

**News  
& Update**

**TMS2014 Proceedings Process; Steven J. Zinkle Takes New Editor Position**



**TMS Implements Faster, Easier Process for Accessing TMS2014 Collected Proceedings**

One of the most valuable benefits of registering for a TMS Annual Meeting & Exhibition is free, exclusive access to the published collected proceedings. Last year marked the first time that the proceedings were delivered online, rather than on CD-ROM. While the new process worked well for many people, there were some unanticipated issues that needed to be addressed. TMS staff received many helpful suggestions from meeting attendees for how the collected proceedings could be offered in the most user-friendly way possible and has incorporated these into a new process for the collected proceedings of the TMS 2014 Annual Meeting & Exhibition (TMS2014):

- On the meeting registration form, attendees will have the option to purchase a DVD for an additional \$25. Note: The DVD purchase is an addition to, not a replacement for, electronic access.
- One week prior to the meeting, pre-registered attendees will be sent a URL and receive access information for the proceedings upon verifying their registration. On-site registrants will receive this access information at the time they register.
- The proceedings landing page will give attendees three options for accessing content: (1) A single PDF file that contains all proceedings content in one bundle; (2) separate PDF files for each proceedings publication; or (3) complimentary access to the Wiley Online Library for downloads of individual articles. The PDF files for options 1

and 2 will have bookmarks that separate and identify the content, providing the same functionality as a DVD.

- None of the PDF files will require unique software. Users who are able to open standard PDF files will be able to access the proceedings files in the same way.
- Attendees will have access to an on-site help location at the meeting.
- As in 2013, free access to the 2014 collected proceedings will be available for six months after the first day access is granted. Once the six months has elapsed, standard TMS member pricing will take effect.

TMS2014 will take place from February 16 through 20 in San Diego, California. Registration for the meeting will open in October at <http://www.tms.org/tms2014>.

**Steven J. Zinkle Named Metallurgical and Materials Transactions E Editor**

TMS and ASM International have named Steven J. Zinkle, chief scientist of the Nuclear Science and Engineering Directorate and a Corporate Fellow at Oak Ridge National Laboratory (ORNL), as the second of two editors of *Metallurgical and Materials Transactions E: Materials for Energy Systems*. This new, peer-reviewed journal, scheduled to debut in March 2014, will focus on the science and technology of energy materials.

Zinkle joins an editorial staff led by Principal Editor David Laughlin, Alcoa Professor of Physical Metallurgy at Carnegie Mellon University, and including Victorino Franco, Professor in the Condensed Matter Physics

Department at Sevilla University in Spain, who was named an editor for the journal in May.

Before taking on his current role at ORNL, Zinkle served as the director of the lab's Materials Science and Technology Division from 2006 to 2010 and in a variety of research scientist and program management roles since he joined ORNL in 1985. He received a Ph.D. in Nuclear Engineering and an M.S. in Materials Science from the University of Wisconsin-Madison in 1985. His research has centered on microstructure-property relationships in materials for a broad range of energy applications, including deformation and fracture mechanisms in structural materials and investigation of radiation effects in ceramics, fuel systems, and metallic alloys for fusion and fission energy systems. He has written over 240 peer-reviewed publications.

Zinkle is a member of the National Academy of Engineering, a recipient of the 2006 U.S. Department of Energy E.O. Lawrence Award, and a fellow of the American Ceramic Society, ASM International, TMS, the Materials Research Society, the American Nuclear Society, and the American Association for the Advancement of Science.

Officially announced by TMS and ASM International on March 4, 2013, *Metallurgical and Materials Transactions E* spans the entire energy spectrum, from production and generation to transmission to energy storage and conversion. The journal is now accepting papers for publication in 2014. A call for papers is available at [www.tms.org/pubs/journals/MT/MT.aspx](http://www.tms.org/pubs/journals/MT/MT.aspx).

TMS members will receive electronic subscriptions to the new journal as a benefit of membership.

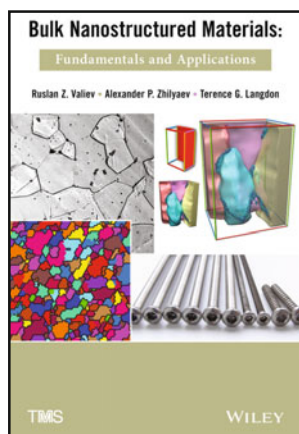
**TMS-Wiley Release Three New Titles**

TMS and its publishing partner, John Wiley & Sons, are pleased to announce the release of three new books this fall, all authored by TMS members and encompassing a broad range



Steven J. Zinkle

of materials science and engineering topics. TMS members receive a 35 percent discount off the list price of TMS products and all other products sold by Wiley. To acquire the discount code, log on to the TMS Members Only website and select "Books" under the "Member Reading Room" on the left side menu bar. From there, access the TMS-Wiley Bookstore link at the bottom of the page. The new books are:



### ***Bulk Nanostructured Materials: Fundamentals and Applications***

*Ruslan Z. Valiev, Professor and Director of the Institute of Physics of Advanced Materials, Ufa State Aviation Technical University, Ufa, Russia, and Head, Laboratory on Mechanics of Bulk Nanomaterials, St. Petersburg State University, St. Petersburg, Russia.*

*Alexander P. Zhilyaev, Principal Research Scientist, Institute for Metals Superplasticity, Russian Academy of Sciences and Senior Research Fellow, University of Southampton, Southampton, United Kingdom*

*Terence G. Langdon, Professor of Materials Science, University of Southampton and William E. Leonhard Professor of Engineering, University of Southern California*

*Hardcover, 464 pages, \$149.95*

Bulk nanostructured materials can provide new and unusual properties for a wide range of metals and alloys, such as very high strength and ductility, record-breaking fatigue endurance, or increased superplastic forming capabilities. With bulk nanostructured materials moving from laboratory-scale research to industrial applica-

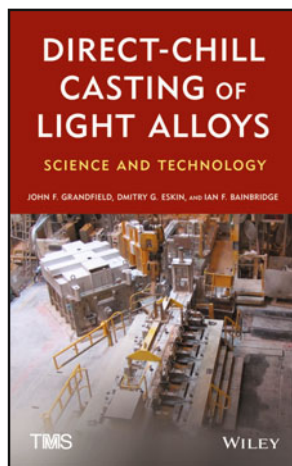
tions, the full potential of this research area is beginning to emerge.

*Bulk Nanostructured Materials* sets the stage for further innovation by providing a single treatise that encapsulates the fundamentals, as well as new and emerging applications. The book presents and analyzes the most recent results in bulk nanostructured materials research, in addition to new trends in severe plastic deformation (SPD) processing. Special emphasis is placed on the mechanical properties, functional behavior, and innovative applications of bulk nanostructured materials formed by SPD.

The book begins with a brief introduction that defines the field and provides an overview of SPD principles and techniques. The remainder of the book is organized into four parts:

- High-Pressure Torsion
- Equal Channel Angular Pressing
- Fundamentals and Properties of Materials after SPD
- Innovation Potential and Prospects for SPD Applications

Figures throughout the book clarify complex concepts and techniques. In addition, detailed examples help bridge the gap from theory to practical applications.



### ***Direct-Chill Casting of Light @ Alloys: Science and Technology***

*John F. Grandfield, Director, Grandfield Technology Pty Ltd;*

*Dmitry G. Eskin, Professor, Brunel University;*

*Ian F. Bainbridge, Senior Consultant (retired)*

*Hardcover, 424 pages, \$139.95*

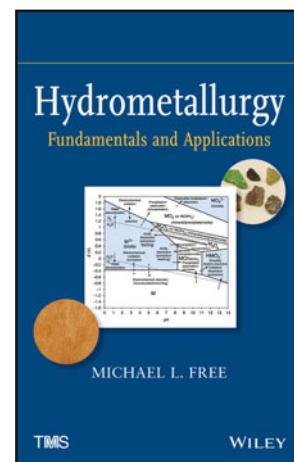
This book reviews the science and technology of direct-chill casting of light alloys and important ancillary processes. Emphasizing the needs of industrial research and practice, it explains how the physico-chemical, thermo-physical, and thermo-mechanical aspects of light alloys all play major roles in the formation of the structure, defects, and properties of the casting.

*Direct-Chill Casting of Light Alloys* begins with a historical overview and then examines liquid metal supply, alloy preparation, and melt transport.

Other topics covered include:

- Melt refining and impurity control
- Grain refinement
- Solidification phenomena and casting defects
- Direct-chill casting technology and operation
- Post-casting processing
- Modeling and simulation

It concludes with a discussion of key economic considerations in direct-chill casting.



### ***Hydrometallurgy: Fundamentals and Applications***

*Michael L. Free, Professor of Metallurgical Engineering, University of Utah*

*Hardcover, 444 pages, \$135.00*

Compiling the fundamentals, methods, applications, and analytical tools into one text, *Hydrometallurgy* stands as a valuable reference to improving the efficiency and effectiveness of the chemical processing of metals in aqueous solutions in technically viable, environmentally responsible, and eco-

### ARE YOU THE NEXT TMS-WILEY AUTHOR?

TMS-Wiley is currently seeking new authors or volume editors for textbooks, handbooks or reference books on materials science-related topics. Authors and editors of new, original books receive royalties on worldwide sales of their books, while editors of proceedings volumes receive complimentary copies. If you are an interested author or editor, or simply have an idea that you wish to share, please contact Matthew Baker, TMS Publications Manager, at [mbaker@tms.org](mailto:mbaker@tms.org).

nominally feasible ways.

*Hydrometallurgy* explores several essential topics that are generally not covered extensively in other hydrometallurgy texts, including aqueous electrometallurgy, aqueous corrosion, environmental hydrometallurgy, and

metal utilization in aqueous media. Other topics covered include:

- Speciation and phase diagrams
- Rate processes in aqueous metal processing
- Aqueous metal extraction and leaching

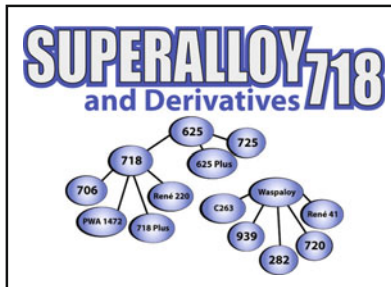
- Metal concentration processes
- Selective aqueous metal recovery phases
- Process design principles for aqueous processing of metals
- Environmental regulations and remediation technologies

Detailed examples and illustrations throughout the chapters help clarify complex concepts and their application into practice. At the end of the text, a group of appendices brings together valuable reference materials, including atomic weights, important constants, conversion factors, and laboratory calculations.

### Make a Note: Important TMS Meeting Milestones

Don't miss your opportunity to participate in one of these upcoming TMS meetings:

ence website at <http://www.tms.org/meetings/2014/superalloy718-2014/home.aspx>.

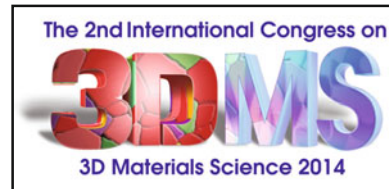


#### Superalloy 718 and Derivatives Abstracts Due: November 1

The 8<sup>th</sup> International Symposium on Superalloy 718 and Derivatives covers all aspects of metallurgical processing, materials behavior and microstructural performance for a distinct class of 718 type superalloys and derivatives. It will take place from September 28 through October 1, 2014, in Pittsburgh, Pennsylvania.

The symposium will focus on Alloy 718 and superalloys in this class relative to alloy and process development, production, product applications, trends and the development of advanced modeling tools. Authors will have an opportunity to present technical advancements relative to a broad spectrum of areas, while assessing their impact on related fields associated with this critical alloy group. Abstracts are now being accepted through November 1.

For additional information and to submit an abstract, go to the confer-



#### 3DMS2014 Abstract Deadline: November 15

The 2<sup>nd</sup> International Congress on 3D Materials Science (3DMS2014) will take place from June 29 through July 2, 2014, in Annecy, France. Abstracts are being accepted through November 15, 2013 in the following topic areas:

- Experimental techniques for 3D data acquisition
- Advances in reconstruction algorithms
- Image processing and digital representation of 2D and 3D microstructural data
- Advances in 3D materials modeling
- Microstructure property relationships in 3D
- 3D interfaces and microstructural evolution
- Future directions and challenges for 3D materials science

For additional information on the technical program and to submit an abstract, go to the conference website at <http://www.tms.org/Meetings/2014/3DMS2014>.



#### First TMS Summit on Creating and Sustaining Diversity: July 29–31, 2014

Save the date to attend the First TMS Summit on Creating and Sustaining Diversity in the Minerals, Metals, and Materials Professions (DMMM1): Honoring the First Female Member of AIME: Ellen Swallow Richards. The conference is scheduled for July 29 through 31, 2014, in Washington, D.C.

Cosponsored by the National Academy of Engineering, the American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME), and the Society of Mining, Metallurgy, & Exploration, the event will focus on the underrepresentation of gender and race from the U.S. government, academic, and industry perspectives. Outputs from the workshops, panel discussions, and skills-development sessions will be captured to develop toolkits and guidance to address the development of a more diverse community of minerals, metals, and materials professionals in actionable ways.

Check the summit website regularly for details and updated information at <http://www.tms.org/meetings/2014/diversity/home.aspx>.