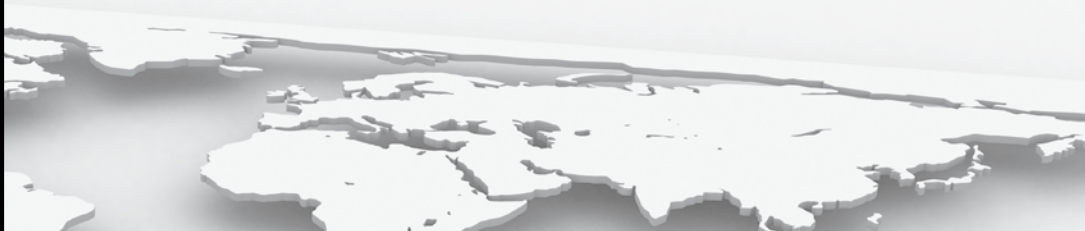




TMS 2009

138th Annual Meeting & Exhibition

**Linking Science and Technology
for Global Solutions**



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2001	Light Metals Division: Poster Session		Aluminum Reduction Technology: Environment	Aluminum Reduction Technology: Potline Performances and Vision	General Abstracts: Light Metals Division: Session I	Aluminum Reduction Technology: Process Control	Aluminum Reduction Technology: Operational Improvements	Aluminum Reduction Technology: Potroom Operation and Maintenance
2001/2003		Challenges for Sustainable Growth in the Aluminum Industry - Through the Current Crisis and on to the Future: Aluminum Plenary Session						
2002			Alumina and Bauxite: Bayer Process Safety, Environmental and Sustainability Issues	Alumina and Bauxite: Bauxite Ore Handling and Beneficiation	Alumina and Bauxite: Process Improvements and Experiences - Red Side	Alumina and Bauxite: Methods - Bauxite Characterization, Bayer Chemistry, Alumina Quality	State of the NSF Metallic Materials and Nanostructures (MMN) Program: Session I Alumina and Bauxite: Alumina Precipitation	Alumina and Bauxite: Process Improvements and Experiences - White Side
2003			Electrode Technology for Aluminum Production: Environmental Issues and Raw Materials	Electrode Technology for Aluminum Production: Special Session: Coke Quality Changes and Countermeasures	Electrode Technology for Aluminum Production: Jt Aluminum Reduction Technology and Electrode Technology Session: Coping with Changes in Coke Quality	Electrode Technology for Aluminum Production: Anode Production Operations - Focus on Baking	Electrode Technology for Aluminum Production: Electrode Connections and Cathode Studies	Electrode Technology for Aluminum Production: Electrode Technology - Cathodes and Inert Anodes
2004			Aluminum Alloys: Fabrication, Characterization and Applications: Development and Application	Aluminum Alloys: Fabrication, Characterization and Applications: Processing and Properties	Aluminum Alloys: Fabrication, Characterization and Applications: Formability and Texture	Aluminum Alloys: Fabrication, Characterization and Applications: Materials Characterization	Aluminum Alloys: Fabrication, Characterization and Applications: Modeling and Corrosion	Aluminum Alloys: Fabrication, Characterization and Applications: Composite and Foam
2005		General Abstracts: Extraction and Processing Division: Session I	Cast Shop for Aluminum Production: Engineering and Industrial Developments	Cast Shop for Aluminum Production: Environment, Health and Safety	Cast Shop for Aluminum Production: Characterization and Furnace Operation	Cast Shop for Aluminum Production: Molten Metal Cleanliness	Cast Shop for Aluminum Production: Casting Structure vs. Process	Cast Shop for Aluminum Production: Casting Technology
2006	Magnesium Technology 2009: Poster Session Magnesium and Its Alloys	Magnesium Technology 2009: Alloys I: Rare Earth (Gadolinium, Neodymium)	Magnesium Technology 2009: Casting	Magnesium Technology 2009: Alloys II: Calcium	Magnesium Technology 2009: Alloys III: Rare Earth (Cerium and Other)	Magnesium Technology 2009: Refining and Surface Treatment	Magnesium Technology 2009: Alloys IV: Yttrium and Tin	Magnesium Technology 2009: Modeling

Program-at-a-Glance

Sunday	Monday		Tuesday		Wednesday		Thursday
PM	AM	PM	AM	PM	AM	PM	AM
	Magnesium Technology 2009: Magnesium Town Hall Meeting - A Decade of Modern Magnesium in China - AND - Fatigue and Tension/Compression Asymmetry	Magnesium Technology 2009: Primary Production	Magnesium Technology 2009: Applications, Testing and Forming	Magnesium Technology 2009: Deformation	Magnesium Technology 2009: Twin Roll Casting and Semi-Solid Processing	Magnesium Technology 2009: Wrought Alloys	
Microstructural Processes in Irradiated Materials: Poster Session	Microstructural Processes in Irradiated Materials: Radiation Effects I: Segregation and Modeling	Microstructural Processes in Irradiated Materials: Radiation Effects II: Advanced Characterization and Fe-Cr Alloys	Microstructural Processes in Irradiated Materials: Advanced Oxide Dispersion Strengthened Ferritic Alloys	Microstructural Processes in Irradiated Materials: Radiation Effects III: He Effects on Microstructural Evolution and Deformation	Microstructural Processes in Irradiated Materials: Ceramics and Fuels	RPV Embrittlement and Fusion Materials: Measuring, Modeling and Managing Irradiation Effects: RPV Embrittlement: Technical Contributions of Professor G. Robert Odette	RPV Embrittlement and Fusion Materials: Measuring, Modeling and Managing Irradiation Effects: Fusion Reactor Materials: Technical Contributions of Professor G. Robert Odette
	Peirce-Smith Converting Centennial Symposium: Historical Foundations/Refractory Practices	Peirce-Smith Converting Centennial Symposium: Operational Aspects	Peirce-Smith Converting Centennial Symposium: Injection Techniques, Modeling and Process Control	Peirce-Smith Converting Centennial Symposium: New Converting Technologies and Panel Discussion	Materials for the Nuclear Renaissance: New Materials and Past Limitations	Materials for the Nuclear Renaissance: Materials: Applications and Characterization	Materials for the Nuclear Renaissance: Materials: Manufacturing and Testing
Near-Net Shape Titanium Components: Poster Session	General Abstracts: Structural Materials Division: Session I	Aluminum Cold Rolling and Strip Processing: Session I	Aluminum Hot Rolling: Session I	Near-Net Shape Titanium Components: Casting, Welding and Beam Processes	Near-Net Shape Titanium Components: Powder Metallurgy I	Near-Net Shape Titanium Components: Deformation and Machining Processes	Near-Net Shape Titanium Components: Powder Metallurgy II
	Shape Casting: Third International Symposium: Properties	Shape Casting: Third International Symposium: Processes	Shape Casting: Third International Symposium: Characterization	Shape Casting: Third International Symposium: Novel Methods and Applications	Shape Casting: Third International Symposium: Modeling		

2007

2008

2009

2010

2011

	Sunday	Monday	Tuesday	Wednesday	Thursday			
	PM	AM	AM	AM	AM			
2012		Energy Conservation in Metals Extraction and Materials Processing II: Extraction Processes/ Refractories/ Modeling and Analysis	Energy Conservation in Metals Extraction and Materials Processing II: Energy Conservation and Technology	CO ₂ Reduction Metallurgy 2009: Mechanisms and Electrolysis	CO ₂ Reduction Metallurgy 2009: Ferrous and Titanium Metallurgy	Aluminum Reduction Technology: New Pot Technology and Pot Start-Up	Aluminum Reduction Technology: Fundamentals	Aluminum Reduction Technology: Modelling
2014		Friction Stir Welding and Processing-V: Session I	Friction Stir Welding and Processing-V: Session II	Friction Stir Welding and Processing-V: Session III	Friction Stir Welding and Processing-V: Session IV	Friction Stir Welding and Processing-V: Session V	Friction Stir Welding and Processing-V: Session VI	
2016		Materials Processing Fundamentals: Solidification and Casting	Materials Processing Fundamentals: Process Modeling	Materials Processing Fundamentals: Deformation Processing	Materials Processing Fundamentals: Smelting and Refining	Materials Processing Fundamentals: Powders, Composites, Coatings and Measurements	Materials Processing Fundamentals: Aqueous and Liquid Processing	
2018		Frontiers in Solidification Science III: Fundamentals of Solidification: Interfaces, Nucleation, Growth, and Nonequilibrium Considerations	Frontiers in Solidification Science III: Dendritic Growth Phenomena	Frontiers in Solidification Science III: Coupled Multiphase Growth Morphologies	Frontiers in Solidification Science III: Prediction and Control of Solidification Behavior and Cast Microstructures	General Abstracts: Structural Materials Division: Session II	General Abstracts: Structural Materials Division: Session III	
2020	Pb-Free Solders and Emerging Interconnect and Packaging Technologies: Poster Session	Pb-Free Solders and Emerging Interconnect and Packaging Technologies: Fundamental Properties, Interfacial Reactions and Phase Transformation	Pb-Free Solders and Emerging Interconnect and Packaging Technologies: Electromigration Reliability	Pb-Free Solders and Emerging Interconnect and Packaging Technologies: Effects of Surface Finishes and Advances in Interconnects	Pb-Free Solders and Emerging Interconnect and Packaging Technologies: Electromigration, Microstructure, and Mechanical Properties	Pb-Free Solders and Emerging Interconnect and Packaging Technologies: Reliability and Microstructure Development	Pb-Free Solders and Emerging Interconnect and Packaging Technologies: Microstructure, Modeling and Test Methods	Pb-Free Solders and Emerging Interconnect and Packaging Technologies: Tin Whisker Formation and Mechanical Properties
2022		Phase Stability, Phase Transformations, and Reactive Phase Formation in Electronic Materials VIII: Session I	Phase Stability, Phase Transformations, and Reactive Phase Formation in Electronic Materials VIII: Session II	Phase Stability, Phase Transformations, and Reactive Phase Formation in Electronic Materials VIII: Session III	Phase Stability, Phase Transformations, and Reactive Phase Formation in Electronic Materials VIII: Session IV	Phase Stability, Phase Transformations, and Reactive Phase Formation in Electronic Materials VIII: Session V	General Abstracts: Electronic, Magnetic and Photonic Materials Division: Session I	General Abstracts: Electronic, Magnetic and Photonic Materials Division: Session II
2024		Recycling of Electronic Wastes: Life Circle Analysis and Environmental Issues	Recycling of Electronic Wastes: Mechanical Recycling and Pyrometallurgical Recycling	Recycling of Electronic Wastes: Hydrometallurgical Recycling	Recycling of Electronic Wastes: General Recycling	Recycling--General Session: Session I: Metals	Recycling--General Session: Session II: Waste Utilization	Recycling--General Session: Session III: Aqueous Processing

Program-at-a-Glance

Sunday	Monday		Tuesday		Wednesday		Thursday
PM	AM	PM	AM	PM	AM	PM	AM
	Structural Materials Division Symposium: Advanced Characterization and Modeling of Phase Transformations in Metals in Honor of David N. Seidman on his 70th Birthday: Driven Alloy Systems	Structural Materials Division Symposium: Advanced Characterization and Modeling of Phase Transformations in Metals in Honor of David N. Seidman on his 70th Birthday: Thermodynamics of Phase Transformations	Structural Materials Division Symposium: Advanced Characterization and Modeling of Phase Transformations in Metals in Honor of David N. Seidman on his 70th Birthday: Structure Property Relationships	Structural Materials Division Symposium: Advanced Characterization and Modeling of Phase Transformations in Metals in Honor of David N. Seidman on his 70th Birthday: Kinetics of Phase Transformations I	Structural Materials Division Symposium: Advanced Characterization and Modeling of Phase Transformations in Metals in Honor of David N. Seidman on his 70th Birthday: Kinetics of Phase Transformations II	Applicable Computing Technologies in Heat Treating: Numerical Modeling and Simulation for Heat Treatment	Open Source Tools for Materials Research and Engineering: Session I
	Transformations under Extreme Conditions: A New Frontier in Materials: Keynote: Melting and Solidification I	Transformations under Extreme Conditions: A New Frontier in Materials: Melting and Solidification II	Transformations under Extreme Conditions: A New Frontier in Materials: High Rate Deformation	Transformations under Extreme Conditions: A New Frontier in Materials: Extreme Deformation and Damage	Transformations under Extreme Conditions: A New Frontier in Materials: Solid-Solid Transformations and In Situ Diagnostics I	Transformations under Extreme Conditions: A New Frontier in Materials: Pressure/Stress-Induced Transformations and In Situ Diagnostics II	Transformations under Extreme Conditions: A New Frontier in Materials: Driven Reactions
	Computational Thermodynamics and Kinetics: Energy Materials	Computational Thermodynamics and Kinetics: Thin Films	Computational Thermodynamics and Kinetics: Functional Materials	Computational Thermodynamics and Kinetics: Defects	Computational Thermodynamics and Kinetics: Integrated Thermodynamic and Kinetic Modeling	Computational Thermodynamics and Kinetics: Thermodynamics	Computational Thermodynamics and Kinetics: Grain Growth and Recrystallization
Synergies of Computational and Experimental Materials Science: Poster Session	Synergies of Computational and Experimental Materials Science: Three-Dimensional Materials Science I	Synergies of Computational and Experimental Materials Science: Three-Dimensional Materials Science II	Synergies of Computational and Experimental Materials Science: Three-Dimensional Materials Science III	Synergies of Computational and Experimental Materials Science: Synergies in Nanoscience	Synergies of Computational and Experimental Materials Science: Synergies in Integrated Computational Materials Engineering	Computational Materials Research and Education Luncheon Roundtable: FiPy Progress in Computational Materials Science and Engineering Education: Session I	Progress in Computational Materials Science and Engineering Education: Session II Computational Materials Research and Education Luncheon Roundtable: Gibbs: A Multi-Component Thermodynamics Calculation and Visualization Suite
	Materials Issues in Additive Powder-Based Manufacturing Processes: Additive Manufacturing Applications	Materials Issues in Additive Powder-Based Manufacturing Processes: Additive Manufacturing Metals I	Materials Issues in Additive Powder-Based Manufacturing Processes: Additive Manufacturing Metals II	Materials Issues in Additive Powder-Based Manufacturing Processes: Coatings and Deposition	Solar Cell Silicon: Production and Recycling: Session I	Solar Cell Silicon: Production and Recycling: Session II	

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	Sunday	Monday	Tuesday	Wednesday	Thursday			
	PM	AM	AM	AM	AM			
3005		Global Innovations in Photovoltaics and Thermoelectrics: Session I	Global Innovations in Materials and Technologies for Energy Harvesting: Plenary Session	Materials in Clean Power Systems IV: Clean Coal-, Hydrogen Based-Technologies, and Fuel Cells: High Temperature Materials for Power Generation	Materials in Clean Power Systems IV: Clean Coal-, Hydrogen Based-Technologies, and Fuel Cells: Materials for Hydrogen Production and Transport - AND - Advanced Materials for PEM Fuel Cells and Batteries Session I	Materials in Clean Power Systems IV: Clean Coal-, Hydrogen Based-Technologies, and Fuel Cells: Advanced Materials for PEM Fuel Cells and Batteries Session II - AND - Solid Oxide Fuel Cell Materials, Session I: Membranes, Electrodes, and Seals	Materials in Clean Power Systems IV: Clean Coal-, Hydrogen Based-Technologies, and Fuel Cells: Solid Oxide Fuel Cell Materials, Session II: Interconnects	
3006		Manufacturing Issues in Fuel Cells: Session I	Manufacturing Issues in Fuel Cells: Session II	Diffusion in Materials for Energy Technologies: Session I	Diffusion in Materials for Energy Technologies: Session II	Diffusion in Materials for Energy Technologies: Session III	Diffusion in Materials for Energy Technologies: Session IV	
3007		Bulk Metallic Glasses VI: Alloy Development and Glass Forming Ability I	Bulk Metallic Glasses VI: Alloy Development and Glass Forming Ability II	Bulk Metallic Glasses VI: Structures and Mechanical Properties I	Bulk Metallic Glasses VI: Structures and Mechanical Properties II	Bulk Metallic Glasses VI: Fatigue and Other Properties	Bulk Metallic Glasses VI: Structures and Modeling	
3008		Fatigue: Mechanisms, Theory, Experiments and Industry Practice: Characterization Methods for Elucidating Fatigue Mechanisms	Fatigue: Mechanisms, Theory, Experiments and Industry Practice: Theory and Simulation	Fatigue: Mechanisms, Theory, Experiments and Industry Practice: The Role of Microstructure in Fatigue	Fatigue: Mechanisms, Theory, Experiments and Industry Practice: Fatigue in Engineering Components	Fatigue: Mechanisms, Theory, Experiments and Industry Practice: Experimental Studies of Initiation and Growth in Structural Materials	General Abstracts: Materials Processing and Manufacturing Division: Session IV	
3009	Characterization of Minerals, Metals and Materials: Poster Session	Characterization of Minerals, Metals and Materials: Emerging Characterization Techniques	Characterization of Minerals, Metals and Materials: Characterization of Processing	Characterization of Minerals, Metals and Materials: Characterization of Microstructure of Properties of Materials I	Characterization of Minerals, Metals and Materials: Characterization of Microstructure of Properties of Materials II	Characterization of Minerals, Metals and Materials: Characterization of Microstructure of Properties of Materials III	Characterization of Minerals, Metals and Materials: Characterization of Microstructure of Properties of Materials IV	Characterization of Minerals, Metals and Materials: Characterization of Microstructure of Properties of Materials V

Program-at-a-Glance

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Materials for High Temperature Applications: Next Generation Superalloys and Beyond: Poster Session	Materials for High Temperature Applications: Next Generation Superalloys and Beyond: Future Application Requirements and Next Generation Superalloys	Materials for High Temperature Applications: Next Generation Superalloys and Beyond: Next Generation Superalloys	Materials for High Temperature Applications: Next Generation Superalloys and Beyond: Refractory Alloys I	Materials for High Temperature Applications: Next Generation Superalloys and Beyond: Refractory Alloys II	Materials for High Temperature Applications: Next Generation Superalloys and Beyond: Advanced Coatings I	Materials for High Temperature Applications: Next Generation Superalloys and Beyond: Advanced Coatings II and Intermetallics National Academies Propulsion Materials Study Community Town Hall Meeting	Materials for High Temperature Applications: Next Generation Superalloys and Beyond: Ceramic Composites and Other Technologies
	Recent Advances in Thin Films: Process-Property Correlations	Recent Advances in Thin Films: Applications	Recent Advances in Thin Films: Metal Films and Integration Schemes	Surface Structures at Multiple Length Scales: Surface Properties in Various Length Scales	Surface Structures at Multiple Length Scales: Bio Coatings and Nanoscale Characterization	Surface Structures at Multiple Length Scales: Processing of Novel Surfaces	Surface Structures at Multiple Length Scales: Surface Deposition and Properties
	Emerging Applications of Neutron Scattering in Materials Science and Engineering: Neutron Diffraction and Structure Determination	Emerging Applications of Neutron Scattering in Materials Science and Engineering: Residual Stress Mapping and Neutron Imaging	Emerging Applications of Neutron Scattering in Materials Science and Engineering: Microstructure Control	Emerging Applications of Neutron Scattering in Materials Science and Engineering: Phase Transformation	Emerging Applications of Neutron Scattering in Materials Science and Engineering: Deformation Behaviors	Bulk Metallic Glasses VI: Mechanical Behavior of Nano and Amorphous Materials	
Biological Materials Science: Poster Session	Biological Materials Science: Implant Biomaterials I	Biological Materials Science: Biomimetic Processing	Biological Materials Science: Drug Delivery and Imaging	Biological Materials Science: Biological Materials I	Biological Materials Science: Cell-Biomaterial Interactions	Biological Materials Science: Implant Biomaterials II Scaffolds	Biological Materials Science: Biological Materials II - and - Implant Biomaterials III
	Neutron and X-Ray Studies of Advanced Materials: Resolving Local Structure	Neutron and X-Ray Studies of Advanced Materials: Diffuse Scattering	Neutron and X-Ray Studies of Advanced Materials: Small Scale and Thin Film Studies	Neutron and X-Ray Studies of Advanced Materials: Advances in Line Profile	Neutron and X-Ray Studies of Advanced Materials: Phase Transition	Neutron and X-Ray Studies of Advanced Materials: Advanced Imaging and Bio-Inspired Studies	Neutron and X-Ray Studies of Advanced Materials: Neutron Diffraction and Modeling of Materials Behavior
2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Poster Session	2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Low Dimensional Nanostructures I	2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Low Dimensional Nanostructures II	2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Nanoscale Oxides: Synthesis and Applications	2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Nanoscale Fabrication and Devices: Concepts, Approaches and Scale-Up	2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Bulk Nanocrystalline Materials	2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Nanoscale Phenomena: Mechanics, Phase Stability and Properties	2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Nanoscale Powders: Materials, Synthesis and Applications

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		Sunday	Monday	Tuesday	Wednesday	Thursday				
		PM	AM	AM	AM	AM				
3020			Nanocomposite Materials: Nanoparticle Synthesis	Nanocomposite Materials: Polymer Nanocomposites	Nanocomposite Materials: Characterization and Modeling of Nanocomposites I	Nanocomposite Materials: Metallic Nanocomposites	Nanocomposite Materials: Characterization and Modeling of Nanocomposites II	Nanocomposite Materials: Nanocomposites for Energy Conversion and Storage	Nanocomposite Materials: Nanocomposite Processing	
	3022		Dislocations: 75 Years of Deformation Mechanisms: Dislocation Structures and Effects of Material Microstructure	Dislocations: 75 Years of Deformation Mechanisms: Dislocation Ensembles and Structures	Dislocations: 75 Years of Deformation Mechanisms: Effects of Obstacles, Surfaces, and Scale on Dislocation Generation and Motion	Dislocations: 75 Years of Deformation Mechanisms: Nanostructured and Temperature Effects on Dislocations	General Abstracts: Materials Processing and Manufacturing Division: Session I	General Abstracts: Materials Processing and Manufacturing Division: Session II	General Abstracts: Materials Processing and Manufacturing Division: Session III	
		3024	Mechanical Behavior of Nanostructured Materials: Poster Session	Mechanical Behavior of Nanostructured Materials: Stability of Nanostructures	Mechanical Behavior of Nanostructured Materials: Nanostructures by Severe Plastic Deformation	Mechanical Behavior of Nanostructured Materials: Plasticity and Deformation Mechanisms at Small Length Scale I	Mechanical Behavior of Nanostructured Materials: Strengthening Mechanisms at Small Length Scale	Mechanical Behavior of Nanostructured Materials: Plasticity and Deformation Mechanisms at Small Length Scale II	Mechanical Behavior of Nanostructured Materials: Plasticity and Deformation Mechanisms at Small Length Scale III	
			Exhibit Hall						Peirce-Smith Converting Centennial Symposium: Short Course on Injection Phenomena in the Peirce-Smith Converter	
2nd/3rd Floor Foyers					General Poster Session					

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2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Nanoscale Oxides: Synthesis and Applications	Tues AM	3018	129
2009 Functional and Structural Nanomaterials: Fabrication, Properties, and Applications: Nanoscale Phenomena: Mechanics, Phase Stability and Properties	Wed PM	3018	274
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Alumina and Bauxite: Process Improvements and Experiences - Red Side	Tues PM	2002	176
Alumina and Bauxite: Process Improvements and Experiences - White Side	Thurs AM	2002	324
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Aluminum Alloys: Fabrication, Characterization and Applications: Development and Application	Mon PM	2004	84
Aluminum Alloys: Fabrication, Characterization and Applications: Formability and Texture	Tues PM	2004	177
Aluminum Alloys: Fabrication, Characterization and Applications: Materials Characterization	Wed AM	2004	228
Aluminum Alloys: Fabrication, Characterization and Applications: Modeling and Corrosion	Wed PM	2004	277
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Bulk Metallic Glasses VI: Alloy Development and Glass Forming Ability II	Mon PM	3007	88
Bulk Metallic Glasses VI: Fatigue and Other Properties	Wed AM	3007	232
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