 03/02/2017 2:00 PM Utilization of Complex Ores

A Prospective Look at the MGI After Five Years

Mon 02/27/2017 3:25 PM Keynote Session

Acta Materialia Symposium

Mon 02/27/2017 3:15 PM Award Session

Additive Manufacturing of Metals: Establishing Location-Specific Processing-Microstructure-Property Relationships

Mon 02/27/2017 8:30 AM Materials, Methods, and Microstructures

Tues 02/28/2017 8:30 AM Local Microstructural Control and Graded Materials

Tues 02/28/2017 2:00 PM Advances in Methods, Characterization, and Modeling Tools

Wed 03/01/2017 8:30 AM Processing-Microstructure Relationships

Wed 03/01/2017 2:00 PM Defects and Fatigue

Thur 03/02/2017 8:30 AM Aerospace and Aluminum Alloys

Thur 03/02/2017 2:00 PM Microstructure and Microstructural Evolution

Additive Manufacturing: Building the Pathway towards Process and Material Qualification

Mon 02/27/2017 8:30 AM Novel Material Systems

Tues 02/28/2017 8:30 AM Beam Line Studies and In Situ Monitoring

Tues 02/28/2017 2:00 PM Process Qualification Part I

Wed 03/01/2017 8:30 AM Process Qualification Part II

Wed 03/01/2017 2:00 PM Novel Techniques

Thur 03/02/2017 8:30 AM Feedstock

Thur 03/02/2017 2:00 PM Defects and Mechanical Properties

Additive Manufacturing: Past, Present, and Future

Mon 02/27/2017 2:00 PM Joint Keynote Session

Advanced Characterization Techniques for Quantifying and Modeling Deformation Mechanisms

Mon 02/27/2017 8:30 AM Session I
Mon 02/27/2017 2:00 PM Session II
Tues 02/28/2017 8:30 AM Session III
Tues 02/28/2017 2:00 PM Session IV
Wed 03/01/2017 8:30 AM Session V
Wed 03/01/2017 2:00 PM Session VI
Thur 03/02/2017 8:30 AM Session VII
Thur 03/02/2017 2:00 PM Session VIII

Advanced High-Strength Steels

Mon 02/27/2017 8:30 AM Fundamentals of Steel Design
Mon 02/27/2017 2:00 PM Recent Developments in High-/Medium Mn Steels
Tues 02/28/2017 8:30 AM Planar Defects and Interfaces
Tues 02/28/2017 2:00 PM Impact of Solutes
Wed 03/01/2017 8:30 AM Nanostructures and Precipitates
Wed 03/01/2017 2:00 PM Microstructure Property Relationship
Thur 03/02/2017 8:30 AM Processing of Advanced Steels

Advanced Materials for Energy Conversion and Storage

Tues 02/28/2017 8:30 AM Mico & Macro Reliability
Tues 02/28/2017 2:00 PM Energy Storage I
Wed 03/01/2017 8:30 AM Energy Storage II
Wed 03/01/2017 2:00 PM Functional Materials I
Thur 03/02/2017 8:30 AM Functional Materials II
Thur 03/02/2017 2:00 PM Energy Storage III

Advanced Materials in Dental and Orthopedic Applications

Mon 02/27/2017 8:30 AM Session I
Mon 02/27/2017 2:00 PM Session II

Advanced Thermo-mechanical Characterization of Materials with Special Emphasis on In Situ Techniques

Mon 02/27/2017 8:30 AM In Situ Techniques I
Mon 02/27/2017 2:00 PM In Situ Techniques II
Tues 02/28/2017 8:30 AM In Situ Techniques III
Tues 02/28/2017 2:00 PM In Situ Techniques IV
Wed 03/01/2017 8:30 AM In Situ Techniques V

Advances in Environmental Technologies: Recycling and Sustainability Joint Session

Mon 02/27/2017 8:30 AM Advances in Environmental Technologies: Characterization and
Uncertainty
Advances in Environmental Technologies: New Areas of Value
Mon 02/27/2017 2:00 PM Recovery

Alloys and Compounds for Thermoelectric and Solar Cell Applications V

Mon 02/27/2017 8:30 AM Session I
Mon 02/27/2017 2:00 PM Session II
Tues 02/28/2017 8:30 AM Session III
Tues 02/28/2017 2:00 PM Session IV
Thur 03/02/2017 8:30 AM Session V

Alumina & Bauxite

Mon 02/27/2017	2:00 PM	Digestion and Calcination
Tues 02/28/2017	8:30 AM	Bauxite Residues Technology
Wed 03/01/2017	8:30 AM	Non-traditional Resources

Aluminum Alloys, Processing and Characterization

Mon 02/27/2017	2:00 PM	Alloy Development and Applications
Tues 02/28/2017	8:30 AM	Heat Treatment
Tues 02/28/2017	2:00 PM	Plasticity and Mechanical Behavior
Wed 03/01/2017	8:30 AM	Solidification and Casting
Wed 03/01/2017	2:00 PM	Characterization

Aluminum Reduction Technology

		Electrolyte and Fundamentals, Anode Effects and PFC
Mon 02/27/2017	2:00 PM	Emissions
Tues 02/28/2017	8:30 AM	Joint Session on Cell Lining Materials
Tues 02/28/2017	2:00 PM	Cell Voltage and Pot Control
Wed 03/01/2017	8:30 AM	Dry Scrubbing, Alumina Transport and Dissolution
Wed 03/01/2017	2:00 PM	Modelling and Cell Design, Potroom Operations
Thur 03/02/2017	8:30 AM	Technology Development

Applications of Process Engineering Principles in Materials Processing, Energy and Environmental Technologies: An EPD Symposium in Honor of Professor Ramana G. Reddy

Mon 02/27/2017	9:00 AM	Plenary Session
Mon 02/27/2017	2:00 PM	Electrometallurgy
Tues 02/28/2017	8:30 AM	Hydrometallurgy
Tues 02/28/2017	2:00 PM	Pyrometallurgy I
Wed 03/01/2017	8:30 AM	Pyrometallurgy II
Wed 03/01/2017	2:00 PM	Materials Processing and Plasma Processing
Thur 03/02/2017	8:30 AM	Energy Storage and Engineering Issues
Thur 03/02/2017	2:00 PM	Modeling and Simulation
Thur 03/02/2017	2:00 PM	Thermodynamics and Kinetics

Applications of Solidification Fundamentals

Mon 02/27/2017	8:30 AM	Characterization of Solidification Structures I
Mon 02/27/2017	2:00 PM	Characterization of Solidification Structures II
Tues 02/28/2017	8:30 AM	Phase Field Modeling
Tues 02/28/2017	2:00 PM	Simulation and Modeling of Solidification Behavior
Wed 03/01/2017	8:30 AM	Solidification of Iron and Steel

Biological Materials Science

Mon 02/27/2017	8:30 AM	Synthesis of Bio-inspired Composites
Mon 02/27/2017	2:00 PM	Biomaterials and Biomedical Applications
Tues 02/28/2017	8:30 AM	Bones, Teeth and Dental Materials
Tues 02/28/2017	2:00 PM	Structural Biological Materials I
Wed 03/01/2017	8:30 AM	Structural Biological Materials II
Wed 03/01/2017	2:00 PM	Functional Biological Materials

Bio-Nano Interfaces and Engineering Applications

Mon 02/27/2017	8:30 AM	Bio-Nano Interfaces: Fundamentals I
Mon 02/27/2017	2:00 PM	Bio-Nano Interfaces: Biomedical Applications
Tues 02/28/2017	8:30 AM	Bio-Nano Interfaces: Fundamentals II
Tues 02/28/2017	2:00 PM	Bio-Nano Interfaces: Engineering Applications

Wed 03/01/2017 8:30 AM Functional BionanoInterfaces

Bulk Metallic Glasses XIV

Mon 02/27/2017 8:30 AM Alloy Development and Application I
Mon 02/27/2017 2:00 PM Alloy Development and Application II
Tues 02/28/2017 8:30 AM Structures and Mechanical Properties I
Tues 02/28/2017 2:00 PM Structures and Mechanical Properties II
Wed 03/01/2017 8:30 AM Structures and Mechanical Properties III
Wed 03/01/2017 2:00 PM Structures and Characterization
Thur 03/02/2017 8:30 AM Structures and Modeling I
Thur 03/02/2017 8:30 AM Mechanical and Other Properties I
Thur 03/02/2017 2:00 PM Structures and Modeling II
Thur 03/02/2017 2:00 PM Mechanical and Other Properties II

Cast Shop Technology

Mon 02/27/2017 2:00 PM Foundry and Shape Casting
Mon 02/27/2017 2:00 PM Continuous Strip Casting
Tues 02/28/2017 8:30 AM Melting, Energy, and Dross
Wed 03/01/2017 8:30 AM DC Casting and Macrosegregation
Wed 03/01/2017 2:00 PM Grain Refining and Solidification
Thur 03/02/2017 8:30 AM Casthouse Management and Automation

Cast Shop Technology: Recycling and Sustainability Joint Session

Tues 02/28/2017 2:00 PM Cast Shop/Recycling Joint Session

Ceramic Materials for Nuclear Energy Research and Applications

Mon 02/27/2017 8:30 AM Microstructural Evolution under Irradiation in Oxide Ceramics
Fuel Performance Modeling and Fundamental Defect Science in
Mon 02/27/2017 2:00 PM Ceramics
Fundamental Defect Science in Ceramics and Thermal
Tues 02/28/2017 8:30 AM Transport
Tues 02/28/2017 2:00 PM Advanced Sintering, Characterization, and Measurement
Wed 03/01/2017 8:30 AM Non-oxide Ceramics for Nuclear Applications I
Wed 03/01/2017 2:00 PM Non-oxide Ceramics for Nuclear Applications II

Characterization of Materials through High Resolution Coherent Imaging

Mon 02/27/2017 8:30 AM Coherent Imaging I
Mon 02/27/2017 2:00 PM Coherent Imaging II
Tues 02/28/2017 8:30 AM Coherent Imaging and Phase Contrast I
Tues 02/28/2017 2:00 PM Phase Contrast Imaging II

Characterization of Minerals, Metals, and Materials

Mon 02/27/2017 8:30 AM Clays and Ceramics
Mon 02/27/2017 8:30 AM Soft Materials

Mon 02/27/2017 2:00 PM Electronic, Magnetic, Environmental, and Advanced Materials
Mon 02/27/2017 2:00 PM Nano Materials
Tues 02/28/2017 8:30 AM Alloys
Tues 02/28/2017 2:00 PM Powders and Foams
Wed 03/01/2017 8:30 AM Minerals
Wed 03/01/2017 2:00 PM Ferrous Metals
Wed 03/01/2017 2:00 PM Material Processing and Corrosion

Thur 03/02/2017	8:30 AM	Method Development
Thur 03/02/2017	8:30 AM	Composites
Thur 03/02/2017	8:30 AM	Welding and Solidification
Thur 03/02/2017	2:00 PM	Non-Ferrous Metals
Thur 03/02/2017	2:00 PM	Materials Extraction

Computational Approaches to Materials for Energy Applications

Wed 03/01/2017	8:30 AM	Session I
Wed 03/01/2017	2:00 PM	Session II

Computational Materials Discovery and Optimization – From Bulk to Materials Interfaces and 2D Materials

Mon 02/27/2017	8:30 AM	Materials Informatics Approaches
Mon 02/27/2017	2:00 PM	2D Materials and Materials Epitaxy
Tues 02/28/2017	8:30 AM	Materials Surfaces, Interfaces, and Electrochemistry
Tues 02/28/2017	2:00 PM	Electronic, Magnetic, and Optical Properties
Wed 03/01/2017	8:30 AM	Mechanical Properties
Wed 03/01/2017	2:00 PM	Bulk Material Structures and Properties
Thur 03/02/2017	8:30 AM	Kinetics and Processing

Computational Methods and Experimental Approaches for Uncertainty Quantification and Propagation, Model Validation, and Stochastic Predictions

		Mathematical Tools for Uncertainty Quantification and
Wed 03/01/2017	8:30 AM	Propagation
Wed 03/01/2017	2:00 PM	Uncertainty Quantification in Density Functional Theory (DFT)
		Uncertainty Quantification and Model Validation for Classical
Thur 03/02/2017	8:30 AM	Force Fields
		Uncertainty Quantification for Multiscale and Continuum
Thur 03/02/2017	2:00 PM	Methods (FEM, Crystal Plasticity, etc.)

Computational Thermodynamics and Kinetics

Mon 02/27/2017	8:30 AM	Microstructure Evolution I
Mon 02/27/2017	2:00 PM	Thermodynamics and Alloy Design
Tues 02/28/2017	8:30 AM	Grain Boundaries and Defects I
Tues 02/28/2017	2:00 PM	Diffusion and Kinetics I
Wed 03/01/2017	8:30 AM	Materials Physics
Wed 03/01/2017	2:00 PM	Microstructure Evolution II, Thermodynamics and Alloys II
Thur 03/02/2017	8:30 AM	Grain Boundaries and Defects II
Thur 03/02/2017	2:00 PM	Diffusion and Kinetics II

Defects and Properties of Cast Metals

Mon 02/27/2017	8:30 AM	Defects I - Molten Metal and Inclusions
Mon 02/27/2017	2:00 PM	Defects II & Properties I
Tues 02/28/2017	8:30 AM	Properties II & Hot Tearing
Tues 02/28/2017	2:00 PM	Porosity
Wed 03/01/2017	8:30 AM	Cast Iron & Steel
Wed 03/01/2017	2:00 PM	Continuous and DC Casting

Deformation and Transitions at Interfaces

Mon 02/27/2017	8:30 AM	Grain Boundary Structure
Mon 02/27/2017	2:00 PM	Defects/Grain Boundary Interactions

		Meso/Microstructural Scale Mechanical Behavior of
Tues 02/28/2017	8:30 AM	Polycrystals I
Tues 02/28/2017	2:00 PM	Fracture and Decohesion
		Meso/Microstructural Scale Mechanical Behavior of
Wed 03/01/2017	8:30 AM	Polycrystals II
Wed 03/01/2017	2:00 PM	Interfaces in Materials
		Grain Boundary Interactions with Dislocation and Twins in
Thur 03/02/2017	8:30 AM	Hexagonal Metals
Thur 03/02/2017	2:00 PM	Deformation and Grain Growth in Polycrystalline Materials
Deriving Value from Challenging Waste Materials: Recycling and Sustainability Joint Session		
Wed 03/01/2017	2:00 PM	Deriving Value from Challenging Waste I
Thur 03/02/2017	8:30 AM	Deriving Value from Challenging Waste II
Thur 03/02/2017	2:00 PM	Deriving Value from Challenging Waste III
Electrode Technology		
Mon 02/27/2017	2:00 PM	Anode Characterization
Tues 02/28/2017	2:00 PM	Electrodes: Raw Materials and Anode Quality
Wed 03/01/2017	8:30 AM	Baking Furnace/Electrode Design
Wed 03/01/2017	2:00 PM	Operation/Practice
Emerging Interconnect and Pb-free Materials for Advanced Packaging Technology		
Mon 02/27/2017	8:30 AM	Cu- and Ag- related Bonding Materials
Mon 02/27/2017	2:00 PM	Mechanical Properties of Pb-free Materials
		Electromigration, Thermomigration and Electrochemical
Tues 02/28/2017	8:30 AM	Behaviors
Tues 02/28/2017	2:00 PM	Alloying and Doping of Pb-free Materials
		Intermetallic Compound and Microstructural Evolution of Pb-
Wed 03/01/2017	8:30 AM	free Materials
Wed 03/01/2017	2:00 PM	Tin Whisker and Wettability
Thur 03/02/2017	8:30 AM	Transient Liquid Phase Bonding and Nanosolder
Energy Materials 2017: Energy and Environmental Issues in Materials Manufacturing and Processing		
Tues 02/28/2017	8:30 AM	Opportunities in the Steel Industry
		Opportunities in Aluminum Production, Waste Heat and Water
Tues 02/28/2017	2:00 PM	Recovery
		Energy and Environmental Issues in Materials Manufacturing
Wed 03/01/2017	8:30 AM	and Processing III
Energy Materials 2017: Materials for Coal-Based Power		
Tues 02/28/2017	2:00 PM	Session I
Wed 03/01/2017	8:30 AM	Session II
Wed 03/01/2017	2:00 PM	Session III
Thur 03/02/2017	8:30 AM	Session IV
Thur 03/02/2017	2:00 PM	Session V
Energy Materials 2017: Materials for Energy Conversion with Emphasis on SOFC		
Mon 02/27/2017	8:30 AM	Session I
Mon 02/27/2017	2:00 PM	Session II
Tues 02/28/2017	8:30 AM	Session III
Energy Materials 2017: Materials for Gas Turbines		
Mon 02/27/2017	8:30 AM	Coatings

Mon 02/27/2017 2:00 PM Hot Corrosion and New Materials
 Tues 02/28/2017 8:30 AM Creep and Failure
 Tues 02/28/2017 2:00 PM Microstructure and Processing

Energy Materials 2017: Materials for Nuclear Energy

Wed 03/01/2017 8:30 AM Materials for Nuclear Applications I
 Wed 03/01/2017 2:00 PM Materials for Nuclear Applications II
 Thur 03/02/2017 8:30 AM Environmental Effects
 Thur 03/02/2017 2:00 PM Accident Tolerant Fuels & Irradiation Effects

Energy Materials 2017: Materials for Oil and Gas and AMREE Oil & Gas III

Mon 02/27/2017 8:30 AM Harnessing Bulk Nanostructured Materials for Energy I
 Mon 02/27/2017 2:00 PM Harnessing Bulk Nanostructured Materials for Energy II
 Technological Innovation for Efficiency Enhancements in
 Tues 02/28/2017 8:30 AM Energy
 Tues 02/28/2017 2:00 PM Hydrogen Effects on Materials in Energy
 Materials, Interfaces and Innovations for Hostile Oil and Gas /
 Wed 03/01/2017 8:30 AM Energy I
 Materials, Interfaces and Innovations for Hostile Oil and Gas /
 Wed 03/01/2017 2:00 PM Energy II

Energy Materials 2017: Materials in Clean Power

Mon 02/27/2017 8:30 AM Session I
 Mon 02/27/2017 2:00 PM Session II

Energy Technologies

Wed 03/01/2017 8:30 AM Energy Technologies
 Wed 03/01/2017 2:00 PM Novel Technologies
 Thur 03/02/2017 8:30 AM CO2 Management and Sustainable Metallurgical Processes
 Thur 03/02/2017 2:00 PM Heat Recovery

Environmentally Assisted Cracking: Theory and Practice

Mon 02/27/2017 8:30 AM Hydrogen Embrittlement I
 Mon 02/27/2017 2:00 PM Stress Corrosion Cracking I
 Tues 02/28/2017 8:30 AM Hydrogen Embrittlement II
 Tues 02/28/2017 2:00 PM Stress Corrosion Cracking II
 Wed 03/01/2017 8:30 AM Environmentally Assisted Embrittlement and Cracking I
 Wed 03/01/2017 2:00 PM Environmentally Assisted Embrittlement and Cracking II

Fatigue in Materials: Fundamentals, Multiscale Modeling and Prevention

Mon 02/27/2017 8:30 AM Data-Driven Investigations of Fatigue
 Mon 02/27/2017 2:00 PM Modeling Approaches to Improve Fatigue Predictions
 Relationships Among Processing, Microstructure, and Fatigue
 Tues 02/28/2017 8:30 AM Properties
 Fatigue Characterization Using Advanced Experimental
 Tues 02/28/2017 2:00 PM Methods in 2D and 3D
 Wed 03/01/2017 8:30 AM Creep, Fatigue, and Environmental Interactions
 Wed 03/01/2017 2:00 PM Fatigue Behaviors of Engineering Alloys

Fracture Properties and Residual Stresses in Small Dimensions

Wed 03/01/2017 8:30 AM Fracture Mechanisms and Modeling
 Wed 03/01/2017 2:00 PM In Situ Fracture Testing Methodologies
 Thur 03/02/2017 8:30 AM Fracture Testing Methodologies
 Thur 03/02/2017 2:00 PM Interface Dominated Fracture

Friction Stir Welding and Processing IX

Mon 02/27/2017	8:30 AM	High Temperature Applications I
Tues 02/28/2017	8:30 AM	High Temperature Applications II
Tues 02/28/2017	2:00 PM	Derivative Technologies
Wed 03/01/2017	8:30 AM	Lightweight Applications
Wed 03/01/2017	2:00 PM	Dissimilar Applications
Thur 03/02/2017	8:30 AM	Industrial Applications
Thur 03/02/2017	2:00 PM	Control and Simulation

Frontiers in Materials Science, Engineering, and Technology: An FMD Symposium in Honor of Sungho Jin

		Process-Property-Performance Correlations: Metals, Alloys and
Mon 02/27/2017	8:30 AM	Ferroelectrics
		Process-Property-Performance Correlations: Q-D, 2-D and 3-D
Mon 02/27/2017	2:00 PM	Materials & Structures
		Structure-Property-Performance Correlations: Carbon
Tues 02/28/2017	8:30 AM	Nanotubes, Boron Nitride and Biomaterials
		Process-Property-Performance Correlations: Titanates,
Tues 02/28/2017	2:00 PM	Transition Metal Oxides, Chalcogenides & Beyond
		Process-Property-Performance Correlations: Ferrites, Alloys,
Wed 03/01/2017	8:30 AM	Devices & Systems
		Process-Property-Performance Correlations: Devices, Circuits,
Wed 03/01/2017	2:00 PM	Lead Free Solder & Packaging

Fundamental Aspects and Modeling Powder Metal Synthesis and Processing

Mon 02/27/2017	8:30 AM	Titanium and Advanced Materials
Mon 02/27/2017	2:00 PM	Powder Atomization and Synthesis
Tues 02/28/2017	8:30 AM	Field-assisted Processing
Tues 02/28/2017	2:00 PM	Fundamentals of Powder Consolidation

Gamma (FCC)/Gamma-Prime (γ') Co-Based Superalloys II

Tues 02/28/2017	8:30 AM	Microstructural Evolution
Tues 02/28/2017	2:00 PM	Alloy Development
Wed 03/01/2017	8:30 AM	Processing and Environmental Resistance
Wed 03/01/2017	2:00 PM	Mechanical Behavior I
Thur 03/02/2017	8:30 AM	Mechanical Behavior II

GAT-2017 (Gamma Alloys Technology - 2017)

Mon 02/27/2017	8:30 AM	Keynote and Aero-Engine Blades Applications
Mon 02/27/2017	2:00 PM	Surface Protection with Panel Discussion, and Posters Briefing Other Applications and Materials-Processes Development
Tues 02/28/2017	8:30 AM	Efforts
Tues 02/28/2017	2:00 PM	Microstructure Evolution, Simulation and Prediction
Wed 03/01/2017	8:30 AM	Processing-Microstructure-Property Relationships Microstructure Types, Boundary Effects, and Directional
Wed 03/01/2017	2:00 PM	Solidification
Thur 03/02/2017	8:30 AM	Novel Processing - Additive Manufacturing, SPS and Ductility
Thur 03/02/2017	2:00 PM	Technologically Critical Areas - Discussions

High Entropy Alloys V

Tues 02/28/2017	8:30 AM	Alloy Development and Applications I
Tues 02/28/2017	2:00 PM	Alloy Development and Applications II
Wed 03/01/2017	8:30 AM	Structures and Mechanical Properties I
Wed 03/01/2017	2:00 PM	Mechanical and Other Properties
Wed 03/01/2017	2:00 PM	Structures and Mechanical Properties II
Thur 03/02/2017	8:30 AM	Structures and Characterization
Thur 03/02/2017	8:30 AM	Structures and Modeling I
Thur 03/02/2017	2:00 PM	Structures and Modeling II
Thur 03/02/2017	2:00 PM	Thermal and Other Properties

High Temperature Electrochemistry III

Wed 03/01/2017	8:30 AM	Nuclear Materials
Wed 03/01/2017	2:00 PM	Materials Electrochemistry I
Thur 03/02/2017	8:30 AM	Materials Electrochemistry II

Hume-Rothery Award Symposium: Alloy Phase Chemistry at the Atomic Level - Opportunities and Challenges

Mon 02/27/2017	8:30 AM	Session I
Mon 02/27/2017	2:00 PM	Session II
Tues 02/28/2017	8:30 AM	Session III
Tues 02/28/2017	2:00 PM	Session IV
Wed 03/01/2017	8:30 AM	Session V

ICME Gap Analysis: Structural Materials for Automotive Applications (Abstracts by invitation only)

Mon 02/27/2017	8:30 AM	High-Temperature Alloys for Automotive Applications
Mon 02/27/2017	2:00 PM	Light-weight Materials for Automotive Applications

In-situ Methods for Unraveling Structure-Property Relationships in Light Metals

Tues 02/28/2017	8:30 AM	Imaging and Acoustic Emission
Tues 02/28/2017	2:00 PM	Diffraction and Other Novel Methods

Interface-Mediated Properties of Nanostructured Materials

Mon 02/27/2017	8:30 AM	Nanolaminates and Nanotwinned Materials I
Mon 02/27/2017	2:00 PM	Nanolaminates and Nanotwinned Materials II
Tues 02/28/2017	8:30 AM	Hierarchical Nanostructured Materials
Tues 02/28/2017	2:00 PM	Measurement and Modeling of Nanoscale Deformation

Magnesium Technology 2017

Mon 02/27/2017	8:30 AM	Keynote Session
Tues 02/28/2017	8:30 AM	Alloy Development
Tues 02/28/2017	2:00 PM	Solidification and Processing I Mechanical Behavior: Twinning, Plasticity, Texture, and Fatigue
Wed 03/01/2017	8:30 AM	I
Wed 03/01/2017	8:30 AM	Solidification and Processing II Solidification and Processing III and Magnesium-Rare Earth
Wed 03/01/2017	2:00 PM	Alloys I Mechanical Behavior: Twinning, Plasticity, Texture, and Fatigue
Wed 03/01/2017	2:00 PM	II
Thur 03/02/2017	8:30 AM	Corrosion
Thur 03/02/2017	8:30 AM	Magnesium-Rare Earth Alloys II Mechanical Behavior: Twinning, Plasticity, Texture, and Fatigue
Thur 03/02/2017	2:00 PM	III

Materials and Fuels for the Current and Advanced Nuclear Reactors VI

Mon 02/27/2017	8:30 AM	Fuels I
Mon 02/27/2017	2:00 PM	Fuels II
Tues 02/28/2017	8:30 AM	Fuels III
Tues 02/28/2017	2:00 PM	Structural Materials I
Wed 03/01/2017	8:30 AM	Structural Materials II
Wed 03/01/2017	2:00 PM	Structural Materials III
Thur 03/02/2017	8:30 AM	Structural Materials IV
Thur 03/02/2017	2:00 PM	Modeling

Materials by Design: An MPMD Symposium Honoring Greg Olson on the Occasion of His 70th Birthday

Tues 02/28/2017	8:30 AM	Materials Design I
Tues 02/28/2017	2:00 PM	Materials Design II

Materials Engineering of Soft Magnets for Power and Energy Applications

Wed 03/01/2017	8:30 AM	Nanocomposite Soft Magnetic Alloys for Power Electronics, Transformers, and Inductors
Wed 03/01/2017	2:00 PM	Ferrites, Soft Magnetic Composites, and Bulk Soft Magnet Materials
Thur 03/02/2017	8:30 AM	Advanced Soft Magnetic Material Characterization and Development Techniques
Thur 03/02/2017	2:00 PM	Advanced Silicon Steels and Soft Magnetic Alloys for Rotating Electrical Machinery

Materials for High Temperature Applications: Next Generation Superalloys and Beyond

Mon 02/27/2017	8:30 AM	Next Generation Superalloys I
Mon 02/27/2017	2:00 PM	Next Generation Superalloys II
Tues 02/28/2017	8:30 AM	Emerging Materials and Refractory Metals
Tues 02/28/2017	2:00 PM	Refractory Metals
Wed 03/01/2017	8:30 AM	Intermetallics and Additive Manufacturing of Superalloys
Wed 03/01/2017	2:00 PM	Coatings and Environmental Resistance
Thur 03/02/2017	8:30 AM	Ir Alloys and Next Generation Superalloys

Materials Processing Fundamentals

Wed 03/01/2017	8:30 AM	Steelmaking
Wed 03/01/2017	2:00 PM	Metal Extraction
Thur 03/02/2017	8:30 AM	Solid-state Processing
Thur 03/02/2017	2:00 PM	Molten & Gas State Processing

Materials Science for High-Performance Permanent Magnets

Mon 02/27/2017	2:00 PM	Nd-Fe-B: Microstructure and Properties
Tues 02/28/2017	8:30 AM	Coercivity Mechanism
Tues 02/28/2017	2:00 PM	Magnetization Process / Microstructural Stability
Wed 03/01/2017	8:30 AM	Nd-Fe-B Processing / New RE-lean Hard Magnets
Thur 03/02/2017	8:30 AM	Search for New Hard Magnets / Non-Rare Earth Magnets
Thur 03/02/2017	2:00 PM	Synthesis and Processing

Mechanical and Creep Behavior of Advanced Materials: A SMD Symposium Honoring Prof. K. Linga Murty

		Introductory Session: Unique Mechanical Behavior and Technologies
Mon 02/27/2017	8:30 AM	
Mon 02/27/2017	2:00 PM	High Temperature Creep of Structural Materials
Tues 02/28/2017	8:30 AM	Crystal Defects: Experiments and Modeling/Simulation

Tues 02/28/2017	2:00 PM	Advanced Materials and Processing
Wed 03/01/2017	8:30 AM	Materials for Nuclear Environments Creep, Creep-Fatigue and Related High Temperature
Wed 03/01/2017	2:00 PM	Mechanical Behavior
Thur 03/02/2017	8:30 AM	Miscellaneous Structure-property Correlations Mechanical Behavior of Titanium and Zirconium Containing
Thur 03/02/2017	2:00 PM	Alloys

Mechanical Behavior of Nanostructured Materials

Mon 02/27/2017	8:30 AM	Mechanical Behavior of Bulk Nanostructured Materials I
Mon 02/27/2017	2:00 PM	Mechanical Milling
Tues 02/28/2017	8:30 AM	Mechanical Behavior of Bulk Nanostructured Materials II
Tues 02/28/2017	2:00 PM	Metallic Glass and High Entropy Alloys
Wed 03/01/2017	8:30 AM	Mechanical Properties of Thin Films, Low Dimensional Material Modeling and Thermal Stability, Radiation, Corrosion of
Wed 03/01/2017	2:00 PM	Nanocrystals

Microstructural Processes in Irradiated Materials

Mon 02/27/2017	8:30 AM	Advanced Characterization and Techniques
Mon 02/27/2017	2:00 PM	Reactor Pressure Vessel Steels
Tues 02/28/2017	8:30 AM	Ferritic and Ferritic-Martensitic Alloys I
Tues 02/28/2017	2:00 PM	Ferritic and Ferritic-Martensitic Alloys II
Wed 03/01/2017	8:30 AM	Austenitic Alloys
Wed 03/01/2017	2:00 PM	Fusion Materials and High-Temperature Alloys
Thur 03/02/2017	8:30 AM	Zr-Alloys and Advanced Modeling
Thur 03/02/2017	2:00 PM	Nuclear Fuels and Ceramics

Multiscale Architected Materials (MAM II): Tailoring Mechanical Incompatibility for Superior Properties

Mon 02/27/2017	8:30 AM	Gradient Materials
Mon 02/27/2017	2:00 PM	Heterogeneous Materials
Tues 02/28/2017	8:30 AM	Heterogeneous and Gradient Materials
Tues 02/28/2017	2:00 PM	Laminated Materials
Wed 03/01/2017	8:30 AM	Materials with Architected Structures
Wed 03/01/2017	2:00 PM	Novel and Complex Materials I
Thur 03/02/2017	8:30 AM	Novel and Complex Materials II

Nanocomposites IV: Nanoscience for Renewable Energy

Mon 02/27/2017	8:30 AM	NanoScience Part I
Mon 02/27/2017	2:00 PM	NanoScience Part II

Nanostructured Materials for Nuclear Applications II

Mon 02/27/2017	8:30 AM	Session I
Mon 02/27/2017	2:00 PM	Session II
Tues 02/28/2017	8:30 AM	Session III
Tues 02/28/2017	2:00 PM	Session IV

Nanostructured Surfaces for Improved Functional Properties

Wed 03/01/2017	8:30 AM	Session I
Wed 03/01/2017	2:00 PM	Session II

Pan American Materials Congress Plenary

Tues 02/28/2017	8:30 AM	Session I
-----------------	---------	-----------

Tues 02/28/2017 2:00 PM Session II
Wed 03/01/2017 8:30 AM Session III
Wed 03/01/2017 2:00 PM Session IV

Pan American Materials Congress: Advanced Biomaterials

Wed 03/01/2017 10:10 AM Bioinspired, Drug Delivery and Biomimetic Materials
Wed 03/01/2017 3:40 PM Scaffolds and Nanobiomaterials
Thur 03/02/2017 8:30 AM Antibacterial and Nanostructured Materials
Thur 03/02/2017 2:00 PM Implants, Bone Graft and Drug Delivery

Pan American Materials Congress: Advanced Manufacturing

Tues 02/28/2017 10:20 AM Materials Processing
Tues 02/28/2017 3:40 PM Metals and Alloys
Wed 03/01/2017 10:10 AM Polymer, Composites, and Metals

Pan American Materials Congress: Materials for Green Energy

Tues 02/28/2017 10:20 AM Materials for Green Energy
Tues 02/28/2017 3:40 PM Environmental Assessment of Green Energy
Wed 03/01/2017 10:10 AM Battery Technologies for Green Energy

Pan American Materials Congress: Materials for Infrastructure

Wed 03/01/2017 3:40 PM Session I
Thur 03/02/2017 2:00 PM Session II

Pan American Materials Congress: Materials for Oil and Gas Industry

Wed 03/01/2017 3:40 PM Next Generation of Metallic and Non-metallic Materials Design,
Manufacture and Processing
Welding Technology, Corrosion Protection, Non-Destructive
Thur 03/02/2017 8:30 AM Evaluation, and Structural Integrity

Pan American Materials Congress: Materials for Transportation and Lightweighting

Tues 02/28/2017 10:20 AM Processing-Structure-Property Relationships I
Tues 02/28/2017 3:40 PM Structure-Property relationships II
Wed 03/01/2017 3:40 PM Aluminum Processing
Thur 03/02/2017 8:30 AM Composite Materials I
Thur 03/02/2017 2:00 PM Composite Materials II
Thur 03/02/2017 2:00 PM Joining

Pan American Materials Congress: Minerals Extraction and Processing

Wed 03/01/2017 3:40 PM Waste Treatment and Processing
Thur 03/02/2017 8:30 AM Hydrometallurgical Processing
Thur 03/02/2017 2:00 PM Ore Processing

Pan American Materials Congress: Nanocrystalline and Ultra-fine Grain Materials and Bulk Metallic Glasses

SPD Processing, Mechanical Properties of Nanocrystalline
Tues 02/28/2017 10:20 AM Materials, BMG
Tues 02/28/2017 3:40 PM Mechanical Properties of Structural Materials Processed by SPD
Wed 03/01/2017 10:10 AM Microstructure Evolution
Superplasticity, Wear, Corrosion, Magnetic, Electric and
Wed 03/01/2017 3:40 PM Functional Properties
Thur 03/02/2017 8:30 AM Additional Topics in SPD Processing and Mechanical Properties
Thur 03/02/2017 2:00 PM Student Session

Thur 03/02/2017 2:00 PM Phase, Interface and Crystalline Defects Evolution during SPD
Pan American Materials Congress: Steels

Tues 02/28/2017 10:20 AM Properties and Performance

Tues 02/28/2017 3:40 PM Steelmaking & Solidification

Wed 03/01/2017 10:10 AM Thermomechanical Processing and Properties

Phase Stability, Phase Transformations, and Reactive Phase Formation in Electronic Materials XVI

Mon 02/27/2017 8:30 AM Phase Stability on Energy Materials

Mon 02/27/2017 2:00 PM Phase Stability & Phase Equilibria

Tues 02/28/2017 8:30 AM Electromigration

Tues 02/28/2017 2:00 PM Electronic Interconnection

Wed 03/01/2017 8:30 AM Electrochemistry & Pb-free Soldering

Wed 03/01/2017 2:00 PM Pb-free Soldering & UBM

Phase Transformations and Microstructural Evolution

Mon 02/27/2017 8:30 AM Steels & General

Mon 02/27/2017 2:00 PM Ti & Zr, and Lightweight Metals Al & Mg

Tues 02/28/2017 8:30 AM Shape Memory Alloys, and Lightweight Metals Al & Mg

Tues 02/28/2017 2:00 PM Ti & Zr, and Steels

Wed 03/01/2017 8:30 AM Shape Memory Alloys, and General

Wed 03/01/2017 2:00 PM Ti & Zr

Thur 03/02/2017 8:30 AM Steels and Shape Memory, and General

Pioneers in Additive Manufacturing

Tues 02/28/2017 8:30 AM Session I

Tues 02/28/2017 2:00 PM Session II

Rare Metal Extraction & Processing

Mon 02/27/2017 2:00 PM Rare Earth Elements I

Tues 02/28/2017 8:30 AM Rare Earth Elements II and Platinum Group Metals

Tues 02/28/2017 2:00 PM Base and Rare Metals

Recent Developments in Biological, Structural and Functional Thin Films and Coatings

Mon 02/27/2017 8:30 AM Biomaterials and Functional Films

Mon 02/27/2017 2:00 PM Multiscale Modeling of Thin Films

Tues 02/28/2017 8:30 AM Functional Surfaces and Thin Films I

Tues 02/28/2017 2:00 PM Functional Surfaces and Thin Films II

Solar Cell Silicon

Wed 03/01/2017 2:00 PM Silicon Production, Crystallization, and Properties

Thur 03/02/2017 8:30 AM Silicon Impurity Removal and Refining

Thur 03/02/2017 2:00 PM Silicon Photovoltaics

Solid State Precipitation

Wed 03/01/2017 2:00 PM Session I

Thur 03/02/2017 8:30 AM Session II

Thur 03/02/2017 2:00 PM Session III

Student-Run Symposium: Building Bridges – Connecting Academic and Industry Research

Mon 02/27/2017 8:30 AM Session I

Mon 02/27/2017 2:00 PM Session II

The John Cahn Memorial Symposium

Wed 03/01/2017 8:30 AM Session I

Wed 03/01/2017 2:00 PM Session II

The Science of Melt Refining: An LMD Symposium in Honor of Christian Simensen and Thorvald Abel Engh

Tues 02/28/2017 8:30 AM TAE/CJS Honorary Symposium I: Inclusion Removal

Tues 02/28/2017 2:00 PM TAE/CJS II Degassing and Oxidation