

Announcements & Calls for Papers

TMS

2002 Fall Meeting

DATE: October 6–10, 2002

LOCATION: Columbus, OH

PROGRAMMING: An extensive program of technical sessions focusing on physical metallurgy and materials science will update metallurgists materials scientists and engineers with the latest scientific and technical developments are being programmed and sponsored by three technical divisions of TMS: Electronic, Magnetic & Photonic Materials Division (EMPMD), Materials Processing & Manufacturing Division (MPMD), Structural Materials Division (SMD), and the ASM International: Material Science Critical Technology Sector (ASM-MSCTS).

All technical programs are accessible through the TMS 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.

Characterization and Representation of Material Microstructure

Sponsored by: Structural Materials Division

Abstract due date: 3/15/02

This symposium will address recent advancements in the development of experimental methods to characterize, quantify, and visualize material microstructures in three dimensions (3-D), and the mathematical representation of microstructural features. In particular, this symposium will focus on the following topics: Experimental methods for characterizing microstructures in 3-D, which includes methods such as serial sectioning, 3-D atom probe, and x-ray tomography; Stereology, quantitative microscopy, and parameterization of microstructural features; Computer Visualization and Rendering of Material Microstructures in 3-D; and Mathematical Representation of Material Microstructures. Submit abstracts electronically at <http://cms.tms.org> or to: Mike Uchic, Air Force Research Laboratory, Dayton, OH 45433-7817 USA

T: 937-255-4784 F: 937-255-3007. Co-Organizers: Dennis M. Dimiduk, Wright-Patterson AFB, WL/MD, WPAFB, OH 45433 USA T: 937-255-9839 F: 937-255-1321 Email: dimidudm@ml.wpafb.af.mil; George Spanos, Naval Research Laboratory, Physical Metallurgy Branch, Washington, DC 20375 USA T: 202-767-5791 Email: spanos@anvil.nrl.navy.mil

Corrosion in Reactors and Nuclear Power Systems

Sponsored by: Structural Materials Division; Corrosion & Environmental Effects Committee, Nuclear Materials Committee

Abstract due date: 4/15/2002

Interest in the revived growth of nuclear power has been increasing both within the USA and globally. Materials issues, particularly corrosion, remain important to the current generation of reactors and are critical to areas ranging from waste disposition to the implementation of advanced concepts. This symposium seeks to bring together experts with broad interest and experience in issues of corrosion and materi-

als compatibility in nuclear systems. Topics of interest to current LWRs include radiolytic effects in aqueous corrosion, stress corrosion cracking, and hydrogen embrittlement. Advanced reactors include both generation 3 and 4 LWRs and HTGR systems such as the pebble bed concept. We are also soliciting papers in areas relevant to waste disposition such as materials for waste containers and materials accelerator transmutation applications such as liquid metal corrosion of metals and ceramics and aqueous corrosion of target materials. Submit abstracts electronically at <http://cms.tms.org> or to: Robert Hanrahan, Los Alamos National Laboratory, MS G770, Los Alamos, NM 87544 USA T: 505-667-9560; Email: hanrahan@lanl.gov

Forming and Shaping of Light Weight Automotive Structures

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

Abstract due date: 4/15/02

This symposium provides a forum on forming and shaping of lightweight automotive structures. The materials include, but are not limited to, ultra-high strength steels, aluminum alloys, magnesium alloys, and polymer composites. The processing technologies include, but are not limited to rollforming, stamping, casting, hydroforming, bending, crushing, forging, extrusion, welding, injection molding, and compression molding. Papers of academic research, contracted research, industrial R&D, and commercialization of new technologies and materials related to reducing weight are solicited. Submit abstracts electronically at <http://cms.tms.org> or to: Dan Zhao, Johnson Controls, Inc., Plymouth, MI 48170 USA T: 734-254-7604 F: 801-751-4201 Email: dan.zhao@jci.com. Co-Organizers: Prabir Chaudhury, Intercontinental Manufacturing, Garland, TX 75046 USA T: 972-276-5131 ext. 432 F: 972-276-9278 Email: chaudhury@imco-bergman.com; Mahmoud Y. Demeri, Ford Motor Company, Manufacturing Systems Department, Northville, MI 48167 USA T: 313-845-6092 F: 313-390-0514 Email: mderi@ford.com; Zhe Jin, Alcoa Technical Center, Thermomechanical Processing and Alloy Development, Alcoa Center, PA 15069 USA Email: Zhe.Jin@alcoa.com

Interstitial and Substitutional Solute Effects in High Temperature Materials and Alloys

Sponsored by: Structural Materials Division, High Temperature Alloys Committee, Structural Materials Committee

Abstract due date: 3/1/02

This symposium will address recent developments in the understanding of the effects of interstitial and substitutional solute atoms on the physical and mechanical properties of high temperature structural materials and alloys. It will provide a forum for discussing the theory, modeling, and experimental analysis of such effects as solid-solution hardening, point defect-solute interactions, stoichiometry effects, static and dynamic strain aging, the Portevin-Le Chatelier effect, internal friction measurements, dislocation-solute interactions, gettering effects and other related topics. Abstracts spanning the entire spectrum of refractory metals, intermetallics, superalloys and other alloys intended for application at high temperatures. Sub-

mit abstracts electronically at <http://cms.tms.org> or to: Mark L. Weaver, University of Alabama, Metallurgical and Materials Engineering, Tuscaloosa, AL 35487-0202 USA T: 205-348-7073 F: 205-348-2164 Email: mweaver@coe.eng.ua.edu. Co-Organizers: Michael E. Stevenson, CORE Property Sciences, Suwanee, GA 30024 USA Email: michael.stevenson@ua.edu

Mechanisms and Mechanics of Fracture: Symposium in the Honor of Professor J. F. Knott

Sponsored by: Structural Materials Division, Structural Materials Committee

Abstract due date: 3/15/02

The objective of the symposium is to honor the work of Prof. John Knott on the mechanisms and mechanics of fracture. The symposium will bring together scientists and engineers from around the world to present a comprehensive range of experimental and theoretical papers on the fracture of materials. Consistent with the work of Professor Knott, the symposium will emphasize the fundamentals of fracture, and their engineering applications. The proposed 6-8 session symposium will include invited and contributed papers in the following areas: Brittle fracture; Ductile fracture; Fatigue; Statistical approaches; Advanced materials; and Structural life prediction. Submit abstracts electronically at <http://cms.tms.org> or to: Winston O. Soboyejo, Princeton University, Department of Mechanical Aerospace Engineering, Princeton, NJ 08544 USA T: 609-258-5609 F: 609-258-5877 Email: soboyejo@princeton.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; R. O. Ritchie, University of California-Berkeley, Department of Materials Science & Engineering, Berkeley, CA 94720 USA T: 510-486-5798 F: 510-486-4995 Email: roritchie@lbl.gov

Microstructural Design of Advanced Materials: A Symposium in Honor of Professor Gareth Thomas

Sponsored by: Structural Materials Division, Jt. Mechanical Behavior of Materials, Physical Metallurgy Committee

Abstract due date: 3/31/02

Microstructural design for a set of targeted mechanical/functional properties has become a recognized field in Materials Science and Engineering especially with the developments for atomistic characterization methods, and in theoretical analysis

and modeling. This symposium will bring together a group of experts and leaders in this field to honor Gareth Thomas who has pioneered this approach to materials science and engineering area over a wide range of materials problems and applications. Submit abstracts electronically at <http://cms.tms.org> or to: Marc Andre Meyers, IMM, University of California, San Diego, CA 92093 USA T: 858-534-5119 F: 858-534-8908 Email: mameyers@mae.ucsd.edu. Co-Organizers: R. O. Ritchie, University of California-Berkeley, Department of Materials Science & Engineering, Berkeley, CA 94720 USA T: 510-486-5798 F: 510-486-4995 Email: roritchie@lbl.gov

Microstructure/Property Relationships in Alpha/Beta Titanium Alloys

Sponsored by: Structural Materials Division, Titanium Committee

Abstract due date: 3/31/02

Presentations are solicited on microstructure/property relationships in alpha/beta titanium alloys. Experimental elucidation of deformation mechanisms will constitute the overall theme of this symposium, with emphasis on the effects of the coarse and fine extremes of microstructural scale. Deformation studies in all temperature and strain rate regimes are appropriate. Assessments of the relative contributions of various slip obstacles to strength, such as prior beta grain boundaries, alpha grain boundaries, second phases, and alpha colony and lath boundaries in transformed beta microstructures are of interest, as well as damage accumulation mechanisms that lead to fracture. Modeling and simulation of microstructural development during processing (casting, thermomechanical processing, heat treatment, etc.) as they pertain to the attainment of desirable microstructures are also relevant. Submit abstracts electronically at <http://cms.tms.org> or to: Patrick L. Martin, US Air Force, AFRL/MLLM, WPAFB, OH 45433 USA T: 937-255-1353 F: 937-255-3007 Email: patrick.martin@wpafb.af.mil. Co-Organizers: James Cotton, The Boeing Company, Seattle, WA 98124-2499 USA T: 425-234-2681 F: 425-234-2863 Email: james.d.cotton@boeing.com

Modeling the Performance of Engineering Structural Materials

Sponsored by: Structural Materials Division, Structural Materials Committee

Abstract due date: 3/15/02

This symposium is the third in a series of symposia that have covered current re-

search and development in all aspects related to the modeling of the performance of engineering structural materials. Contributions are encouraged which cover both analytical and computational modeling of all material forms including metals, ceramics, polymers and composites. Specific topics of interest include elastic and plastic deformation, fracture and fatigue behavior, durability and high rate deformation. Modeling work concerned with the processing of materials to meet specific performance criteria is also encouraged. Special attention will be given to material models, studies involving the validation of modeling approaches and the use of modeling to study problems in engineering and science. The presentation of work on advanced structural materials that relates microstructure to performance is particularly encouraged. A proceedings of papers presented at the symposium is planned. Submit abstracts electronically at <http://cms.tms.org> or to: Donald R. Lesuer, Lawrence Livermore National Laboratory, Livermore, CA 94550 USA T: 925-422-9633 F: 925-422-2527 Email: lesuer1@llnl.gov. Co-Organizers: T. Srivatsan, University of Akron, Department of Mechanical Engineering, Akron, OH 44325-3903 USA T: 330-972-6196 F: 330-972-6027 Email: tsrivatsan@uakron.edu; Eric M. Taleff, University of Texas, Mechanical Engineering Department, Austin, TX 78712-1063 USA T: 512-471-5378 F: 512-471-7681 Email: taleff@mail.utexas.edu

Rapid Prototyping of Materials

Sponsored by: Materials Processing & Manufacturing Division, ASM International: Materials Science Critical Technology Sector, Powder Materials Committee

Abstract due date: 3/15/02

Rapid Prototyping, also called Solid Free Form Fabrication, has grown into a mature manufacturing method that has use in a number of fields. Numerous materials systems are processed the way that often times cannot be processed by other means. Furthermore, Rapid Prototyping has become a method by which new materials and composites can be formed. Recent examples involve the combining of preprocess processing with metal and alloy infiltration to form composite structure. This symposium will focus on the state of the art manufacturing of Rapid Prototyping while introducing the newest materials developments, which have resulted from this method. This symposium will also focus on the industrial use of Rapid Prototyping and Solid Free Form Fabrication its commercially successful application. Submit abstracts electronically at <http://cms.tms.org> or to: Fernand D.S. Marquis, South Dakota School of Mines & Technology, Department of Materials & Metallurgical Engi-

neering, Rapid City, SD 57701-3995 USA T: 605-394-1283 F: 605-348-2792 Email: fmarrquis@silver.sdsmt.edu. Co-Organizers: Rick V. Barrera, Rice University, Mechanical Engineering & Materials Science Department, Houston, TX 77005 USA T: 713-348-6242 F: 713-348-5423 Email: ebarrera@rice.edu; Meisha L. Shofner, Rice University, MEMS, Houston, TX 77005 USA T: 713-343-6358 Email: meisha@rice.edu

Solidification During Joining Processes

Sponsored by: Materials Processing & Manufacturing Division, Solidification Committee

Abstract due date: 4/15/02

The strength of a joint is determined by its microstructure, which is in turn determined by the processing conditions. This symposium will focus on controlling the microstructure and thus the properties of welded, brazed and soldered joints by controlling the solidification process and pre/post heat treatment. Educational papers in this area are also of interest. Submit abstracts electronically at <http://cms.tms.org> or to: Mark A. Palmer, Kettering University, Flint, MI 48504-4898 USA T: 810-762-7973 F: 810-762-9924 Email: mapalmer@kettering.edu. Co-Organizers: Iver Anderson, Iowa State University, Ames Laboratory, Ames, IA 50011-3020 USA T: 515-294-8252 F: 515-294-8727 Email: andersoni@ameslab.gov; James C. Foley, Ames Laboratory, Iowa State University, Ames, IA 50011-3020 USA T: 515-294-8252 F: 515-294-8727 Email: foley@ameslab.gov

General Abstract Sessions

Sponsored by: TMS Committee

Abstract due date: 4/15/02

The TMS Fall Meeting Program Committee invites you to make plans now to present your research as part of its most extensive program of general abstract sessions ever. In an effort to present a more comprehensive view of current work being carried on in materials science research, particularly new and emerging technologies and techniques. TMS is soliciting general abstract submissions for sessions related to the following areas: alloy phases, chemistry and physics of materials, composite materials, corrosion and environmental effects, electronic packaging and interconnection materials, ferrous metallurgy, high temperature alloys, industrial innovations, mechanical metallurgy, new and emerging technologies, non-ferrous metals, nuclear materials, polymers, powder metallurgy, 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, Programming Services, 184 Thorn Hill Road, Warrendale, PA 15068 USA; T: 724-776-9042; F: 724-776-3770; Email: ckobert@tms.org

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.

If electronic submission is not possible please attach your abstract to this form and submit to TMS as directed.

Please Check One Presentation Type and Submit with 150-word Abstract:

- General Abstract
- TMS Annual Meeting
- TMS Fall Meeting
- Poster Session

If submitted as a GENERAL ABSTRACT, indicate desired category and key word(s) - (see keyword category listed and mail to address listed above).

Name _____

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KEY WORD CATEGORIES FOR GENERAL ABSTRACTS

- Alloy Phases
- Chemistry and Physics of Materials
- Coatings and Thin Films
- Composite Materials
- Corrosion and Environmental Effects
- Deformation
- Electronic Packaging and Interconnection Materials
- Environmental Effects
- Extraction and Processing
- Fatigue
- Ferrous Metallurgy
- Fracture
- High Temperature Alloys
- Industrial Innovations
- Mechanical Metallurgy
- Modeling
- New and Emerging Technologies
- Non-Ferrous Metals
- Nuclear Materials
- Phase Transformations and Structural Evolution
- Physical Properties
- Polymers
- Powder Metallurgy
- Powder Technology
- Refractory Metals
- Shaping and Forming
- Solidification
- Structure
- Superconducting Materials
- Surface Engineering
- Thin Films and Interfaces
- Wear Phenomena

Optional use - Type abstract text here.



FUTURE MEETING SITES

MEETING	DATE	LOCATION
Annual Meeting and Exhibition: More than 1,000 technical presentations and 30,000 square feet of exhibitions will detail the latest advances and most critical developments in minerals, metals, and materials science and technology.		
2002 – Seattle, WA	February 17-21	Wash. State Conv. & Trade Center
2003 – San Diego, CA	March 2-6	San Diego Convention Center
2004 – Charlotte, NC	March 14-18	Charlotte Convention Center
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 6-10	Adams Mark
Fall Extraction & Process Metallurgy Meeting:		
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.		
2002 – Santa Barbara, CA	June 26-28	University of California-Santa Barbara
Topical Conferences:		
2002 – Santa Barbara, CA <i>Device Research Conference</i>	June 24-26	University of California

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

TMS Meeting Services Department
184 Thorn Hill Road
Warrendale, PA 15086

Telephone: (724) 776-9000, ext. 243
Fax: (724) 776-3770
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WEB: <http://www.tms.org/Meetings/Meetings.html>

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