Announcements & Calls for Papers

TMS 2002
131st Annual International Meeting & Exhibition

- Advances in Metallic Glasses
- Advances in Molten Salt Processing Technology
- Alumina and Bauxite
- Aluminum Reduction Technology
- Aluminum Sheet and Plate Rolling & Finishing Technology and Application
- Automotive Alloys 2002
- Carbon Technology
- Cast Shop Technology
- Charles J. McMahon Interfacial Segregation and Embrittlement Symposium
- Computational Phase Transformations
- Creep Deformation: Fundamentals and Applications
- David L. Davidson Symposium on High Cycle Fatigue
- Deformation and Stresses in Small Volumes
- Engineering Criteria 2000: Experience and Practice
- Fatigue and Creep of Metal Matrix Composites
- Fatigue of High Temperature Alloys
- Flyash: Generation, Treatment, Metal Recovery and Disposal
- Fundamentals of Advanced Materials For Energy Conversion
- Fundamentals of Structural Intermetallics
- General Abstracts
- General Pyrometallurgy
- General Topics in Waste Treatment and Minimization
- High-Temperature Superconductors
- High Performance Metallic Materials for Cost Sensitive Applications
- Hume-Rothery Award Symposium: CALPHAD and Alloy Thermodynamics
- Imaging of Dynamic Processes
- International Symposium on Science and Technology of Interfaces in Honor of Dr. Bhakta Rath
- Lead-Free Solders and Materials Issues in Microelectronic Packaging
- Magnesium Technology 2002
- Materials Processing Fundamentals
- Modeling of High Temperature Alloy Processing
- Modeling of Multi-Scale Phenomena in Materials Processing
- Phase Stability, Phase Transformations & Reactive Phase Formation in Electronic Materials
- Processing and Properties of Lightweight Cellular Metals and Structures
- Processing of Refractory Metals and Alloys
- Reactive Metals
- Recycling—General Sessions
- Second International Symposium on Ultrafine Grained Materials
- Shear Banding in Materials
- Surface Engineering: Science & Technology II
- Synthesis of Lightweight Metal IV
- Teaching and Learning Hydrometallurgical Science and Engineering
- Third International Sulfide Smelting Symposium: “Sulfide Smelting '02”
- Water Vapor Effects on Oxidation of High-Temperature Materials

DATE: February 17-21, 2002

LOCATION: Washington State Convention & Trade Center
Seattle, Washington
PROGRAMMING:
Nearly 200 technical sessions to update metallurgists, materials scientists, and engineers with the latest scientific and technical developments are being programmed and sponsored by the technical divisions of TMS: EMPMD, EPD, LMD, MPMD, SMD, and the ASM-MSCTS.

All technical programs are accessible through the conference management system (CMS) at http://cms.tms.org

All authors wishing to submit abstracts to the symposia listed below are encouraged to use CMS for electronic submission of abstracts and communication with organizers. Abstract deadlines are listed for each symposium.

GENERAL ABSTRACT INFORMATION
Please contact:
TMS Technical Programming Department, 184 Thorn Hill Road, Warrendale, PA 15086 USA
Telephone (724) 776-9042, ext. 253; Fax (724) 776-3770; Email ckobert@tms.org

AUTHORS:
It is recommended that the prospective author electronically submit abstracts to the TMS Conference Management System (CMS) using the following address: http://cms.tms.org. Follow the instructions to access the appropriate year and conference to which you wish to submit. Please call the Programming Services Department for assistance if you need further instructions.

Advances in Metallic Glasses
Sponsored by: Electronic, Magnetic & Photonic Materials Division, Chemistry & Physics of Materials Committee
Abstract due date: 7/15/01
The purpose of this symposium is to discuss the latest advances in the field of metallic glasses. Topics will include all aspects of theory, experiment, and applications in new developments in this field. A particular area of interest include glasses which crystallize as nanostructured compositions, and bulk metallic glasses. Submit abstracts electronically at http://cms.tms.org or to: Ken F. Kelton, Washinton University, Department of Physics, St. Louis, MO 63130 USA T: 314-935-6228; F: 314-935-6219; Email: kfk@wuphys.wustl.edu. Co-Organizers: Krishna Rajan, Rensselaer Polytechnic Institute, Department of Materials Science and Engineering, Troy, NY 12180-3590 USA T: 518-276-6126; F: 518-276-8554; Email: rajank@rpi.edu

Advances in Molten Salt Processing Technology
Sponsored by: Light Metals Division, Reactive Metals Committee
Abstract due date: 7/15/01
Advanced molten salt processing methods are being developed for new metals production technologies, hazardous waste treatment methods, and the processing of spent nuclear fuels. These varied applications use halide salts as a common technology base for pyrochemical and electrometallurgical processes. This symposium will discuss the most recent developments in molten salt processing technologies in iodide, chloride, and fluoride salt systems. Abstracts are solicited for papers that describe research and results from experimental development through advanced application demonstrations. Submit abstracts electronically at http://cms.tms.org or to: Sean M. McDeavitt, Argonne National Laboratory, Chemical Technology Division, Argonne, IL 60439-4837 USA T: 630-252-4308; F: 630-252-9917; Email: mcdeavitt@cnt.anl.gov

Alumina and Bauxite
Sponsored by: Light Metals Division, Aluminum Committee
Abstract due date: 7/15/01
Papers addressing all aspects of the Bayer Industry are sought for the Bauxite and Alumina sessions: from bauxite through to alumina quality; from analytical methods through to process control; from theoretical aspects to operational issues. Also papers that relate to improvements to the safety and the integrity of the Refineries through design, maintenance procedures and alternative materials are encouraged. The increasing focus on environmental issues, in particular greenhouse emissions and residue disposal, are areas where the Industry needs to be continually aware and seek opportunities for improvement. Papers in these areas are keenly sought. There is a minimum standard of content, clarity and style to be met by all papers; we will assist wherever possible in this regard. Papers of a commercial nature will not be considered. (Please contact TMS for presentation of marketing information at the Commercial Mini-Sessions.) Submit abstracts electronically at http://cms.tms.org or to: Steve Rosenberg, Worsley Alumina Pty. Ltd., Process Chemistry Group, Collie, West Australia 6225 Australia T: 61 8 9734 8315; F: 61 8 9734 8643; Email: steve.rosenberg@wa-pl.com.au. Co-Organizers: Jacques M. Mordini, Aluminium Pechiney, Gardanne, Cedex 13541 France T: 011 334 4265 2126; F: 011 334 4258 0711; Email: jmordini@amt.pechiney.fr

Aluminum Reduction Technology
Sponsored by: Light Metals Division, Aluminum Committee
Abstract due date: 7/15/01
The Aluminum Reduction Technology sessions address all aspects of primary aluminum production technology. Suggested topics are technical innovations, cell design, performance improvements and operating advances. Papers are encouraged on retrofitting and expansion, productivity improvements, modeling and simulation of cells and potrooms, pot control techniques and sensors, inert anodes, as well as environment aspects and emissions. Further subjects of interest are fundamental studies, new processes, materials performance, anode phenomena, bath chemistry, magnetohydrodynamics, heat balance, and cell dynamics. Submit abstracts electronically at http://cms.tms.org or to: Kenneth L. Reed, Eastman Chemical Co., Alcoa, 505 New York Avenue, Roanoke, VA 24011 USA T: 703-746-3225; F: 703-746-3223; Email: krreed@eastman.com. Co-Organizers: Charles H. Reeves, Alcoa, 505 New York Avenue, Roanoke, VA 24011 USA T: 703-746-3225; F: 703-746-3223; Email: charles.reeves@alcoa.com
Automotive Alloys 2002
Sponsored by: Light Metals Division, Aluminum Association
Abstract due date: 7/15/01
Automotive Alloys 2002 symposium is inviting papers to capture the ongoing research, development and testing activities for usage of aluminum and magnesium alloys in automotive applications. Submit abstracts electronically at http://cms.tms.org or to: Subodh K. Das, President, Secat, Inc. & Director, Center for Aluminum Technology, University of Kentucky, Coldstream Research Campus, 1505 Bull Lea Road, Lexington, KY 40511 USA T: 859-514-4955; F: 859-514-4988; Email: skdas@engr.uky.edu

Automotive Alloys 2002  
Sponsored by: Light Metals Division, Aluminum Association  
Abstract due date: 7/15/01  
Automotive Alloys 2002 symposium is inviting papers to capture the ongoing research, development and testing activities for usage of aluminum and magnesium alloys in automotive applications. Submit abstracts electronically at http://cms.tms.org or to: Subodh K. Das, President, Secat, Inc. & Director, Center for Aluminum Technology, University of Kentucky, Coldstream Research Campus, 1505 Bull Lea Road, Lexington, KY 40511 USA T: 859-514-4955; F: 859-514-4988; Email: skdas@engr.uky.edu  

Carbon Technology  
Sponsored by: Light Metals Division, Aluminum Association  
Abstract due date: 7/15/01  
Programming for several sessions will cover anode (both prebaked and sodberberg) and cathode operations as they relate to the aluminum industry. This includes raw materials, paste and green anode manufacture, anode baking, anode rodding, as well as all cathode operations. Also there will be a joint session with Reduction Technology on anode performance in the cell. All aspeas as they relate to properties, analytical procedures, and operations will be included. Papers should avoid any commercialism and must contain substantial new findings or reinterpretations of interest for the aluminum industry. Submit abstracts electronically at http://cms.tms.org or to: Don T. Walton, Aluminum Company of America, Wenatchee Works, Malaga, WA 98828-9728 USA T: 509-663-9317; F: 509-664-8686; Email: don.walton@alcoa.com. Co-Organizers: Les Edwards, CII Carbon, Chalmette, LA 70044 USA T: 504-278-1085 ext 106; F: 504-278-1084; Email: ledwards@ciicarbon.com

Cast Shop Technology  
Sponsored by: Light Metals Division, Aluminum Committee  
Abstract due date: 7/15/01  
Broad-based scientific and engineering papers in the following areas are sought for incorporation in our Cast Shop technical sessions: charge materials, pre-furnace treatment, recycling, melting and melt preparation, dross processing, melt loss, alloying, grain refinement, fluxing, filtration, ingot and shape casting, continuous processing for all shapes (including strip and slab casting), process modeling and control, automation, cast structures, safe melt handling practices, and environmental issues. Submit abstracts electronically at http://cms.tms.org or to: David H. DeYoung, Alcoa Technical Center, Alcoa Center, PA 16069 USA T: 724-337-2269; F: 724-337-4063; Email: david.deyoung@alcoa.com. Co-Organizers: John F. Grandfield, CSIRO Australia, Preston, Victoria 3072 Australia T: 011 61 3 9662 7832; F: 011 61 3 9662 7770; Email: john.grandfield@preston.csiro.au

Charles J. McMahon Interfacial Segregation and Embrittlement Symposium  
Abstract due date: 7/1/01  
Nature and driving force for Interfacial Segregation Temper Embrittlement (Embrittlement in steels due to heat treatment) Segregation and Embrittlement in high temperature alloys due to service exposure Embrittlement due to weld thermal cycles Reheat cracking Weld sensitization Segregation resulting in enhanced corrosion and SCC Irradiation induced segregation and resulting SCC Impact on fracture, fracture mechanisms and fatigue Segregation to other than grain boundaries, and its influence on properties Computer modeling of segregation and the resulting embrittlement Submit abstracts electronically at http://cms.tms.org or to: Vaclav Vitek, University of Pennsylvania, Department of Materials Science and Engineering, Philadelphia, PA 19104 USA T: 215-898-7883; F: 215-898-8296; Email: vitek@soli.lrsn.upenn.edu. Co-Organizers: Clyde Briant, Brown University, Division of Engineering, Providence, RI 02912 USA T: 401-863-2626; F: 401-863-7677; Email: clyde_briant@brown.edu; Harvey D. Solomon, General Electric Company, Research & Development Center, Schenectady, NY 12309 USA T: 518-387-5902; F: 518-387-7495; Email: solomon@crd.ge.com

Computational Phase Transformations  
Abstract due date: 7/15/01

This is the first of a series of annual TMS symposia focusing on the computational thermodynamics and kinetics of phase transformations. Its main objective is to bring together computational materials scientists and engineers to assess the current status of computational thermodynamics and kinetics, and discuss the possibilities of integrating models at different time and spatial scales as applied to phase transformations and the accompanying microstructure evolution. The computational models that are of interest include, but are not limited to, phase equilibria calculations using first-principles and CALPHAD approaches, and dynamic simulations using one or more of the following: Monte-Carlo, microscopic master equations, phase-field models, as well as models based on traditional sharp-interface descriptions. Of particular interest are computational models that integrate two or more different approaches and analyses that compare two or more different approaches, involve simulations with experimental verifications, and discuss the applications and limitations of a particular computational model. Six sessions are anticipated with a number of invited speakers for each session. Submit abstracts electronically at http://cms.tms.org or to: Long-Qing Chen, Pennsylvania State University, Materials Science and Engineering Department, University Park, PA 16802-5005 USA T: 184-865-8101; F: 814-865-2917; Email: qch@psu.edu. Co-Organizers: Mark Asta, Northwestern University, Department of Materials Science and Engineering, Evanston, IL 60208-3108 USA T: 847-491-5940; Email: m-asta@northwestern.edu; Zi-Kui Liu, Pennsylvania State University, Materials Science and Engineering, University Park, PA 16802-5005 USA T: 814-865-1934; F: 814-865- 2917; Email: zkliu@psu.edu; James Aaron Warren, NIST, CTCMS and Metallurgy Division, Gaithersburg, MD 20899-8554 USA T: 301-975-5708; F: 301-975-4553; Email: james.warren@nist.gov

Creep Deformation: Fundamentals and Applications

Sponsored by: ASM International: Materials Science Critical Technology Sector, Jt. Mechanical Behavior of Materials, Powder Metallurgy Committee

Abstract due date: 7/15/01

The overall focus of the symposium is on the application of fundamental creep research to the design and development of high temperature materials for engineering applications. Papers are sought on all aspects of creep deformation and high temperature materials development. We particularly seek papers dealing with the influence of microstructures on various aspects of creep and the application of this information in the design of highly creep resistant materials. The sessions on fundamental behavior will be organized in honor of Professor Amiya K. Mukherjee. The purpose of this symposium is to bring together researchers working on fundamental issues relating to the development and characterization of high temperature materials and design engineers involved in high temperature applications. Submit abstracts electronically at http://cms.tms.org or to: Rajiv S. Mishra, University of Missouri, Metallurgical Engineering, Rolla, MO 65409-0340 USA T: 573-341-6361; F: 573-341-6934; Email: rs mishra@umr.edu. Co-Organizers: James C. Earthman, University of California, Department of Chemical and Materials Science, Irvine, CA 92697-2575 USA T: 949-824-5018; F: 949-824-2541; Email: earthman@uci.edu; Sai V. Raj, NASA Lewis Research Center, Cleveland, OH 44135 USA T: 216-433-8195; F: 216-433-7132; Email: savi.r@larc.nasa.gov

David L. Davidson Symposium on High-Cycle Fatigue

Sponsored by: Structural Materials Division, ASM International: Materials Science Critical Technology Sector, Jt. Mechanical Behavior of Materials

Abstract due date: 7/1/01

High-cycle fatigue has become a major concern in the design and life engineering components and structures. This concern has led to increased research activities in high-cycle fatigue, including basic understanding of failure mechanisms, development of new experimental techniques, analysis methods, and life-prediction methods. The proposed symposium is intended to capture the current research activities and to assess the state-of-the-art in the high-cycle fatigue arena. We propose to organize a four-session symposium on high-cycle fatigue. Some examples of what might be included in the proposed sessions are (1) basic understanding of failure mechanisms, (2) experimental methods and studies, (3) modeling and simulation, and (4) life-prediction methodology. This symposium is organized in honor of Dr. David L Davidson who made very significant contributions in fatigue, and retired from Southwest Research Institute in February 1999, after thirty years of service. Authors of accepted papers will be notified by July 15, 2001. The due date for submitting the papers to one of the organizers is August 31, 2001. Submit abstracts electronically at http://cms.tms.org or to: Kwai S. Chan, Southwest Research Institute, Department of Materials Science, San Antonio, TX 78284 USA T: 210-522-2053; F: 210-522-5122; Email: kchan@swri.edu. Co-Organizers: Peter K. Liaw, University of Tennessee, Department of Materials Science and Engineering, TN 37996-2200 USA T: 423-974-6356; F: 423-974-4115; Email: pliaw@utk.edu

Deformation and Stresses in Small Volumes

Sponsored by: ASM International: Materials Science Critical Technology Sector, Structural Materials Division, Jt. Mechanical Behavior of Materials

Abstract due date: 7/15/01

This symposium will focus on the mechanics properties, stresses, and deformation of materials which have at least one representative dimension in the micron or sub micron length scale. In these materials, such as thin films for microelectronics, wear resistant coatings, or nanostructured composites, deformation and fracture can be either detrimental, leading to system failure; or advantageous, showing greatly enhanced mechanical properties over the bulk state of a material. Papers related to stresses and deformation in thin films, thin film fracture and adhesion, deformation of multilayered materials and nanostructured composites, and advanced and novel testing methods for these materials are sought. Submission of papers addressing the implications of mechanical deformation on electronic and optical materials is encouraged. Submit abstracts electronically at http://cms.tms.org or to: David F. Bahr, Washington State University, Department of Mechanical & Materials Engineering, Pullman, WA 99164-2920 USA T: 509-335-8523; Email: bahr@mme.wsu.edu. Co-Organizers: Eric Kvam, Purdue University, School of Materials Engineering, West Lafayette, IN 47907-1289 USA T: 765-494-4097; F: 765-494-1204; Email: kvam@purdue.edu; Scott X. Mao, University of Pittsburgh, Department of Mechanical Engineering, Pittsburgh, PA 15261 USA T: 412-624-9602; F: 412-624-4846; Email: smao@engr.pitt.edu; Neville R. Moody, Sandia National Laboratories, Livermore, CA 94551-0969 USA T: 925-294-2622; F: 925-294-3410; Email: nmooday@ca.sandia.gov

Engineering Criteria 2000: Experience and Practice

Sponsored by: Education Committee

Abstract due date: 7/15/01

A forum for Materials Engineering programs to present and discuss their experiences with Criteria 2000 from both the ABET visitor prospective as well as the program perspective. Submit abstracts electronically at http://cms.tms.org or to: Dennis Readey, Colorado School of Mines. Co-Organizers: Anthony D. Rollett, Carnegie Mellon University, Department of Materials Science & Engineering, Pittsburgh, PA 15213-3890 USA T: 412-268-3177; F:
Fatigue and Creep of Metal Matrix Composites

Sponsored by: Structural Materials Division, Joint Composite Materials Committee

Abstract due date: 7/15/01

Contributions to the broad area of fatigue and creep of metal matrix composites are solicited. Particle, short fiber, continuous fiber, reinforced in composites will be covered including laminates and layered materials. The relationship between precursor, structure, and fatigue and creep properties and mechanisms is the focus of this symposium. Submit abstracts electronically at http://cms.tms.org or to: Nikhilesh Chawla, Arizona State University, Department of Chemical, Biochemical & Materials Engineering, Tempe, AZ 85287-6006 USA: T: 480-965-2422; F: 480-965-0037; Email: nchawla@asu.edu. Co-Organizers: John J. Lewandowski, Case Western Reserve University, Department of Materials Science and Engineering, Cleveland, OH 44106 USA: T: 216-368-4234; F: 216-368-3209; Email: jjl3@po.cwru.edu

Fatigue of High Temperature Alloys

Sponsored by: Structural Materials Division, High Temperature Alloys Committee

Abstract due date: 7/1/01

This symposium will address the fatigue behavior of high temperature alloys. Both materials and service effects on initiation and crack propagation behavior will be covered. Abstracts for papers in the following areas are sought: (1) processing/microstructure (cast, wrought, powder metallurgy, heat treatment), (2) environmental/mechanical (oxidation, corrosion, thermomechanical, dwell periods), (3) alloy composition/coatings/surface modifications. The symposium will include several invited speakers, and the proceedings will be published as a TMS book. Submit abstracts electronically at http://cms.tms.org or to: Richard S. Bellows, Solar Turbines, Inc., Materials and Process Engineering, San Diego, CA 92186-5376 USA: T: 619-237-8121; F: 619-544-2830; Email: bellow_richard_s@solarturbines.com. Co-Organizers: Winston O. Soboyejo, Princeton University, Princeton Materials Institute, Bowen Hall, NJ 08540 USA; Tom Zogas, Carpenter Technology Corporation, Reading, PA 19612-4662 USA

Flyash: Generation, Treatment, Metal Recovery and Disposal

Sponsored by: Extraction & Processing Division, Waste Treatment & Minimization Committee

Abstract due date: 7/15/01

Many kinds of fly ash are produced; municipal incineration plants, coal-burning electric power stations, pyrometallurgical and other metal processing plants. Fly ash often contains volatile metals such as Zn, Pb, Cu, Cd and others, which should be recovered. At the same time the recovery of metals leads to removal of harmful materials from fly ash. The session will cover the above topics and related areas. Submit abstracts electronically at http://cms.tms.org or to: Junji Shibata, Kansai University, Department of Chemical Engineering, Osaka 564-8680 Japan: T: 011-81-66-386-0856; F: 011-81-66-388-8869; Email: shibata@kansai-u.ac.jp. Co-Organizers: I. Gaballah, Laboratoire Environnement et Mineralurgie, Associated to CNRS, ENSG-LEM, Vandoeuvre lès Nancy 54501 France: T: 33-383-596336; F: 33-383-569585; Email: gaballah@ensg.uncancy.fr; David G. Robertson, University of Missouri-Rolla, Department of Metallurgical Engineering, Rolla, MO 65409-1460 USA: T: 573-341-4709; F: 573-341-6934; Email: davidrob@umr.edu

Fundamentals of Advanced Materials For Energy Conversion

Sponsored by: Extraction & Processing Division, Process Fundamentals Committee

Abstract due date: 7/15/01

The scope of this symposium will be to bring together researchers in the fields of materials related to energy conversion. The focus will be on recent advances made in conversion, storage, and transmission of energy. The emphasis will be on fundamentals and applications of the above mentioned topics. The symposium sessions will include Fuel Cells, Hydrogen and Tritium Storage, Batteries, Superconductors, Magnets/Membrane Materials, Thermal Energy Storage Materials, Photovoltaics, and others. Submit abstracts electronically at http://cms.tms.org or to: Renato G. Bautista, University of Nevada-Reno, Department of Chemical and Metal Engineering, Reno, NV 89557-0136 USA: T: 775-784-1602; F: 775-784-4764; Email: bautista@quake.seismo.unr.edu. Co-Organizers: Dhanesh Chandra, University of Nevada, Reno, Metallics & Materials Engineering, Reno, NV 89557 USA: T: 775-784-4960; F: 775-784-4316; Email: dchandra@unr.edu

Fundamentals of Structural Intermetallics

Sponsored by: ASM International: Materials Science Critical Technology Sector, Structural Materials Division, Joint Mechanical Behavior of Materials Committee

Abstract due date: 6/15/01

This symposium will deal with advances made in the fundamental understanding of structural intermetallics including aluminides (Ti-base, Fe-base, Ni-base), refractory-metal silicides (Nb-base, Mo-base, etc.), advanced intermetallics, intermetallic composites, shape-memory intermetallics, and others. Topic areas to be covered will include: physical metallurgy, alloy development, mechanical behavior & mechanisms, environmental resistance; melting & ingot production, casting, extrusion, forging & rolling, joining & fabrication, machining; powder metallurgy and novel processes. All aspects understood via experimental and/or analytical approaches are to be discussed along with modeling & simulation. Papers will be published in Metallurgical & Materials Transactions A through a stringent review process. Submit abstracts electronically at http://cms.tms.org or to: Young-Won Kim, UES, Inc., Materials & Processing Division, Dayton, OH 45432 T: 937-255-1321; F: 937-656-7292; Email: young-won.kim@afrl.af.mil. Co-Organizers: Kwai S. Chan, Southwest Research Institute, Department of Materials Science, San Antonio, TX 78284 USA: T: 210-522-2053; F: 210-522-5122; Email: KChan@swri.edu; Vijay K. Vasudevan, University of Cincinnati, Department of Materials Science and Engineering, Cincinnati, OH 45221-0012 USA: T: 513 556-3103; F: 513 556-3773; Email: vvvasudev@uceng.uc.edu

General Abstracts

Sponsored by: TMS

Abstract due date: 8/15/01

The TMS Annual Meeting Programming Committee invites you to make plans now to present your research as part of its extensive program of general abstract sessions. In an effort to present a more comprehensive view of current work being carried on in materials science research and industry, particularly new and emerging technologies and techniques, TMS is soliciting general abstract submissions for sessions related to the following areas: alloy phases, aluminum, chemistry and physics of materials, composite materials, corrosion and environmental effects, electronic packaging and inter-connection materials, polymers, powder metallurgy, precious metals, processing fundamentals, reactive metals, recycling, refractory metals, shaping and forming, solidification, superconducting materials, surface engineering, thin films and interfaces. Submit abstracts electronically at http://cms.tms.org or to: TMS, Warrendale, PA 15086 USA: T: 724-776-9042; F: 724-776-3770; Email: ckobert@tms.org
General Poster Session

Submit abstracts electronically at http://cms.tms.org or to: TMS, Warrendale, PA 15086 USA T: 724-776-9042; F: 724-776-3770; Email: ckobert@tms.org

General Pyrometallurgy

Sponsored by: Extraction & Processing Division, Pyrometallurgy Committee

Abstract due date: 7/15/01

General topics in pyrometallurgy, covering the science, technology, and industrial practice of the processing of non-ferrous metals from their ores and or secondary sources by pyrometallurgical means, and their forming into semi-finished, or finished products. Submit abstracts to cms.tms.org

Submit abstracts electronically at http://cms.tms.org or to: Adrian C. Deneyes, Praxair Inc., Tarrytown, NY 10591 USA T: 914-345-6908; F: 914-345-6486; Email: adrian_deneyes@praxair.com

General Topics in Waste Treatment and Minimization

Sponsored by: Extraction & Processing Division, Process Mineralogy Committee, Waste Treatment & Minimization Committee

Abstract due date: 7/15/01

This symposium will address pertinent topics in waste treatment and minimization, with subjects Recycling Refractories and Process Mineralogy. Submit abstracts electronically at http://cms.tms.org or to: Junji Shibata, Kansai University, Department of Chemical Engineering, Osaka 564-8680 Japan T: 011-81-66-368-0856; F: 011-81-66-388-8869; Email: shibata@kansai-u.ac.jp. Co-Organizers: Cheryl Dahlin, US Department of Energy, Albany Research Center, Albany, OR 97321-2152 USA T: 541-967-5843; F: 541-967-5880; Email: dahlin@alrc.doe.gov; I. Gaballah, Laboratoire Environnement et Mineralurgie, Associated to CNRS, ENSG-LÉM, Vandoeuvre 54501 France T: 33-383-596336; F: 33-383-560585; Email: gaballah@ensg.u-nancy.fr; Jasper Kwong, US Department of Energy, Albany Research Center, Albany, OR 97321-2198 USA T: 541-967-5825; F: 541-967-5845; Email: kwong@alrc.doe.gov

High-Temperature Superconductors

Sponsored by: Electronic, Magnetic & Photonic Materials Division, Structural Materials Division, Superconducting Materials Committee

Abstract due date: 7/15/01

The purpose of this symposium is to bring together those actively engaged in synthe-
sis, fabrication, characterization, and applications of high-temperature supercon-
ductors. Their recent results and discuss the future prospects and directions for R&D. Topics include but not limited to: Second generation coated conductors (substrates, buffer layers, superconductor deposition, and protective layer/stabilizer preparation techniques, current transport); Issues in scale-up of coated conductors; Bi-based superconductors (powder-in-tube, thick/thin films, bulk); TI- and Hg-based superconductors; Characterization of superconductors (electrical, microstruc-
tural, mechanical, & biaxial texture); Struc-
ture-Property relationships; Phase equilibriuia studies; and Electronic & Elec-
tric Power applications. Submit abstracts electronically at http://cms.tms.org or to: U. Balu Balachandran, Argonne National Laboratory, Argonne, IL 60439 USA T: 630-252-4250; F: 630-252-3640; Email: balu@anl.gov. Co-Organizers: Pradeep Haldar, Intermetallics General Corporation, Latham, NY 12110-0461 USA T: 518-782-1122; F: 518-783-2615; Email: phaldar@igc.com; Chandra Pande, Naval Research Laboratory, Materials Science and Technology Division, Washington, DC 20375-5000 USA T: 202-767-2744; F: 202-767-2623; Email: pande@anvil.nrl.navy.mil

High Performance Metallic Materials for Cost Sensitive Applications

Sponsored by: Structural Materials Division, Structural Materials Committee, Titanium Committee

Abstract due date: 7/1/01

High performance structural materials are used in an ever-increasing array of prod-
ucts that are highly cost-sensitive. These cost-sensitive applications span several in-
dustries, including automobile, aerospace, energy production, and consumer products industries. In order to maintain competi-
tiveness, improved materials and processing technologies are critical to maintaining high performance while reducing acquisi-
tion and life-cycle costs. For example, titanium has continued to be one of the most costly, but widely-utilized, high perfor-
manice materials for which cost re-
duction is of critical importance. Alumi-
num alloys have made significant inroads into automobile manufacturing thanks in large part to acquisition cost reductions and greater efficiency in processing and forming technologies. This symposium will examine recent advances and best prac-
tices in structural materials selection, de-
sign, and manufacturing for producing af-
fordable components, emphasizing tita-
nium, aluminum, and other advanced me-
tallic materials. Focal areas include melt-
ing, casting, powder metallurgy, forging, forming, extrusion, and machining. Topics of particular interest include processing ad-
vances, innovative processing techniques, process modeling and materials by design, new alloys as well as related processing-
microstructure-properties-performance-
cost studies. Written papers are solicited to be published as proceedings. Submit ab-
stracts electronically at http://cms.tms.org or to: Edward Y. Chen, Titech International Inc., Pomona, CA 91768 USA T: 909-595-7455; F: 909-598-6526; Email: titechint1@yahoo.com. Co-Organizers: Rod Boyer, Boeing Commercial Airplane Group, Seattle, WA 98124-2207 USA T: 206-965-2461; F: 206-965-1440; Email: rodney.r.boyer@boeing.com; James Cotton, The Boeing Company, Seattle, WA 98124-2499 USA T: 425-234-2681; F: 425-234-2863; Email: james.d.cotton@bo-
ing.com; F. H. (Sam) Froes, University of Idaho, Institute of Materials and Advanced Processes, Moscow, ID 83844-3026 USA T: 208-885-7998; F: 208-885-4009; Email: imap@uidaho.edu; Eric M. Taleff, University of Texas, Mechanical Engineering De-
partment, Austin, TX 78712-1063 USA T: 512-471-5378; F: 512-471-7681; Email: taleff@mail.utexas.edu

Hume-Rothery Award Symposium: CALPHAD and Alloy Thermodynamics

Sponsored by: Electronic, Magnetic & Photonic Materials Division, Structural Materials Division, Alloy Phases Committee

Abstract due date: 6/15/01

This symposium is held in honor of the 2002 Hume-Rothery Award recipient, Dr. Larry Kaufman, will emphasize all theoretical aspects of computational thermodynamics and kinetics, and their impact on the science of alloys and materials design. All participants are invited speakers, and have been asked to review important subjects in the field. Specifically, this symposium will provide an assessment of the CALPHAD approach pioneered by Larry Kaufman, a current status of the software approach and their range of applicability, the impact of CALPHAD on alloy thermodynamics and design, and future prospects. Submit abstracts electronically at http://cms.tms.org or to: Patrice E. A. Turchi, Lawrence Livermore National Laboratory, Materials Science and Technology Division, Livermore, CA 94551 USA T: 925-422-9925; F: 925-423-7040; Email: turchi1@llnl.gov. Co-Organizers: Antonios Gonis, Lawrence Livermore National Labo-
ratory, Livermore, CA 94551-0808 USA T: 925-422-7150; F: 925-423-7040; Email: gonis1@llnl.gov; Robert D. Shull, NIST, 855.11, Gaithersburg, MD 20899-8552 USA T: 301-975-6035; F: 301-975-4553; Email: robert.shull@nist.gov

Imaging of Dynamic Processes

Sponsored by: Extraction & Processing Division, Materials Processing and Manu-

facturing Division, Jt. Processing Modeling Analysis & Control Committee

Abstract due date: 7/15/01

New experimental techniques and devices for capturing visual images have permitted development of enhanced understanding of dynamic processing operations. These will be reviewed along with the understanding that has been created. Submit abstracts electronically at http://cms.tms.org or to: Iver Anderson, Iowa State University, Ames Laboratory, Ames, IA 50011-3020 USA T: 515-294-8252; F: 515-294-8727; Email: anderson@ameslab.gov

International Symposium on Science and Technology of Interfaces in Honor of Dr. Bhakta Rath

Sponsored by: Structural Materials Division, ASM International: Materials Science Critical Technology Sector, Electronic, Magnetic & Photonic Materials Division, Physical Metallurgy Committee, Superconducting Materials Committee, Jt. Mechanical Behavior of Materials, Titanium Committee

Abstract due date: 4/30/01

The objective of this symposium is to present current research and developments on interfaces in a variety of materials ranging from advanced nanostructured materials to high Tc superconductors. Special attention will be paid to the effects of interfaces on the unique, highly desirable properties of these materials; as well as their applications. The symposium aims to assess the current status and to indentify future directions of R&D in these materials. Special focus will be on the following topics: synthesis and processing; modeling; characterization & properties. Submit abstracts electronically at http://cms.tms.org or to: Srini Chada, Motorola, Department APTC, Fort Lauderdale, FL 33322 USA T: 954-723-5293; F: 954-723-5554; Email: srinivas.chada@motorola.com. Co-Organizers: Darrel R. Frear, Motorola, Tempe, AZ 85284 USA T: 480-413-6655; F: 480-413-4511; Email: darrel.frear@motorola.com; Sung-Ho Jin, Lucent Technologies, Bell Laboratories, Murray Hill, NJ 07974 USA T: 908-582-4076; F: 908-582-3609; Email: jin@lucent.com; Sung Kang, IBM, TJ Watson Research Center, Yorktown Heights, NY 10598 USA T: 914-945-3932; F: 914-945-2141; Email: kang@ibm.com; C. Robert Kao, National Central University, Department of Chemical Engineering, Chungli City, Taiwan T: 011 886 3 4227382; Email: 011 886 3 4227382; Email: kaocor@hotmail.com; Halvor Kvae, Norsk Hydro ASA, Oslo N-0240 Norway T: 011 47 22 53 9155; F: 011 47 22 53 7778; Email: halvor.kvane@hydro.com; Michael J. Pfeifer, Motorola, Northbrook, IL USA 60062 T: 847-480-5216; F: 847-480-3597; Email: michael.pfeifer@motorola.com; Martin Weiser, Honeywell Electronics Materials, Plated and Discrete Products, Spokane, WA 99216 USA T: 509-252-2757; F: 509-252-8617; Email: weisemw@jmspk.com

Magnesium Technology 2002

Sponsored by: Light Metals Division, Magnesium Committee, International Magnesium Association

Abstract due date: 7/15/01

The scope of the conference will deal with all aspects of magnesium technology, from production and mining to part manufacturing technology and on to physical and mechanical and corrosion properties of new and existing magnesium alloys. The list of session topics should be as follows (subject to further suggestions by the committee):

1. Fundamental of Magnesium Production-Electrolytic or Thermal Materials for Magnesium production Magnesium Cast House technology, casting and solidification Environmental issues Magnesium recycling/cr gas issues Alloy development: Structural, Thixo and Wrought alloys, high temperature alloys Corrosion, cathodic protection, corrosion resistant alloys and coatings Alloy properties and new applications Magnesium and the automotive industry Magnesium R&D needs Submit abstracts electronically at http://cms.tms.org or to: Howard I. Kaplan, Magnesium Corporation of America, Salt Lake City, UT 84116 USA T: 801-532-2043 x567; F: 801-534-1407; Email: hakpl-an@magnesiumcorp.com. Co-Organizers: Menachem Bamberger, Email: mbamb-er@MIT.EDU; Byron B. Clow, International Magnesium Association, McLean, VA 22101 USA T: 703-442-8888; Email: ima@bellatlantic.net; Gerald S. Cole, Ford Motor Company, Ford Research Laboratories, Dearborn, MI 48121 USA T: 313-302-1860; F: 313-390-0514; Email: gcole@ford.com; Rod Esdale Email: Esdale@aol.com; John N. Hryn, Argonne National Laboratory, Argonne, IL 60439-4815 USA T: 630-252-5894; F: 630-252-1342; Email: hryn@anl.gov; Zi-Kui Liu, Pennsylvania State University, Materials Science and Engineering, University Park, PA 16002-5005 USA T: 814-865-1934; F: 814-865-2917; Email: zikui@psu.edu; John L. Mihelich, Metal Experts International, Winston, GA 30187 USA T: 770-942-7893; F: 770-942-0945; Email: yodonna@aol.com; Ramaswami Neele-meggham, Magnesium Corporation of America, Salt Lake City, UT 84116 USA T: 801-532-1522 280; F: 801-596-1132; Email: rnellemeggham@magnesium-cor.com; Eric A. Nyberg, Pacific Northwest National Laboratory, Materials Processing Group, Richland, WA 99352 USA T: 509-372-2510; F: 509-376-6034; Email: eric.nyberg@pnl.gov; Mihriban O. Pekguleryez, Noranda, Noranda Technology Centre, Pointe-Claire, Quebec H9R 1G5 Canada T: 514-630-9339; F: 514-630-9379; Email: pekguler@ntc.noranda.com; Bob R. Powell, General Motor Corporation, APTC, Fort Lauderdale, FL 33322 USA T: 954-723-5293; F: 954-723-5293; Email: hkapl-an@magnesiumcorp.com; Martin Weiser, Honeywell Electronics Materials, Plated and Discrete Products, Spokane, WA 99216 USA T: 509-252-2757; F: 509-252-8617; Email: weisemw@jmspk.com

Materials Processing Fundamentals

Sponsored by: Extraction & Processing Division, Process Fundamentals Committee

Abstract due date: 7/15/01

This symposium will cover all aspects of

Lead-Free Solders and Materials Issues in Microelectronic Packaging

Sponsored by: Electronic, Magnetic & Photonic Materials Division

Abstract due date: 7/16/01

The focus of this symposium will be on emerging and established lead-free and lead-bearing solders, metallizations (board and component finishes) and various materials issues, including soldering processes for electronic, optical/optoelectronic and MEMS packaging. This symposium will address the materials and manufacturing aspects of alloy design of solders, structure-property-processing relationships of bulk solders as well as solder joints, influence of surface and underbump metallization on solderability and reliability of solders, microstructure modeling and control, reliability modeling and testing methodologies of electronic, MEMS and optical/optoelectronic packages. The symposium will also cover lead-free materials for metal-semiconductor contacts, alternative interconnect technology for stress management at both wafer-level and chip to package level, and the issues involved in the design and integration of conductive adhesives in electronic packages. Topics related to lead-free soldering in optoelectronic and microelectronic packages, such as BGA, micro-BGA, chip-scale etc. are also of special interest. Submit abstracts electronically at http://cms.tms.org or to: Srini Chada, Motorola, Department APTC, Fort Lauderdale, FL 33322 USA T: 954-723-5293; F: 954-723-5554; Email: srinivas.chada@motorola.com. Co-Organizers: Darrel R. Frear, Motorola, Tempe, AZ 85284 USA T: 480-413-6655; F: 480-413-4511; Email: darrel.frear@motorola.com; Sung-Ho Jin, Lucent Technologies, Bell Laboratories, Murray Hill, NJ 07974 USA T: 908-582-4076; F: 908-582-3609; Email: jin@lucent.com; Sung Kang, IBM, TJ Watson Research Center, Yorktown Heights, NY 10598 USA T: 914-945-3932; F: 914-945-2141; Email: kang@ibm.com; C. Robert Kao, National Central University, Department of Chemical Engineering, Chungli City, Taiwan T: 011 886 3 4227382; Email: 011 886 3 4227382; Email: kaocor@hotmail.com; Halvor Kvae, Norsk Hydro ASA, Oslo N-0240 Norway T: 011 47 22 53 9155; F: 011 47 22 53 7778; Email: halvor.kvane@hydro.com; Michael J. Pfeifer, Motorola, Northbrook, IL USA 60062 T: 847-480-5216; F: 847-480-3597; Email: michael.pfeifer@motorola.com; Martin Weiser, Honeywell Electronics Materials, Plated and Discrete Products, Spokane, WA 99216 USA T: 509-252-2757; F: 509-252-8617; Email: weisemw@jmspk.com

Magnesium Technology 2002

Sponsored by: Light Metals Division, Magnesium Committee, International Magnesium Association

Abstract due date: 7/15/01

The scope of the conference will deal with all aspects of magnesium technology, from production and mining to part manufacturing technology and on to physical and mechanical and corrosion properties of new and existing magnesium alloys. The list of

Materials Processing Fundamentals

Sponsored by: Extraction & Processing Division, Process Fundamentals Committee

Abstract due date: 7/15/01

This symposium will cover all aspects of
the fundamentals, synthesis, analysis, design, monitoring, and control of metals, materials, and metallurgical processes and phenomena. Topics include the experimental, analytical, and computer modeling aspects of the physical chemistry, thermodynamics, and transport phenomena in materials and metallurgical processes as well as monitoring and control methodologies involved in these processes. Research relating to processes involving iron and steel, nonferrous metals, or lightweight alloys and topics that relate to process monitoring and control involving laboratory and in-plant validation are especially encouraged. Submit abstracts electronically at http://cms.tms.org or to: P. N. Anyalebechi, ALCOA, Ingot & Solidification Platform, Alcoa Center, PA 15069-0001 USA T: 724-337-2467; F: 724-337-4083; Email: princewill.anyalebechi@alcoa.com. Co-Organizers: A. Powell, MIT, Cambridge, MA 02139-4301 USA T: 617-452-2086; F: 617-253-5418; Email: hazelsct@mit.edu

Modeling of High Temperature Alloy Processing

Sponsored by: Materials Processing and Manufacturing Division, Jt. Processing Modeling Analysis & Control Committee, Shaping and Forming Committee, Solidification Committee

Abstract due date: 7/15/01

The symposium focuses on the modeling of processing of high temperature alloys (titanium and nickel based alloys in particular) from melting and solidification through deformation and heat treatment. We are interested in submissions on predictions of transport phenomena, deformation and residual stress, and/or microstructural development during processes such as casting, remelting and refining (ESR, VAR, PAM, EBW), heat treatment, rolling, incremental forging, hot-die forging, flow-forming, HIP, and powder processing. Submit abstracts electronically at http://cms.tms.org or to: Matt Krane, Purdue University, Department of Materials Engineering, West Lafayette, IN 47907 USA T: 765-494-4107; F: 765-494-1204; Email: krane@ecn.purdue.edu. Co-Organizers: Suhas P. Vaze, Concurrent Technologies Corporation, Johnstown, PA 15904 USA T: 814-269-6236; F: 814-269-7299; Email: vaze@ctc.com

Phase Stability, Phase Transformations & Reactive Phase Formation in Electronic Materials

Sponsored by: Electronic, Magnetic & Photonics Materials Division, Structural Materials Division, Alloy Phases Committee

Abstract due date: 7/15/01

This symposium addresses phase stability, phase transformation, and reactive phase formation issues in electronic materials. Topics of interest include, but are not limited to, phase stability of flip-chip UBM, interfacial reactions at solder joints, phase transformations in lead-free solders during the soldering process, dimensional stability of solder joints in optoelectronics, phase transformations in silicide materials, phase stability of contacts and interconnects in ICs, new barrier layers for Cu processes, self-assembled quantum dots, multicomponent III-V materials, and chemical interactions between electronic materials. Papers on experimental and theoretical investigations of related topics are all welcome. Submit abstracts electronically at http://cms.tms.org or to: Sinn-wen Chen, National Tsing-Hua University, Department of Chemical Engineering, Hsinchu City, Taiwan T: 011 886 3 5721734; F: 011 886 3 5715408; Email: swchen@ch.e.nthu.edu.tw. Co-Organizers: C. Robert Kao, National Central University, Department of Chemical Engineering, Chungli City, Taiwan T: 011 886 3 4227382; F: 011 886 3 4227382; Email: kaoer@hotmail.com; H. M. Lee, Korea Advanced Institute of Science & Technology, Department of Materials Science & Engineering, Taejon, Korea T: 011 82 42 869 3334; F: 011 82 42 869 3334; Email: hmllee@sorak.kaist.ac.kr; Michael R. Notsis, Lehigh University, Department of Materials Science, Bethlehem, PA 18015 T: 610-758-4225; F: 610-758-4244; Email: mn611@lehigh.edu; Douglas J. Swope, University of Pittsburgh, Department of Metallurgical & Materials Engineering, Houghton, MI 49931 USA T: 906-487-3352; Email: dswenson@mtu.edu

Modeling of Multi-Scale Phenomena in Materials Processing


Abstract due date: 7/15/01

Cellular metals and designed porous structures are attractive lightweight structural materials with potential applications in automotive, aerospace, electronics and other industry. Such materials as metal foams, sponge-like metals as well as periodic geometry core structures, e.g. trusscore, honeycomb, hollow sphere, triangular core, etc. are being increasingly considered a solution for problems of light-weight construction, heat exchangers, passive safety, sound damping, filtering, thermal stability and other purposes. Other cellular structures are designed and built per mathematical design methodology to yield uncommon properties. A number of companies are involved in manufacturing such materials and evaluating their properties, and possible applications of cellular metals for a variety of purposes. Modeling of thermal effects, deformation and other characteristics have also made steady progress. This global symposium underscores the enthusiasm in this unique group of materials and structures. Abstracts from authors representing government, industry, and academia are invited in the following areas: (i) design concepts and functional properties, (ii) processing technologies, (iii) microstructure and property characterization, (iv) modeling of properties, (v) component fabrication, and (vi) applications and

Processing and Properties of Lightweight Cellular Metals and Structures


Abstract due date: 7/15/01

Cellular metals and designed porous structures are attractive lightweight structural materials with potential applications in automotive, aerospace, electronics and other industry. Such materials as metal foams, sponge-like metals as well as periodic geometry core structures, e.g. trusscore, honeycomb, hollow sphere, triangular core, etc. are being increasingly considered a solution for problems of light-weight construction, heat exchangers, passive safety, sound damping, filtering, thermal stability and other purposes. Other cellular structures are designed and built per mathematical design methodology to yield uncommon properties. A number of companies are involved in manufacturing such materials and evaluating their properties, and possible applications of cellular metals for a variety of purposes. Modeling of thermal effects, deformation and other characteristics have also made steady progress. This global symposium underscores the enthusiasm in this unique group of materials and structures. Abstracts from authors representing government, industry, and academia are invited in the following areas: (i) design concepts and functional properties, (ii) processing technologies, (iii) microstructure and property characterization, (iv) modeling of properties, (v) component fabrication, and (vi) applications and
investments. Abstracts, not exceeding 150 words in length, should be submitted to Prakash A. K. Ghosh. Proceedings of this special symposium will be prepared and made available at the time of the conference. A 10-page camera-ready manuscript will be required to be submitted by October 1, 2001. (Instructions for manuscript preparation will be mailed to the authors, after review of abstracts, around August 15, 2001). Submit abstracts electronically at http://cms.tms.org or to: Sean M. McDeavitt, Argonne National Laboratory, Chemical Technology Division, Argonne, IL 60439-4837 USA: T: 630-252-4308; F: 630-252-9917; Email: mcdeavitt@cmt.anl.gov

Recycling—General Sessions

Sponsored by: Extraction & Processing Division, Light Metals Division, Recycling Committee

Abstract due date: 7/1/01

Sessions will cover innovative research work, advances in ongoing research, and general industrial practices from recycling of materials. Reports of work in other fields, including optimization of physical, aqueous, and thermal processing of scrap and waste; environmental and economic impacts; material selection and design based on recyclability; life-cycle analysis of materials; properties; and applications of recovered materials are welcomed. Submit abstracts electronically at http://cms.tms.org or to: John N. Hryn, Argonne National Laboratory, Argonne, IL 60439-4815 USA: T: 630-252-5894; F: 630-252-1342; Email: hryn@anl.gov

Second International Symposium on Ultrafine Grained Materials

Sponsored by: Materials Processing and Manufacturing Division, Shaping and Forming Committee

Abstract due date: 7/1/01

This is the second international symposium that focuses on all aspects of science and technology of bulk ultrafine-grained (UFG) materials produced by Severe Plastic Deformation (SPD) techniques. Recently, there have been increasing R&D activities in this area because of the potential of the SPD techniques in producing clean and fully dense, bulk UFG materials for scientific explorations as well as practical structural and functional applications. This symposium provides a forum on the areas of processing and microstructures, microstructural evolution, mechanical and physical properties, superplasticity, computational and analytical modeling, new SPD technologies and advances, etc. A proceedings book will be available at the meeting. Submit abstracts electronically at http://cms.tms.org or to: Yuntian Ted Zhu, Los Alamos National Laboratory, Materials Science and Technology Division, Los Alamos, NM 87545 USA: T: 505-667-4029; F: 505-667-2264; Email: yzhu@lanl.gov. Co-Organizers: Todd Hufnagel, Johns Hopkins University, Department of Materials Science and Engineering, Baltimore, MD 21218-2689 USA; Marc A. Meyers, IMM, University of California, San Diego, CA 92093 USA: T: 619-534-5119; F: 619-534-8908; Email: nameyers@ucsd.edu; Hans Jorgen Roven, Norwegian University of Science and Technology, NTNU, Department of Metallurgy, Trondheim N-7034 Norway.

Surface Engineering: Science & Technology II

Sponsored by: Materials Processing and Manufacturing Division, Surface Engineering Committee

Abstract due date: 7/15/01

This Symposium will address the scientific issues related to Surface Engineering phenomenon in synthesis, characterization and application for all materials. The objective of the symposium is to provide a
multidisciplinary discussion on surface-related phenomena by which materials performance may be enhanced through engineered interfaces and surface modification technologies. Submit abstracts electronically at http://cms.tms.org or to: Ashok Kumar, University of South Florida, Department of Mechanical Engineering, Tampa, FL 33620 USA: T: 813-974-3942; F: 813-974-3610; Email: akumar1@eng.usf.edu. Co-Organizers: Yip-Wah Chung, Northwestern University, Department of Materials Science & Engineering, Evanston, IL 60208 USA: T: 847-491-3112; F: 847-491-7820; Email: ywchung@nwu.edu; Gary L. Doll, The Tinken Company, Canton, OH 44706 USA; D. S. Mishra, I.I.T, Bombay, Department of Metallurgy and Materials Engineering, Golden, CO 80401 USA: T: 303-273-3770; F: 303-279-9527; Email: jjmooore@mines.edu; Kyoshi Yatsui, Nagoka University of Technology, Nagaoka, Niigata 840-2188 Japan.

Synthesis of Lightweight Metal IV
Sponsored by: Structural Materials Division, Titanium Committee
Abstract due date: 7/15/01
This symposium will address recent advances in the synthesis and processing of lightweight metallic materials. It is envisioned that the majority of papers will consider the low-density materials-Al, Mg, Ti and Be and composites based on these materials. Synthesis methods, such as rapid solidification, mechanical alloying, and vapor deposition, will be addressed. Spray methods, including co-spraying, will be included. Plasma and other high-energy techniques, such as electron-beam techniques will be addressed. Nanostructure materials, combustion synthesis, and metal-matrix composites will be covered. Other synthesis/processing methods will include thermomechanical processing (use of hydrogen as a temporary alloying element) and other methods under the general umbrella of the symposium theme. Submit abstracts electronically at http://cms.tms.org or to: F. H. (Sam) Froes, University of Idaho, Institute of Materials and Advanced Processes, Moscow, ID 83844-3026 USA: T: 208-885-7989; F: 208-885-4009; Email: imap@uidaho.edu. Co-Organizers: Dan Eliezer, Ben Gurion University of the Negev, Department of Materials Engineering, Beer-Sheva 84105 Israel T: 972-76-461-467; F: 972-76-472-931; Email: deliezer@bgumail.bgu.ac.il; Lu Li, University of Singapore, Department of Mechanical Engineering, Singapore 119260; Malcolm Ward-Close, Defence Evaluation and Research Agency, Structural Materials Center, Farnborough, Hampshire GU140LX UK: T: 44-1252-392540; F: 44-1252-397303; Email: mwardclose@defra.gov.uk; Dejiang Zhang, The University of Waikato, Department of Materials & Processing Engineering, Hamilton, New Zealand T: 011-647-838-4738; F: 011-647-838-4735; Email: d.zhang@waikato.ac.nz

Teaching and Learning Hydrometallurgical Science and Engineering
Sponsored by: Extraction & Processing Division, Aqueous Processing Committee, Copper, Nickel, Cobalt Committee, Precious Metals Committee, Waste Treatment & Minimization Committee
Abstract due date: 7/15/01
The focus of this symposium is teaching and learning in hydrometallurgy science and engineering. The goal is to bring together people from academia and industry to discuss the issues involved in educating students in hydrometallurgy. It is hoped that there will be a strong international representation. The sessions will be organized to help bridge the gap between universities and industry, with the hope that each will help the other to improve current teaching approaches. Two special sessions are planned. One will be a panel discussion involving professors, industry professionals and students on how industry and academia can work together to better educate hydrometallurgists. The other session will involve short presentations followed by demonstrations through many types of instruction technology, both academic and commercial, that are available. Other possible sessions topics include: Distance/online learning and education; From university to the plant: Industrial perspective; Environmental hydrometallurgy; Teaching and learning on the fly: Incorporating process economics/plan design in courses; Industry-University partnerships for research; and Internships and cooperative education. Submit abstracts electronically at http://cms.tms.org or to: Saskia Duyvesteyn, University of Utah, Department of Metallurgical Engineering, Salt Lake City, UT 84112-0114 USA: T: 801-581-5491; F: 801-581-4937; Email: hysohn@mines.utah.edu

Third International Sulfide Smelting Symposium: “Sulfide Smelting ’02’
Sponsored by: Extraction & Processing Division, Pyrometallurgy Committee
Abstract due date: 7/15/01
This symposium will focus on all aspects of the pyrometallurgical production of primary metals from sulfide concentrates. Papers describing industrial operations producing copper or nickel as well as the direct production of lead or zinc are encouraged. Some key areas to be explored are smelting and/or converting processes, recently completed capital projects, current operating practices, the predicted future of sulfide smelting operations, furnace integrity and refractory design, gas handling processes and equipment, issues related to the treatment of high strength sulfur dioxide-containing off-gases, the production of alternative sulfur products, the treatment of acid plant blowdown streams and sulfated smelter dusts, and the capture and treatment of fugitive emissions. Submit abstracts electronically at http://cms.tms.org or to: Robert L. Stephens, Cominco Research, Trail, British Columbia V1R 4S4 Canada T: 250-364-4295; F: 250-364-4400; Email: rob.stephens@trail.com. Co-Organizers: H. Y. Sohn, University of Utah, Department of Metallurgical Engineering, Salt Lake City, UT 84112 USA: T: 801-581-5491; F: 801-581-4937; Email: hysohn@mines.utah.edu

Water Vapor Effects on Oxidation of High-Temperature Materials
Sponsored by: ASM International: Materials Science Critical Technology Sector, Structural Materials Division, Corrosion and Environmental Effects Committee
Abstract due date: 7/15/01
Water vapor is a constituent in combustion and other high-temperature environments. Its influence on high-temperature corrosion and environmental effects has long been recognized, but, over the past few years, various effects of water vapor on the degradation of metallic and ceramic materials have drawn increasing intense scientific and technological interest. Accordingly, this symposium will serve as a forum for investigators studying effects of water vapor on high-temperature oxidation in order to understand underlying mechanisms and predict material performance under a variety of environmental conditions (low to high water vapor concentrations/pressures, temperature cycling, influence of other reactive species, etc.). Papers describing work with metals/ alloys as well as ceramics will be included. A post-symposium proceedings volume is planned. Submit abstracts electronically at http://cms.tms.org or to: Peter F. Tortorelli, Oak Ridge National Laboratory, Oak Ridge, TN 37831-6156 USA: T: 865-574-5119; F: 865-241-0215; Email: tortorelli@ornl.gov. Co-Organizers: Karren L. More, Oak Ridge National Laboratory, Metallurgy and Ceramics Division, Oak Ridge, TN 37831-6064 USA: T: 865-574-7788; F: 865-574-8443; Email: morekl@ornl.gov; Elizabeth J. Opila, NASA Glenn Research Center, Cleveland, OH 44135 USA: T: 216-433-8904; F: 216-433-8000; Email: Elizabeth.J.Opila@nasa.gov.uk; Deliang Zhang, The University of Idaho, Institute of Materials Science and Engineering, Hamilton, New Zealand T: 011-647-838-4738; F: 011-647-838-4735; Email: d.zhang@waikato.ac.nz
### FUTURE MEETING SITES

<table>
<thead>
<tr>
<th>MEETING</th>
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<tr>
<td><strong>Annual Meeting and Exhibition:</strong></td>
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<td>More than 1,000 technical presentations and</td>
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<td>materials science and technology.</td>
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<td>2002 - Seattle, WA</td>
<td>February 17-21</td>
<td>Wash. State Conv. &amp; Trade Center</td>
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<td>2003 - San Diego, CA</td>
<td>March 2-6</td>
<td>San Diego Convention Center</td>
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<td>2004 - Charlotte, NC</td>
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| **Fall Meeting: Physical Metallurgy and       |            |                                       |
| Materials:**                                  |            |                                       |
| A program focusing on new developments in     |            |                                       |
| materials research and applications held in   |            |                                       |
| conjunction with ASM’s Materials Week and the  |            |                                       |
| Materials Expo.                               |            |                                       |
| 2002 – Columbus, OH                           | October 7-10 | Adams Mark                            |

| **Fall Extraction & Process Metallurgy Meeting:** |            |                                       |
| 2001 – San Diego, CA                          | September 23-26 | Hilton San Diego Resort              |
|                                               | Computational  |                                       |
|                                               | Modeling of    |                                       |
|                                               | Materials,     |                                       |
|                                               | Minerals and    |                                       |
|                                               | Metals         |                                       |
| 2002 – Lulea, Sweden                          | June 16-20    | Lulea University of Technology       |

| **Electronic Materials Conference:**          |            |                                       |
| The annual forum devoted to discussion of     |            |                                       |
| preparation and characterization of electronic|            |                                       |
| materials.                                   |            |                                       |
| 2001 – Notre Dame, IN                        | June 27-29  | University of Notre Dame              |
| 2002 – Santa Barbara, CA                     | June 26-28  | University of California              |

| **Topical Conferences:**                      |            |                                       |
| 2001 – Notre Dame, IN                        | June 25-27  | University of Notre Dame              |
| 2001 – Jackson Hole, WY                      | September 23-27 | Snow King Resort          |
|                                               | International Symposium on Structural Intermetallics - 3 |                                       |
| 2002 – Santa Barbara, CA                     | June 24-26  | University of California              |
|                                               | Device Research Conference                            |                                       |

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For more information on any of these conferences, please contact:

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