TMS SERVING THE MEMBERS WHO SERVE TMS



2010 ANNUAL REPORT



















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Serving the Members Who Serve TMS



"TMS is just like a complete piece of material. Each participant is like a component of this material."

- **Fu Guo**, a materials science professor at Beijing University of Technology in China, 3rd Place Winner in the 2010 TMS, MSE & Me contest

TMS fosters the professional development of individuals, but it also brings professionals together to network and share research with one another.

Members benefit most from the society when they become active participants—through attending conferences, volunteering, and other activities. As a result of their participation, TMS can provide more opportunities and resources to support members' career development.

In 2010, TMS continued to offer the benefits members have come to expect and to rely on for their professional growth. In this review of the society's 2010 activities, you will see how the organization worked to improve opportunities for its members and to raise the profile of the materials community at large.

2010 TMS Board of Directors

Officers

George T. "Rusty" Gray III, *President* Ray D. Peterson, *Past President* Garry W. Warren, *Vice President* Stanley M. Howard, *Financial Planning Officer*

Technical Division Council Directors

Zi-Kui Liu, *Electronic, Magnetic & Photonic Materials* Thomas P. Battle, *Extraction & Processing* John N. Hryn, *Light Metals* James W. Sears, *Materials Processing & Manufacturing* Dennis M. Dimiduk, *Structural Materials*

Administrative Committee Directors

Nikhilesh Chawla, Information Technology Ellen K. Cerreta, Membership & Student Development David Alan Shifler, Professional Development Hani Henein, Programming Kevin J. Hemker, Public & Governmental Affairs Elizabeth A. Holm, Publications

Letter from TMS Leadership

Dear Colleagues:

2010 has been a year of economic recovery for much of the world, and the same has been true for TMS. Through growth in new areas as part of the TMS strategy as well as strength in core products and our services to the members, the society was able to produce excellent operating results that will assist in sustaining the professional services that TMS provides to the materials science and engineering community.

At the core of this success is you, our TMS members. The society has always prided itself on being "Your Professional Partner for Career Advancement" and also serving as the professional home for many aspects of the materials community. In 2010, the TMS Board initiated an even greater emphasis on enhancing the volunteer experience of our members, making the time and talent that you invest in TMS service even more valuable and rewarding.

In 2010, TMS also continued its longstanding policy of seeking collaboration with other societies and organizations in areas of mutual interest. We realize that in a community such as ours it is important to work together in areas where synergy can be realized. We continue to invite our sister societies to join with us in building these valuable collaborations.

Let us close by thanking you for your support and service throughout the year, with the hope and expectation that we will continue to earn your engagement in the important work we have to do in the coming year.

Sincerely,

George T. "Rusty" Gray III, 2010 TMS President

Warren H. Hunt, Jr., Executive Director





George T. "Rusty" Gray III

Warren H. Hunt, Jr.

Focusing on Individuals: TMS Members

"As a student, I was able to learn from TMS, from its presentations and JOM. Now, I'm able to pass that knowledge along to others—to students or young graduates who just started working with me. I see TMS as an asset for queries as well as a forum for literary review. It's a superb organization, where learning flows in numerous directions."

-**Shijie Wang,** senior engineer at Kennecott Utah Copper Corporation and a technical advisor to *JOM* from the Hydrometallurgy and Electrometallurgy Committee

While the mission of TMS is to promote the materials science and engineering community as a whole, the society recognizes that its success is due to the contributions of its individual members. In 2010, the following initiatives recognized the individual achievements of members and encouraged increased member involvement in the future:

TMS Focuses on Volunteerism

TMS exists because it provides an effective platform for its members to engage in activities that advance their careers, to give back to their profession, and to advance the general materials community on a global basis. Volunteerism is the backbone that supports all of these initiatives, and in 2010, the TMS Board of Directors drafted a roadmap on enhanced volunteerism that will serve as the society's strategic path forward toward being a more volunteer-centric society.

New Awards Recognize Individual Achievement

In 2010, TMS updated and expanded its awards program to include several new awards, including:

- Vittorio de Nora Prize: The deNora Prize, first awarded at the TMS 2010 Annual Meeting, recognizes outstanding materials science R&D leading to the reduction of environmental impacts, particularly greenhouse gas emissions.
- Brimacombe, Cohen, and Smith Awards: TMS announced three new awards to recognize excellence in materials science and engineering. The awards were named for prestigious former

members of the society: J. Keith Brimacombe, Morris Cohen, and Cyril Stanley Smith.

- Journal of Electronic Materials Best Paper Award: TMS established a best paper award to recognize outstanding contributions to the Journal of Electronic Materials.
- Energy Committee Best Paper Awards: TMS introduced Energy Best Paper Awards that recognize excellence in professional and student papers published in energy proceedings from the TMS Annual Meeting or in *JOM*.

JOM Turns Spotlight on Members

JOM turned a sharp focus on member contributions in 2010 with two new features: Your Member Connection and Get Involved. Your Member Connection is a listing of all members featured in each issue of *JOM*, with detailed biographies and photos of the authors and advisors. Get Involved shines a light on volunteers who serve in a variety of areas of TMS.

2010 Membership Numbers

In 2010, the number of total professional TMS members increased by 9.5%, compared with 2009. This increase was due to a number of efforts to re-engage lapsed members and to recruit specialty-meeting attendees, nonmembers serving on TMS committees, and recent graduates of the Material Advantage student program. With an increased number of professionals participating in TMS, all society members will benefit from increased networking opportunities and access to the skills, resources, and expertise that these new members bring to the society.

















Solving Materials Problems: Energy Initiatives















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"TMS is the home of our professional community, so it is natural for TMS to be the catalyst and provide the vehicle for us to come together to deliberate these energy-related topics and to come up with implementable recommendations."

-**Diran Apelian**, chair of the Energy Materials Blue Ribbon Panel and Past President of TMS



In recent years, TMS has placed increasing emphasis on the role materials can play in solving problems of global significance. In 2010, TMS turned a sharper, more strategic focus on one specific area materials-enabled energy technology—through a series of projects collectively known as TMS Energy. Through TMS Energy initiatives, TMS aims to provide leadership, facilitation, and resources that initiate and support effective energy solutions based on the innovative development and use of materials. Specific TMS Energy projects that the society pursued in 2010 included:

Linking Transformational Materials and Processing

TMS was commissioned by the U.S. Department of Energy Industrial Technologies Program in February 2010 to lead a study into areas where new materials and processing breakthroughs can lead to transformational advances in energy efficiency, energy security, and carbon emission reduction.

Advanced Materials and Devices for Stationary Electrical Energy Storage

In July 2010, TMS was contracted to assist the U.S. Department of Energy to identify the advanced materials and device challenges related to deploying stationary electrical energy storage.

Advanced Materials for Our Energy Future

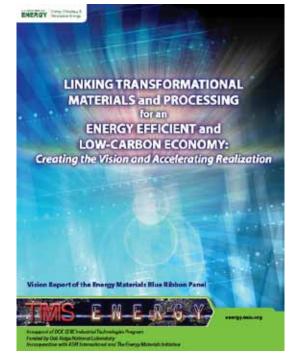
TMS joined forces with four other materials societies to develop Advanced Materials for Our Energy Future, a publication that underscores the importance of materials science and engineering in meeting energy challenges.

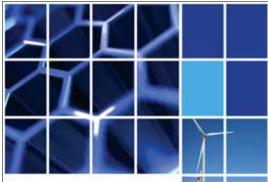
TMS Energy Web Site

TMS launched the TMS Energy web site, *energy.tms. org*, to compile news and publications on all of the society's energy-related materials initiatives.

Energy Materials Initiative

TMS and ASM International have partnered to develop the Energy Materials Network, on online resource.



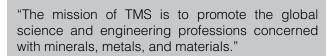


Advanced Materials and Devices for Stationary Electrical Energy Storage Applications



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Uniting the Materials Community to Meet Global Goals: Initiatives and Partnerships



-TMS Mission Statement

TMS partners with like-minded materials organizations to meet pressing societal needs, to raise the profile of materials science and engineering, and to improve services to members. In 2010, TMS worked to advance initiatives and form partnerships to help realize these goals.



Materials and Society

Emphasizing the role that materials can play in providing solutions to global problems and highlighting areas where materials can make a significant impact on society are the goals of a Materials and Society focus adopted by TMS in 2008. In 2010, TMS advanced its Materials and Society initiatives, including:

- Carbon Management Technology Conference: TMS joined with the Society of Petroleum Engineers and other partners to begin development of a new collaborative conference series in the emerging field of carbon management.
- TMS Collaborates with University Centers: TMS signed a memorandum of understanding to develop ongoing cooperative activities with the Center for Resource Recovery and Recycling, established by Worcester Polytechnic Institute and Colorado School of Mines. TMS will assist the center by providing support and outlets for information dissemination.
- Sustainability in Metals Production and Processing: Held at the TMS 2010 Annual Meeting in Seattle, Washington, this symposium provided a forum to discuss issues around the sustainability of the materials industry.



North American Extractive Metallurgy Council

TMS teamed with the Metallurgical Society of the Canadian Institute of Mining, Metallurgy and Petroleum and the Society for Mining, Metallurgy & Exploration to form the North American Extractive Metallurgy Council. The goal of the council is to improve communication, strengthen collaboration among extractive metallurgy professionals from the three societies, and coordinate scheduling for future meetings for the convenience of extractive metallurgists.



TMS Partners with Wiley on Publication Services

Expanding access to the content that TMS offers to the materials community was a key benefit of a publishing agreement that the society announced in February with John Wiley & Sons. While TMS is still responsible for developing technical content, Wiley publishes, markets, and distributes all TMS books. As a result, TMS members have access to a catalog of Wiley online publications, and TMS publications can reach a broader audience.



MS&T Conference Series: An Expanding Partnership

In 2010, the Materials Science & Technology (MS&T) conference series expanded to include NACE International as a programming partner on issues of corrosion. In addition, conference organizers signed an agreement with the Metallurgical Society of the Canadian Institute of Mining, Metallurgy, and Petroleum to participate in MS&T in 2013. MS&T is an annual collaborative conference sponsored by TMS, the American Ceramic Society, the Association for Iron and Steel Technology, and ASM International.

































Bringing People Together: Networking Events

Through international conferences, exhibitions, short courses, and other activities, TMS brings together members from throughout the world and from all materials science and engineering disciplines. Here are a few ways the society linked members of the materials science and engineering community in 2010:

TMS 2010 Annual Meeting & Exhibition

In February, nearly 3,500 materials science and engineering professionals and students gathered in Seattle, Washington, to hear more than 2,700 technical presentations at 57 technical symposia and to visit 85 exhibiting companies at the TMS 2010 Annual Meeting & Exhibition.

TMS Launches New Resource on Travel to the United States

To encourage international attendance at conferences like the TMS Annual Meeting, the society launched an on-line library of tools and information to assist international members with acquiring a visa and preparing for travel to TMS Annual Meetings and other scientific or business meetings taking place in the United States. The new resource is part of the TMS Job and Financial Security Center, which can be accessed through the TMS Members Only web site.

TMS Organizes Conference in Emerging Technology Area

In 2010, TMS began plans for the First World Congress on Integrated Computational Materials Engineering (ICME), which will be held July 10-14, 2011 at the Seven Springs Mountain Resort in Pennsylvania. More than 200 abstracts were submitted for the inaugural conference, which is designed to cover a methodology of strategic importance for the field of materials science and engineering.

International Locales Host TMS Events

In 2010, TMS continued to expand its international reach with two events in Brazil:

- 2010 Industrial Aluminum Electrolysis Course: For the second consecutive offering, TMS hosted its popular Industrial Aluminum Electrolysis Course outside the United States. Held in Maranhao, Brazil, in September, the 2010 course included a plant tour of the nearby ALUMAR refinery smelter. In 2008, the biennial course took place in Dubai.
- TMS-ABM International Materials Congress: In July, TMS partnered with ABM (the Brazilian Metallurgical, Materials, and Mining Association) to hold the first TMS-ABM International Materials Congress in Rio de Janeiro, Brazil.

TMS Connects Members with U.S. Policy Makers

For U.S. members, TMS also offered opportunities to communicate with congressional leaders and policy makers in two different ways:

- Congressional Visits Days: In April, approximately 30 students, faculty members, and professionals from TMS and the Material Advantage student program joined more than 300 other scientists and engineers for the 2010 Science-Engineering-Technology Congressional Visits Days in Washington, D.C. This annual event allows scientists and engineers to visit their congressional leaders to discuss policy issues of importance to the science and engineering community, such as providing adequate funding for R&D.
- Wired to Washington: This new service, launched in 2010, allows materials scientists and engineers to communicate with their Congressional leaders without leaving home. Through the on-line service, users can send pre-written or personalized messages to Washington decision makers on key topics, such as sustained materials research funding and visa issues.





Building the Financial Strength of TMS to Support and Sustain our Mission

Stanley Howard, TMS Financial Planning Officer



TMS has an important mission as the professional society serving the materials science and engineering field. Perhaps most visible to members is TMS's role in convening the technical community and disseminating information through conferences, publications, and our website. But TMS also has a crucial role in being the member's professional partner for career development, through supporting professional development activities such as the Professional Registration in Materials and Metallurgical Engineering as well as a robust awards and recognition program. In addition, TMS takes responsibility for the future of the field, through its role in leading ABET accreditation of materials science and engineering undergraduate programs as well as its support for students through the Material Advantage program.

To support these activities, TMS must have sustainable financial resources. As illustrated in the pie chart below, these resources come primarily from revenues gained from meetings, subscriptions and advertising in publications, and member dues. In 2010, an additional revenue source from government contracts was

> OPERATIONS Member Services

Contracts Exec/Ops

TOTAL

Knowledge Products Meeting Services

Preliminary & unaudited STATEMENT OF ACTIVITIES

December 31, 2010

realized. This diversity of revenue sources is important in providing stability. Referring to the table, you will see that in 2010, TMS's revenues totaled \$5.7 million. In the same table, under the "Expenses" heading, you will see that the great majority of these revenues were applied to society programs and support of staff. The difference between revenues and expenses is called excess revenue in not-for-profit organization language. This excess is used to compensate staff in a Board-approved bonus plan along with being saved in what is called the society's Reserve Fund.

The Reserve Fund was established to provide resources for the society in case of a rainy day as well as to serve as a source of funds for development of new products and services to serve TMS members.

The TMS Financial Planning Committee and TMS Board of Directors take very seriously our fiduciary role to steward the resources of the society for the benefit of the members and the materials science and engineering community. We welcome your questions and input.

Expenses

403,338

898,130

370,911

1,956,550

1,508,002

5.136.931

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REVENUES	EXPENSES
Meeting Services 42%	Exec/Ops 29% Meeting Services 38% Meeting Services 38%

Revenue

457,582

2,203,336

2,379,346

512,019

161.254

5.713.536

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The Minerals, Metals, & Materials Society (TMS) is an international professional organization that encompasses the entire range of materials science and engineering, from minerals processing and primary metal production to basic research and the advanced applications of materials. TMS members number over 11,000, live in more than 70 countries on six continents, and include engineers, scientists, researchers, educators, administrators, and students.

TMS

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