



Conference Tools for Materials Science & Technology 2020

Login Register as a New User Help Submit An Abstract Propose A Symposium Presenter/Author Tools Organizer/Editor Tools

Session Sheets

▼12th International Symposium on Green and Sustainable Technologies for Materials Manuf

```
Mon 11/02/202008:00 AMSustainable Manufacturing of Ceramics IMon 11/02/202002:00 PMSustainable Materials from Agriculture based PrecursorsTue 11/03/202002:00 PMSustainable Manufacturing of Ceramics IITue 11/03/202004:45 PMPoster SessionWed 11/04/202008:00 AMSustainable Manufacturing from Metal and Ceramics based Precursor Materials
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▼2020 Undergraduate Student Poster Contest

Tue 11/03/2020 12:00 PM 2020 Undergraduate Student Poster Contest

ACerS-ECerS Joint Symposium - Emerging Ceramic Technologies; Challenges and Future

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Mon 11/02/202008:00 AMEmerging Ceramic Technologies IMon 11/02/202002:00 PMEmerging Ceramic Technologies II
```

▼ACerS Frontiers of Science and Society - Rustum Roy Lecture

Tue 11/03/2020 01:00 PM ACerS Frontiers of Science and Society - Rustum Roy Lecture

▼ACerS Richard M. Fulrath Award Session

Mon 11/02/2020 02:00 PM ACerS Richard M. Fulrath Award Session

▼ACerS/EPDC: Arthur L. Friedberg Ceramic Engineering Tutorial and Lecture

Mon 11/02/2020 09:00 AM ACerS/EPDC: Arthur L. Friedberg Ceramic Engineering Tutorial and Lecture

*Additive Manufacturing Modeling and Simulation: AM Materials, Processes, and Mechanic

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Mon 11/02/202008:00 AMAdditive Manufacturing Modeling and Simulation - Microstructure EvolutionMon 11/02/202002:00 PMAdditive Manufacturing Modeling and Simulation - Residual Stress, Fatigue Property, anTue 11/03/202002:00 PMAdditive Manufacturing Modeling and Simulation - Machine Learning, Design and OptimiTue 11/03/202004:45 PMPoster SessionWed 11/04/202008:00 AMAdditive Manufacturing Modeling and Simulation - Online Process Monitoring, Non-mech
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▼Additive Manufacturing of Ceramic-based Materials: Process Development, Materials, Proc

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Mon 11/02/2020 08:00 AM Additive Manufacturing of Ceramic-based Materials Process Development, Materials, Process Development,
```

Additive Manufacturing of Ceramics and Ceramic Composites: Materials Properties, ProceWed 11/04/2020 08:00 AM Additive Manufacturing of Ceramics and Ceramic Composites: Materials Properties, Proc

Additive Manufacturing of Metals: Complex Microstructures and Architecture Design

```
    Tue 11/03/2020
    02:00 PM
    Microstructure and Mechanics in Metal AM

    Wed 11/04/2020
    08:00 AM
    Microstructure Evolution and Control

    Wed 11/04/2020
    02:00 PM
    Microstructure Evolution in Structural Metals

    Thu 11/05/2020
    08:00 AM
    Microstructure Characterization and Novel Materials
```

▼Additive Manufacturing: Alloy Design to Develop New Feedstock Materials

```
      Wed 11/04/2020
      08:00 AM
      Session I

      Wed 11/04/2020
      02:00 PM
      Session II

      Thu 11/05/2020
      08:00 AM
      Session III
```

Additive Manufacturing: Equipment, Instrumentation and Measurement

```
      Mon 11/02/2020
      08:00 AM
      Session I

      Mon 11/02/2020
      02:00 PM
      Session II

      Tue 11/03/2020
      02:00 PM
      Session III
```

▼Additive Manufacturing: Materials, Alloy Development, Microstructure and Properties

```
Mon 11/02/202008:00 AMAdditive Manufacturing of Metallic Materials (Cu, Co, Mo, and Ni)Mon 11/02/202002:00 PMAdditive Manufacturing Process Control and OptimizationTue 11/03/202002:00 PMAdditive Manufacturing of 316LWed 11/04/202008:00 AMAdditive Manufacturing of Al- and Ti-based AlloysThu 11/05/202008:00 AMAdditive Manufacturing of Fe-based AlloysThu 11/05/202008:00 AMAdditive Manufacturing of Ni-based AlloysThu 11/05/202008:00 AMAdditive Manufacturing of Other Miscellaneous Materials
```

Additive Manufacturing: Mechanical Behavior of Lattice Structures Produced via AM

```
Mon 11/02/202008:00 AMAdditive Manufacturing of Lattices - Session IMon 11/02/202002:00 PMAdditive Manufacturing of Lattices - Session IIITue 11/03/202002:00 PMAdditive Manufacturing of Lattices - Session III
```

▼Additive Manufacturing: Microstructure and Material Properties of Titanium-based Mater

```
Wed 11/04/2020 08:00 AM Titanium Alloy Microstructure and Properties
Wed 11/04/2020 02:00 PM Modeling and Properties
```

Additive Manufacturing: Qualification and Certification

```
        Mon 11/02/2020
        08:00 AM
        Approaches and Challenges

        Mon 11/02/2020
        02:00 PM
        Microstructure and Properties

        Tue 11/03/2020
        02:00 PM
        Process and Control

        Tue 11/03/2020
        04:45 PM
        Poster Session
```

Advanced Characterization of Materials for Nuclear, Radiation, and Extreme Environment

```
        Mon 11/02/2020
        02:00 PM
        Novel Techniques

        Tue 11/03/2020
        02:00 PM
        Fusion Materials & In-Situ Ion Irradiation

        Tue 11/03/2020
        04:45 PM
        Poster Session

        Wed 11/04/2020
        08:00 AM
        Radiation Effects & Materials Mechanics

        Wed 11/04/2020
        02:00 PM
        Materials Mechanics & Environmental Degradation
```

▼Advanced Coatings for Wear and Corrosion Protection

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Tue 11/03/2020 10:00 AM Poster Session
Wed 11/04/2020 08:00 AM Advanced Coatings for Wear and Corrosion Protection I
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▼Advanced Manufacturing, Processing, Characterization and Modeling of Functional Materi

Wed 11/04/2020 08:00 AM Advanced Manufacturing, Processing, Characterization and Modeling of Functional Mate
Wed 11/04/2020 02:00 PM Advanced Manufacturing, Processing, Characterization and Modeling of Functional Mate

▼Advanced Materials for Harsh Environments

```
Mon 11/02/2020 02:00 PM Session I
Tue 11/03/2020 02:00 PM Session II
```

▼Advanced Steel Metallurgy

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      Mon 11/02/2020
      02:00 PM
      Plate, Pipe & Tube

      Tue 11/03/2020
      09:00 AM
      Poster Session

      Tue 11/03/2020
      02:00 PM
      Simulation & Modeling

      Wed 11/04/2020
      08:00 AM
      Characterization

      Wed 11/04/2020
      02:00 PM
      Miscellaneous
```

▼Advances in Dielectric Materials and Electronic Devices

```
Tue 11/03/202009:00 AMPoster SessionTue 11/03/202002:00 PMDielectrics and Piezoelectrics: Session I Synthesis and GrowthWed 11/04/202010:20 AMFerroics, Multiferroics, & ElectronicsWed 11/04/202002:00 PMDielectrics and Piezoelectrics: Session II Modeling and Applications
```

▼Advances in Surface Engineering

Wed 11/04/2020 02:00 PM **Session I**

▼Advances in Synthesis and Integration Methods for Enhanced Properties, and Applications

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Mon 11/02/202008:00 AM2D Materials Synthesis and Device IntegrationMon 11/02/202002:00 PM2D and Neuromorphic MaterialsTue 11/03/202002:00 PMEnergy Materials I: Energy Storage Materials and Hybrid Perovskite Solar CellsWed 11/04/202008:00 AMEnergy Materials II: Membranes and CatalystsWed 11/04/202002:00 PMFunctional Materials and Nanocomposites
```

▼Advances in Zinc-coated Sheet Steel Processing and Properties

Tue 11/03/2020 02:00 PM Advances in Zinc-coated Sheet Steel Processing and Properties

▼AI for Big Data Problems in Imaging, Modeling and Synthesis

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Wed 11/04/2020 08:00 AM AI-accelerated Materials Discovery and Synthesis
Wed 11/04/2020 02:00 PM AI-enabled Materials Characterization
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▼Applications of Modern Characterization Techniques to Ferrous Alloys and Steel Products

Mon 11/02/2020 02:00 PM Applications of Modern Characterization Techniques to Ferrous Alloys and Steel Product

▼Art and Cultural Heritage: Discoveries and Education

Wed 11/04/2020 02:00 PM Art and Cultural Heritage: Discoveries and Education

▼Artificial Intelligence for Materials Design and Process Optimization

Mon 11/02/2020 08:00 AM AI for Materials Design and Process Optimization

▼Broadening Participation in the Materials Science and Engineering Profession

Wed 11/04/2020 11:00 AM **Session I**

▼BSD/PCSA: Humanitarian Engineering Symposium

Mon 11/02/2020 02:00 PM Humanitarian Engineering

▼Bulk and Sheet Thermal-Deformation Processing and Microstructure Development in Meta

```
      Mon 11/02/2020
      02:00 PM
      Session I

      Tue 11/03/2020
      02:00 PM
      Session II
```

Ceramic and Crystal Materials for Optics and Photonics

```
      Tue 11/03/2020
      09:00 AM
      Poster Session

      Wed 11/04/2020
      08:00 AM
      Session I

      Wed 11/04/2020
      02:00 PM
      Session II
```

▼Ceramic Matrix Composites

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Mon 11/02/2020 08:00 AM CMC I
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Mon 11/02/2020 02:00 PM CMC II: Foreign Object Damage/NDE

Ceramics and Glasses Simulations and Machine Learning

```
        Mon 11/02/2020
        08:00 AM
        Machine Learning and Artificial Intelligence

        Mon 11/02/2020
        02:00 PM
        Atomistic Modeling

        Tue 11/03/2020
        09:00 AM
        Poster Session
```

▼Ceramics in the Nuclear Fuel Cycle

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Tue 11/03/2020 02:00 PM Ceramics in the Nuclear Materials
Wed 11/04/2020 08:00 AM Waste Form Development
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▼Coating and Thin Film Materials for Energy, Aerospace, Environment and Biological Appli

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Tue 11/03/2020 10:00 AM Poster Session
```

Tue 11/03/2020 02:00 PM Advanced Coating and Thin Films

Coatings to Protect Materials from Extreme Environments

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Tue 11/03/202010:00 AMPoster SessionWed 11/04/202008:00 AMEnvironmental and Thermal Barrier Coatings IWed 11/04/202002:00 PMEnvironmental and Thermal Barrier Coatings II/Aerosol DepositionThu 11/05/202008:00 AMCoatings for Harsh Environments
```

▼Computation Assisted Materials Development for Improved Corrosion Resistance

```
Mon 11/02/2020 08:00 AM Residual Lifetime Assessment and Multiscale Modeling Methods
Tue 11/03/2020 10:00 AM Poster Session
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Controlled Synthesis, Processing, and Applications of Structural and Functional Nanomater

```
Mon 11/02/202008:00 AMDevelopment of Nanomaterials and NanostructuresMon 11/02/202002:00 PMComplicated Ceramics and Layered NanomaterialsTue 11/03/202009:00 AMPoster SessionTue 11/03/202002:00 PMEnergy Applications of Nanostructures
```

Curricular Innovations and Continuous Improvement of Academic Programs (and Satisfyir

```
        Mon 11/02/2020
        08:00 AM
        Judson Symposium I

        Mon 11/02/2020
        02:00 PM
        Judson Symposium II
```

Emergent Materials under Extremes and Decisive In Situ Characterizations

```
Wed 11/04/2020 08:00 AM Pressure-induced dramatic changes in structures and properties
Wed 11/04/2020 02:00 PM Decisive In-situ Characterizations
```

▼Engineered Phase Transformations

Mon 11/02/2020 08:00 AM **Engineered Phase Transformations**

▼Engineering Ceramics: Microstructures, Properties, and Applications

Mon 11/02/2020 08:00 AM <u>Microstructure and Properties of Engineering Ceramics</u>

▼Environmentally Assisted Cracking: Theory and Practice

```
Mon 11/02/202008:00 AMEnvironment Assisted CrackingMon 11/02/202002:00 PMInvestigating the Role of HydrogenTue 11/03/202002:00 PMEAC of Aluminum Alloys
```

▼Functional Defects in Electroceramic Materials

```
Mon 11/02/202008:00 AMDefect Engineering in Functional CeramicsMon 11/02/202002:00 PMDefect Design for Energy Storage MaterialsTue 11/03/202009:00 AMPoster Session
```

Glasses, Optical Materials, and their Functional Applications: Current Issues in Science & 7

```
Mon 11/02/202008:00 AMStructure, Dynamics and Surface Reactivity of Glass MaterialsMon 11/02/202002:00 PMAdvanced Characterizations and Functional ApplicationsTue 11/03/202002:00 PMACerS GOMD Alfred R. Cooper Award Session
```

▼Grain Boundaries, Interfaces, and Surfaces in Functional Materials: Fundamental Structur

Tue 11/03/2020 10:00 AM **Poster Session**

```
Wed 11/04/2020 08:00 AM Kinetic Processes and Interface Transitions
Wed 11/04/2020 02:00 PM Interface Anisotropy and Interfaces in Ferroelectric/Functional Oxides
```

▼High Entropy Materials: Concentrated Solid Solution, Intermetallics, Ceramics, Functional

```
        Mon 11/02/2020
        08:00 AM
        Materials Discovery and Design I

        Mon 11/02/2020
        02:00 PM
        Materials Discovery and Design II

        Tue 11/03/2020
        10:00 AM
        Poster Session

        Tue 11/03/2020
        02:00 PM
        Theory and Fundamentals

        Wed 11/04/2020
        08:00 AM
        High Entropy Ceramics

        Wed 11/04/2020
        02:00 PM
        Processing and Properties
```

▼High Temperature Corrosion and Degradation of Structural Materials

```
Mon 11/02/202008:00 AMCO2-rich Environments/Nuclear Reactor EnvironmentsMon 11/02/202002:00 PMEffects of Water Vapor/Ni-based Alloys and High Temperature EffectsTue 11/03/202002:00 PMRefractory Metal Alloys/Modeling and Theory
```

▼Innovations in Refractory Ceramic Technology for Iron and Steel Applications

Mon 11/02/2020 02:00 PM Innovations in Refractory Ceramic Technology for Iron and Steel Applications

▼Integration between Modeling and Experiments for Crystalline Metals: From Atomistic to N

```
      Mon 11/02/2020
      02:00 PM
      Session I

      Tue 11/03/2020
      10:00 AM
      Poster Session

      Tue 11/03/2020
      02:00 PM
      Session II

      Wed 11/04/2020
      08:00 AM
      Session III

      Thu 11/05/2020
      08:00 AM
      Session IV
```

▼Interfaces and Phase Transformations

```
Tue 11/03/2020 10:00 AM Poster Session

Tue 11/03/2020 02:00 PM Interfaces and Phase Transformation I

Wed 11/04/2020 08:00 AM Interfaces and Phase Transformations II
```

▼Joining and Integration of Advanced and Specialty Materials

Mon 11/02/2020 08:00 AM **Joining and Integration of Advanced and Specialty Materials**

▼Journal of the American Ceramic Society Awards Symposium

Wed 11/04/2020 10:20 AM Journal of the American Ceramic Society Awards Symposium Session I
Wed 11/04/2020 02:00 PM Journal of the American Ceramic Society Awards Symposium Session II

▼Late News Poster Session

```
        Tue 11/03/2020
        09:00 AM
        Biomaterials

        Tue 11/03/2020
        09:00 AM
        Ceramic and Glass Materials

        Tue 11/03/2020
        10:00 AM
        Fundamentals and Characterization

        Tue 11/03/2020
        04:45 PM
        Additive Manufacturing

        Tue 11/03/2020
        04:45 PM
        Energy.

        Tue 11/03/2020
        04:45 PM
        Processing and Manufacturing
```

▼Light Metal and Composites Technology

Mon 11/02/2020 08:00 AM Composites I: Microstructure and Mechanical Properties
Mon 11/02/2020 02:00 PM Composites II: Development in Light Weight Alloys

▼Low Density Advanced Composite Materials

Tue 11/03/2020 02:00 PM Low Density Advanced Composite Materials

▼Machine Learning for Discovery of Structure-Process-Property Relations in Electronic Mat

```
Mon 11/02/202008:00 AMMachine Learning in Materials Engineering IMon 11/02/202002:00 PMMachine Learning in Materials Engineering II
```

▼Manufacturing and Processing of Advanced Ceramic Materials

```
Tue 11/03/202002:00 PMNew Opportunities in Ceramic Processing IWed 11/04/202008:00 AMNew Opportunities in Ceramic Processing IIWed 11/04/202002:00 PMProcessing of Oxide CeramicsThu 11/05/202008:00 AMProcessing of Carbides, Borides, and Chlorides
```

▼Materials Design through AI Composition and Process Optimization

```
      Mon 11/02/2020
      02:00 PM
      Session I

      Tue 11/03/2020
      10:00 AM
      Poster Session

      Tue 11/03/2020
      02:00 PM
      Session II
```

▼Materials Informatics and Modeling for 21st Century Ceramics Research

Tue 11/03/2020 02:00 PM Machine Learning for Materials Microstructure and Property Predictions

▼Materials Informatics for Images and Multi-dimensional Datasets

```
Mon 11/02/202002:00 PMSession ITue 11/03/202010:00 AMPoster SessionWed 11/04/202008:00 AMJoint Session: "Materials Informatics for Images and Multi-dimensional Datasets" and "
```

▼Materials vs Minerals: Bridging the Gap between Materials Science and Earth and Planetar

Mon 11/02/2020 08:00 AM Session I

▼Metallurgy and Magnetism

 Wed 11/04/2020
 02:00 PM
 Metallurgy and Magnetism I

 Thu 11/05/2020
 08:00 AM
 Metallurgy and Magnetism II

▼Micro- and Nano-Mechanical Behavior of Materials

 Mon 11/02/2020
 08:00 AM
 Micro/Nano-Mechanics I

 Mon 11/02/2020
 02:00 PM
 Micro/Nano-Mechanics II

 Tue 11/03/2020
 10:00 AM
 Poster Session

 Tue 11/03/2020
 02:00 PM
 Micro/Nano-Mechanics III

▼Microstructure and Physical Property Optimization in High Entropy Alloys

Mon 11/02/2020 08:00 AM Microstructure and Physical Property Optimization in High Entropy Alloys
Tue 11/03/2020 10:00 AM Poster Session

▼MS&T Student Events

 Mon 11/02/2020
 12:00 PM
 PCSA Humanitarian Pitch Competition

 Mon 11/02/2020
 02:00 PM
 ACerS Student Tour

 Tue 11/03/2020
 03:00 PM
 Young Professional Session

 Wed 11/04/2020
 01:00 PM
 MA Speaking Contest Semi-finals

 Wed 11/04/2020
 03:00 PM
 Ceramic Mug Drop and Disc Golf Contests

 Thu 11/05/2020
 01:00 PM
 MA Speaking Contest Finals

▼MS&T20 Plenary Session

Mon 11/02/202011:00 AMAIST Adolf Martens Memorial Steel LectureTue 11/03/202011:00 AMACerS Edward Orton, Jr. Memorial LectureThu 11/05/202011:00 AMTMS/ASM Distinguished Lectureship in Materials and Society

▼Multi-material Additive Manufacturing: Processing and Heterogeneous Materials Design

Wed 11/04/202008:00 AMInnovative AM Approaches for Multi-functionsWed 11/04/202002:00 PMAM of Functionally Graded & Dissimilar MaterialsThu 11/05/202008:00 AMRecent Progress in Multi-Material AM

▼Multiscale Modeling of Microstructure Deformation in Material Processing

Tue 11/03/2020 09:00 AM **Poster Session**

Tue 11/03/2020 02:00 PM Multiscale Modeling of Microstructure Deformation in Material Processing

Nanotechnology for Energy, Environment, Electronics, Healthcare and Industry

Wed 11/04/2020 08:00 AM Wed 11/04/2020 02:00 PM Nanotechnology for Energy, Environment, Electronics, Healthcare and Industry - Session
Thu 11/05/2020 08:00 AM Nanotechnology for Energy, Environment, Electronics, Healthcare and Industry - Session
Nanotechnology for Energy, Environment, Electronics, Healthcare and Industry - Session

▼Naval/Maritime Applications of Additively Manufactured Parts: Design and Experimental A

Tue 11/03/2020 02:00 PM Naval/Maritime Applications of Additively Manufactured Parts: Design and Experimenta

▼Next Generation Biomaterials

 Mon 11/02/2020
 08:00 AM
 Next Generation Biomaterials I

 Mon 11/02/2020
 02:00 PM
 Next Generation Biomaterials II

 Tue 11/03/2020
 09:00 AM
 Poster Session

 Tue 11/03/2020
 02:00 PM
 Next Generation Biomaterials III

 Wed 11/04/2020
 08:00 AM
 Next Generation Biomaterials IV

▼Phase Transformations in Additively Manufactured Materials

Mon 11/02/2020 08:00 AM Additive Manufacturing - Phase Transformations - In-situ and Ex-situ Experimental Wor
Mon 11/02/2020 02:00 PM Additive Manufacturing - Phase Transformations - Modelling

▼Powder Metallurgy of Light, Reactive and Other Non-ferrous Metals

Mon 11/02/2020 02:00 PM **Session I**

▼Probabilistic Life Prediction of Materials in Aging Systems

Tue 11/03/2020 02:00 PM Probabilistic Life Prediction of Materials in Aging Systems

▼Processing and Performance of Materials Using Microwaves, Electric and Magnetic Fields,

Mon 11/02/2020 08:00 AM Session I
Mon 11/02/2020 02:00 PM Session II

Sintering and Related Powder Processing Science and Technologies

Mon 11/02/202008:00 AMField Assisted Sintering and Other Novel MethodsMon 11/02/202002:00 PMModelling and Processing-related TopicsTue 11/03/202004:45 PMPoster Session

Solid State Processing of Metals and Composites

Wed 11/04/2020 02:00 PM Session I

▼Substrate Protection for Corrosion Prevention

Mon 11/02/2020 08:00 AM Substrate Protection for Corrosion Prevention I
Mon 11/02/2020 02:00 PM Substrate Protection for Corrosion Prevention II

Surface Treatments and Properties of Titanium and Titanium Alloys: A Forum on New Str Wed 11/04/2020 08:00 AM Surface Treatments and Properties of Titanium and Titanium Alloys

Synthesis, Characterization and Application of 3D Graphene

Wed 11/04/2020 08:00 AM **Session I**

Synthesis, Characterization, Modeling and Applications of Functional Porous Materials

```
        Mon 11/02/2020
        08:00 AM
        Functional Porous Materials I

        Mon 11/02/2020
        02:00 PM
        Functional Porous Materials II

        Tue 11/03/2020
        02:00 PM
        Functional Porous Materials III

        Tue 11/03/2020
        04:45 PM
        Poster Session
```

▼The Materials Genome Initiative and Materials R&D in the 2020s

Fri 11/06/2020 10:30 AM The Materials Genome Initiative and Materials R&D in the 2020s

▼Thermodynamic Properties, Structure and Phase Stabilities of Special Alloys

Mon 11/02/2020 08:00 AM Thermodynamic Properties, Structure and Phase Stabilities of Special Alloys
Tue 11/03/2020 10:00 AM Poster Session

▼Thermodynamics of Materials in Extreme Environments

| Tue 11/03/2020 | 02:00 PM | Thermodynamic Studies of Nuclear Materials |
|----------------|----------|---|
| Wed 11/04/2020 | 08:00 AM | <u>Thermodynamics, Stability, and Reactivity of Materials under Extreme Conditions</u> |
| Wed 11/04/2020 | 02:00 PM | <u>Thermodynamics and Stability of Mateirals for Fuel Cells and Other Energy Applications</u> |
| Thu 11/05/2020 | 08:00 AM | Thermodynamics at the Nanoscale and Interfaces |

Questions about ProgramMaster? Contact programming@programmaster.org