

TMMIS

The Minerals, Metals & Materials Society

Annual Report 2009

**Serving
Members
in a
Changing
World**



TMS

Serving Members in a Changing World

TMS 2009

138th Annual Meeting & Exhibition

TMS: Putting Members First Now and in the Future

Recovery was a recurring theme of 2009 as the world economy struggled to rebuild itself and ultimately move forward. TMS met the multitude of economic challenges that affected the society and its members by taking a proactive approach, building on core strengths while taking a long view of the future.

TMS Nurtures the Core . . .

TMS members, many of whom work in industries that were affected by the global economic recession, counted on society membership to provide core services and products that have represented the value of TMS since it was established 138 years ago: archival journals and books containing the most current in materials research; conferences, including the TMS Annual Meeting and Exhibition, where attendees represent the best and the brightest of the profession; *JOM*, the member journal that provides essential news of TMS, its members, and their work; and awards and scholarships to help members move forward in their professions.

. . . While Creating the Future

To ensure a prosperous future, new partnerships were formed and existing ones strengthened, within the United States and internationally. TMS partnered with ASM International on the Energy Materials Initiative, employing the strengths of both societies to capitalize on a growing area of member interest: materials for an energy-efficient and low-carbon economy. Internationally, TMS made inroads in its Alliance of the Americas initiative, signing cooperative agreements with materials societies in Canada and Brazil and planning a joint conference with the Brazilian Metallurgical, Materials and Mining Association. The interest of young TMS members—the future of the organization—were considered, as well, with the creation of a committee for graduate students, a revamped student newsletter, and a strong emphasis on social networking, which, although ageless, is the communication method of choice for many new graduates.

2009 Annual Report

Inside this report, TMS reflects on the ways the society increased its value to members by elevating services and building partnerships to move TMS forward. Read on for details on the ways TMS has served its members in a changing world.

About TMS

The mission of TMS is to promote the global science and engineering professions concerned with minerals, metals, and materials. TMS is a professional, member-driven organization that operates in the five technical areas of electronic, magnetic & photonic materials; extraction & processing; light metals; materials processing & manufacturing; and structural materials.



TMS STUDENT NEWS

December 28, 2009

IN THIS ISSUE...

- Winter Break Checklist
- Member and Research News
- ASM Researcher Lead Cash!
- Update Your Profile
- Read JOM
- Facebook
- LinkedIn

WEB SITE LINKS

- MS Online
- Update Your Profile
- Read JOM
- Facebook
- LinkedIn

A Winter Break Checklist

For many students, this time of year means a break from classes, making it the perfect time to plan for the future. This issue of TMS Student e-News outlines ways you can use your downtime to enter contests with cash prizes, prepare for the TMS 2010 Annual Meeting in February, and continue your affiliation with TMS and the Material Advantage program in the coming year.

Here are just a few suggestions for how to use your time off wisely:

- Create a Video for the TMS, MSE, & M&E Contest by January 5
- Make plans for the TMS Annual Meeting
 - Register for the conference by January 15 for a discounted rate
 - Reserve a hotel room through TMS by January 21
 - Practice for the Materials Bowl every Wednesday on Facebook
 - Enter your work in the TMS Technical Division Poster Contest for graduate and undergraduate students by January 13
 - Sign up for a free short course (first-come, first-served) by January 21
- Current Students: Renew your Material Advantage Membership for 2010 by December 31
- December Graduates: Apply for full TMS membership—it's free!

Whether you are a graduate or an undergraduate, someone who has just

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(724) 776-3770

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webmaster@tms.org

www.tms.org

Dear Members and Partners of TMS:

Representing the leadership and staff of TMS, we are honored to present to you the TMS Annual Report, 2009 edition. The theme of this year's report is "Serving Members in a Changing World."

Let us begin by saying that serving our members is an unchanging priority. TMS has a rich heritage as a member-driven society, which has served it well for its 138-year history. 2009 was a year that saw the forces of a global recession affect not only the society but, more importantly, its members. In response, TMS redoubled its efforts to provide services to its members and to increase the value of TMS membership. The details of those initiatives are highlighted in the pages of this report. It is the unwavering commitment to putting members' needs first, through being your Professional Partner for Career Advancement, which is our mission.

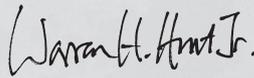
Serving members in a changing world also means that we need to be part of that change, especially in our broadening field of materials science and engineering. We are proud that TMS continued to play a leadership role in convening the materials community to explore areas where synergy and cooperation can benefit all. We also built on our history of international cooperation through our Alliance of the Americas initiative, which strengthens partnerships with our society colleagues in North and South America. We are excited about our new strategic growth initiatives to provide service to members in emerging technical areas that are increasingly important in their work.

Signs of economic recovery are positive, and TMS is in a strong position for the future. Our real strength is not measured in financial terms, but rather in the eyes of our members. To serve you is the reason we exist and is the goal to which we are committed. We invite you to join us in making TMS, our profession, and our world the best that it can be.

Sincerely,



Ray D. Peterson, 2009 President



Warren H. Hunt, Jr., Executive Director

A Message from TMS Leaders



Ray D. Peterson,
2009
President



Warren H. Hunt, Jr.,
Executive
Director

2009 TMS Board of Directors

Officers

Ray D. Peterson, *President*

Diran Apelian, *Past President*

George T. "Rusty" Gray III, *Vice President*

Stanley M. Howard, *Financial Planning Officer*

Technical Division Council Directors

Zi-Kui Liu, *Electronic, Magnetic & Photonic Materials*

Thomas P. Battle, *Extraction & Processing*

Wolfgang A. Schneider, *Light Metals*

Joy Forsmark, *Materials Processing & Manufacturing*

Eric M. Taleff, *Structural Materials*

Administrative Committee Directors

Nikhilesh Chawla, *Information Technology*

Ellen K. Cerreta, *Membership & Student Development*

David A. Shifler, *Professional Development*

Hani Henein, *Technical Programming*

Kevin J. Hemker, *Public & Governmental Affairs*

Elizabeth A. Holm, *Publications*

2009 TMS Leadership

Strategic Goal 1: Broaden Engagement with the Global Materials Community

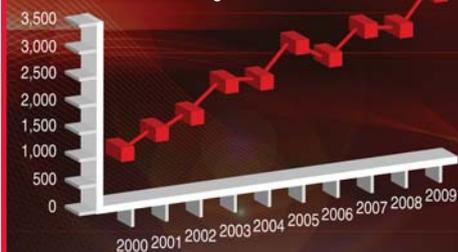
TMS took steps to build its international presence in 2009. New alliances were forged within the global materials community, and new initiatives undertaken to apply materials solutions to societal challenges.

TMS 2009 Annual Meeting Marks Success Despite Turbulent Economy

Nearly 3,500 materials professionals representing industry, government, and academia attended the annual meeting in San Francisco despite a beleaguered economy. A record 2,600 papers were presented at 64 symposia. Programming covered materials topics ranging from extraction and processing to nanomaterials, biomaterials, and beyond. Materials and Society continued to blossom as a programming theme, with one-fourth of the 2009 program focused on such topics as Alternative Energy Sources for Metals & Materials Production, and Carbon Dioxide & Other Greenhouse Gas Reduction Metallurgy.



2009 TMS Annual Meeting Abstract Submissions



Alliance of the Americas: TMS Forges Agreements with Brazil and Canada

TMS extended its global reach by signing Memoranda of Understanding with the Brazilian Metallurgical, Materials and Mining Association (ABM) and the Metallurgical Society of the Canadian Institute of Mining, Metallurgy, and Petroleum (shown in photos at right). The agreements were key pieces of the Alliance of the Americas initiative to build society partnerships in Canada and South America. An immediate outgrowth of the agreement with ABM was the 1st TMS-ABM International Materials Congress, to be held in conjunction with the 65th ABM Congress. The conference will convene July 26–30 in Rio de Janeiro, Brazil.



TMS Foundation Partners with Engineers Without Borders

In an effort to build global outreach, the TMS Materials and Society Committee selected an Engineers Without Borders – USA chapter at Iowa State University as the recipient of the first EWB-USA grant supported by the TMS Foundation. The project, “Ceramics Production for Water Filtration, Cooking Stoves, & Sustainable Households,” will allow the students to use their materials knowledge to improve living conditions in Mali, Africa.

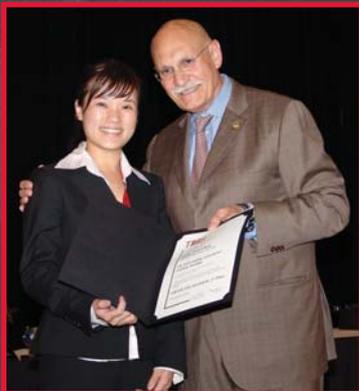


Vittorio de Nora Prize Rewards Environmental Improvements in Metallurgical Industries

Highlighting the impact of materials science and engineering on society, the Vittorio de Nora Prize was established in 2009 to recognize contributions to the reduction of environmental impacts, particularly greenhouse emissions. The prize, named for Vittoria de Nora, a pioneer in materials processing, was awarded to Zeljka Pokrajcic of WorleyParsons Services Pty Ltd – Minerals and Metals, Australia, who demonstrated how significant gains can be made by including more efficient technologies in comminution circuit design.



Zeljka Pokrajcic



Honors and Awards Program Adapts to Changing Member Needs

To reflect the evolution of the society and recognize the best and brightest members, an ad hoc committee was formed to focus on three areas of the TMS Honors and Awards Program: nominations, new awards, and committee structure. As a result, it was decided that steps should be taken to increase the pool of worthy candidates, several new awards would be created and a handful of others modified, most award cycles would be shortened from

approximately 16 months to 11 months, and the number of awards committees would be reduced from ten to seven to consolidate responsibility and expand oversight. The impact of the changes to the program will first be seen with the 2012 honors and awards cycle.

Social Networking Offers New Options for Member Communication



TMS is now reaching out to the worldwide materials science and engineering communities through social networking. Society pages have been established on LinkedIn, a profes-

sional network site; Flickr, a photo-sharing site featuring hundreds of photos from TMS meetings; a Facebook fan page with daily interaction among its members; and ChannelTMS, the YouTube site where a TMS video contest was launched in 2009. In addition, TMS established eight Really Simple Syndication (RSS) news feeds to deliver the latest information from TMS's various news sources straight to subscribers' desktops. Each of the new on-line options offers unique opportunities for interaction among members of the materials community and broadens the TMS sphere of influence.

ABET Retraining, Introductory Materials Available

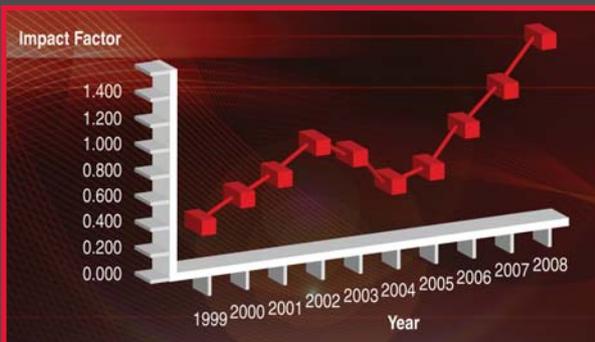


Continued advancements in quality of life depend on the quality of education for materials scientists and engineers. TMS members have the opportunity to impact their profession, and in turn, society at large, by serving as volunteer accreditation evaluators through the Accreditation Board

for Engineering Technology (ABET). To encourage more member participation in this invaluable, rewarding professional service, TMS offers retraining at both its Annual Meeting and the fall Materials Science & Technology meeting. TMS is the ABET Participating Body with lead society curricular responsibility for programs in metallurgical, materials and similarly named engineering programs, including polymers, welding engineering and welding technology.

JOM Impact Factor on the Rise

The *JOM* 2008 impact factor of 1.485, announced in June 2009, continues the journal's four-year upward trend in the citation measurement index. Impact factor measures a publication's



performance in the technical community where a ranking of 1.000 or above is significant. The calculation, published by Thomson ISI Web of Knowledge, is based on the number of citations to papers published in a journal during a two-year period.

**Strategic Goal 2:
Extend TMS Core Competencies**

TMS is building on its existing strengths in technical programming, publications, information technology, and professional development by presenting traditional resources in new formats, expanding on-line resources for members, and developing strategic alliances with other organizations.

Strategic Goal 3: Enhance Services to TMS Members

TMS aims to enhance its services by focusing on the variety of member needs within the society, developing products and services that address the needs of members from industry, academia, and government, as well as student members.

Restyled Members Only Web Site Eases Access to Benefits

After months of planning, preparation, fine-tuning, and execution, the more user-friendly and engaging Members Only Web site debuted in October. The new Web page design features a vibrant, stylish format similar to our home and annual meeting pages, complete with spotlight stories, discussions, postings, upcoming deadlines, and an easy-to-navigate menu of members' only services. The new site also allows members to interact with colleagues on all career levels, access 25 professional and archival journals and educational or career resources, offer feedback to TMS staff members, volunteer for committees, and even submit photos.



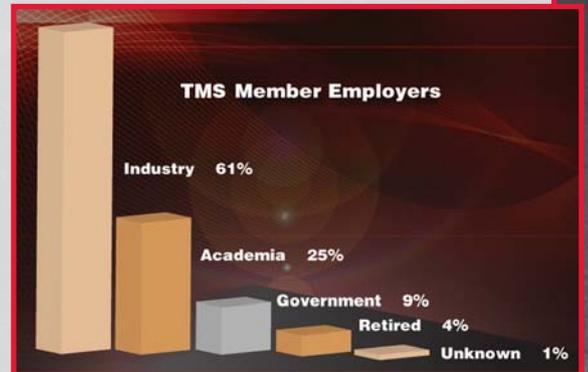
Four New Offerings Enhance Member Experience

TMS members value access to the latest technological information, resource materials, and professional connections. To satisfy these needs, TMS added four new benefits in 2009: TMS On Reserve, OneMine, e-Mentoring, and Consultant Resources. On Reserve puts classic and current publications at your fingertips. OneMine, available at a discount to TMS members, offers a single global resource for mining and minerals research. Through e-Mentoring, members have the opportunity to pose career questions to experienced professionals. Finally, Consultant Resources includes sample business plans and model contracts, as well as articles offering business development advice.



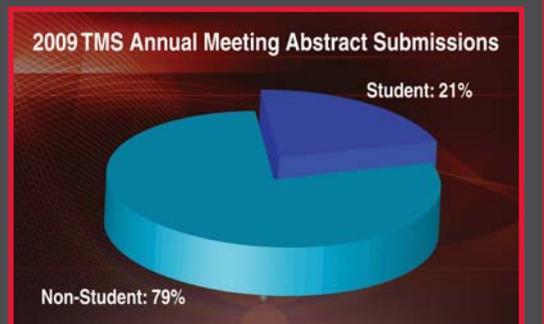
Job & Financial Security Center Expands Capability

Since its launch in December 2008, the Job & Financial Resource Center has compiled a wealth of information and services to help TMS members enhance their employability and maintain their financial footing in a recovering economy. Over the year, many of the center's most popular offerings were those that addressed the specific needs and interests of materials scientists and engineers. The new "Engineering-Specific Resources" topic consolidates many of these resources in one convenient place, while adding a number of new tools. In addition, the center offers excellent general resources such as "Job Transition Resources," "Job Search Tool Kit," and "Enhancing Employability."



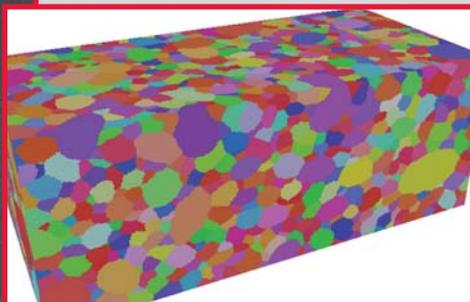
Serving Student Members

The chart at right illustrates the proportion of student presenters at the TMS Annual Meeting—a number that has grown substantially in recent years. In 2009, an enhanced Material Advantage newsletter and a new Graduate Student Committee improved services to student members.



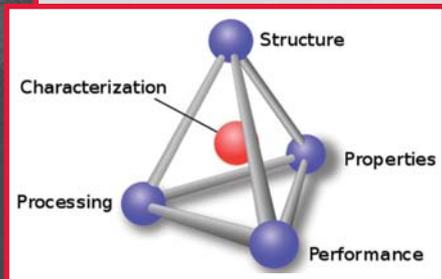
“Grow TMS” Initiative Sets Society Course for Development

While nurturing its core remains a TMS constant, growth cannot occur without change. In 2009, the TMS Board of Directors initiated “Grow TMS,” a program to serve existing members whose areas of interest are evolving and to open doors to potential new members. Under the Grow TMS initiative, the Board identified three areas for growth: Computational Materials Science and Engineering; Micro- and Nanostructure Processing and Property Relationships; and Materials and Energy: Advanced Systems, Sustainable Production, and Efficient Utilization.



Computational Materials Science and Engineering

Computational Materials Science and Engineering (CMSE), encompassing areas of integrated computational materials engineering, materials informatics, and materials modeling, is already strong among TMS members. The Integrated Computational Materials Engineering Committee was established in 2009 to support those areas. The agenda for growth includes programming short courses and specialty conferences, developing related publications, and partnering with other professional societies with similar interests.



Micro- and Nanostructure Processing and Property Relationships

Structure/processing/property relationships, often represented in the form of the “materials tetrahedron,” form the basis of materials science and engineering practice and are a core area of excellence within TMS. Growth initiatives in this area focus on greater integration and emphasis on programming, publication, and technically driven business connections in the key emerging areas.

Materials and Energy

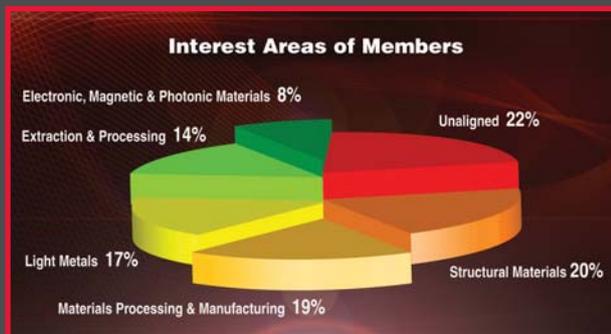
TMS has a strong heritage in a number of energy-related topic areas, including sustainable production, advanced energy systems, and energy efficiency. In 2009, an agreement was signed with ASM International to support the Energy Materials Initiative, which will leverage the strengths of each organization in convening and disseminating information to the materials and broader community through on-line resources, events, and educational offerings.



Strategic Goal 4: Capture Emerging Technologies

TMS seeks to foster the growth of new technologies by creating opportunities for knowledge and information dissemination in emerging technical areas. TMS has identified and analyzed emerging technology areas and is developing ways in which the society can serve these new, fast-growing areas.

TMS Membership by Technical Division



The chart at left shows the diversity of technical interests of TMS members as represented by their Technical Division affiliation. Serving these specific interests as well as providing cross-cutting technology resources is a key focus of Society priorities.

Strategic Goal 5: Ensure Financial Resources to Achieve Strategic Goals

TMS plans to achieve its strategic goals and to assure the operation of the TMS Foundation through accepted business principles, investments, external funding, and fiscally responsible operations.

Department of Energy Commissions TMS-led Study of Energy-Efficient Materials

The close of 2009 brought an opportunity for TMS to lead a U.S. Department of Energy (DOE) study titled “Linking Transformational Materials and Processing for an Energy-Efficient and Low-Carbon Economy: Creating the Vision and Accelerating Realization.” The first tangible outcome from the Energy Materials Initiative, this significant contract illustrates the value of TMS as a facilitator for community input and dialogue. Growth in external funding to support other areas of activity is a 2010 priority.



ProgramMaster Tool Manages Conference Experience

In 2009, TMS launched the latest version of its in-house-developed conference-management system, now called ProgramMaster. The comprehensive tool was introduced for the Electronic Materials Conference and continued to enhance the society's reputation as a world-class conference organizer. ProgramMaster manages all aspects of a conference, from symposia proposals to proceedings. ProgramMaster has not only improved TMS-sponsored conferences, but has been embraced by other organizations that have contracted its use and generated revenue for TMS.



Membership Dues Hold Steady for 2010

In light of an uncertain economy, the TMS Board of Directors decided in 2009 to hold dues steady for 2010, while continuing to offer the quality products and services TMS members have come to expect: publications, conferences, professional development opportunities, and affiliations with other leaders in the materials field.



Summary of Operating Revenue and Expenses (unaudited)

Year Ended 31 December 2009

Revenues	
Member Services	\$491,687
Knowledge Products	\$1,984,305
Meeting Services	\$2,297,527
Executive & Operations	\$193,510
Total	\$4,967,029

Expenses	
Member Services	\$327,626
Knowledge Products	\$1,151,470
Meeting Services	\$2,101,303
Executive & Operations	\$1,210,454
Total	\$4,790,853

