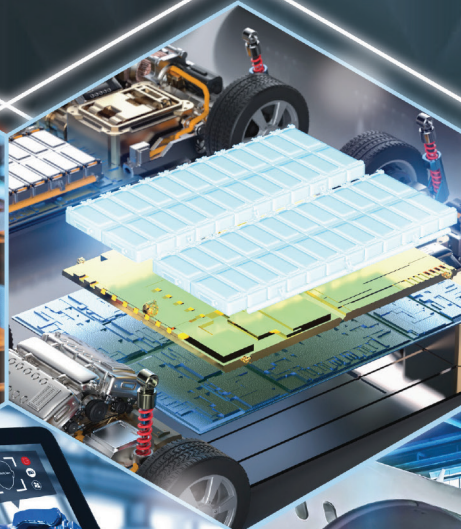


# JOM

MAY 2025

[www.tms.org/JOM](http://www.tms.org/JOM)

An official publication of The Minerals, Metals & Materials Society



TMS

 Springer

# TMS SPECIALTY CONGRESS 2025

**JUNE 15–19, 2025**

Anaheim Marriott | Anaheim, California, USA  
#TMSspecialtyCongress

## REGISTER NOW

The TMS Specialty Congress series convenes the Society's recurring specialty meetings under one roof with a single registration fee that includes all programming and access to multidisciplinary networking opportunities. Explore your technical interest in a focused, small event environment, while also having access to cross-disciplinary learning and collaboration opportunities with aligned materials communities.

### 2025 CO-LOCATED MEETINGS

3rd World Congress on  
**AIM**  
ARTIFICIAL INTELLIGENCE  
MATERIALS & MANUFACTURING 2025

MANUFACTURING  
**ICME**  
DESIGN MATERIALS  
8 TH WORLD CONGRESS ON  
INTEGRATED COMPUTATIONAL MATERIALS  
ENGINEERING (ICME 2025)

The 7th International Congress on

**3DMS**

3D Materials Science 2025

## ONE REGISTRATION. THREE MEETINGS. COUNTLESS BENEFITS.



Learn more and register today at:  
[www.tms.org/SpecialtyCongress2025](http://www.tms.org/SpecialtyCongress2025)

**TMS**  
The Minerals, Metals & Materials Society

5700 Corporate Drive  
 Suite 750  
 Pittsburgh, PA 15237  
 USA  
 Phone: 1-724-776-9000  
 Web: [www.tms.org/JOM](http://www.tms.org/JOM)  
 E-mail: [membership@tms.org](mailto:membership@tms.org)

#### Publisher for TMS

James J. Robinson,  
 Executive Director

#### Operations Management

Matt Baker,  
 Department Head, Content

#### JOM: The Journal

Kelly Markel,  
 Publications Managing Editor

Victoria M. Miller,  
 Associate Editor

Fiseha Tesfaye,  
 Associate Editor

Benjamin Adam,  
 Technical Article Editor

#### JOM: The Magazine

Ashley-Anne Bohnert,  
 Department Head,  
 Marketing and  
 Communications

Kelly Zappas,  
 JOM: The Magazine Editor

Cheryl M. Geier,  
 Senior Graphic Designer

#### Contributing Writers

Megan Enright,  
 Marketing Administrator

Jillian Schultz,  
 Digital Engagement  
 Specialist

#### Graphics Support

David Rasel,  
 Senior Manager,  
 Brand and Digital Assets

Bob Demmler,  
 Visual Communications  
 Coordinator

#### Advertising

TMS Sales Team  
 Phone: 1-724-814-3174  
 Email: [sales@tms.org](mailto:sales@tms.org)

**TMS**

 Springer

## // GUEST EDITORS

### May 2025 Guest Editors

#### Annealing-Induced Phenomena of Mg Alloys

*Magnesium Committee*

**Benjamin Anthony**, University of Florida

#### Diffusionless Phase Transformations in Engineering Alloys

*Phase Transformations Committee*

**Mark Aindow**, University of Connecticut; **Ashley Paz y Puente**, University of Cincinnati

#### Energy Materials Production and Characterization

**Erol Kurt**, Gazi University; **Shadia Ikhmayies**, The University of Jordan

#### Green and Low-carbon Extractive Metallurgy of Nonferrous Metals

*Recycling and Environmental Technologies Committee;*

*Energy Committee; Aluminum Committee*

**Leiting Shen**, Central South University; **Fiseha Tesfaye**, Metso Metals Oy,  
 and Åbo Akademi University; **Hong Peng**, University of Queensland

#### Localized Mechanical Property Assessment in Electronic Materials and Systems

*Nanomechanical Materials Behavior Committee;*

*Electronic Packaging and Interconnection Materials Committee*

**Peter Hosemann**, UC Berkeley; **Daniel Kiener**, University of Leoben

#### About the Cover

The five cover images represent the five technical divisions of The Minerals, Metals & Materials Society: Extraction & Processing, Functional Materials, Light Metals, Materials Processing & Manufacturing, and Structural Materials. In representing the five technical divisions, *JOM: The Journal* balances the interests of its members and authors in the monthly topics and articles it publishes.

#### About JOM:

The scope of *JOM* (ISSN 1047-4838) encompasses publicizing news about TMS and its members and stakeholder communities and publishing high-quality peer-reviewed materials science and engineering content. That content includes groundbreaking laboratory discoveries, the effective transition of science into technology, innovative industrial and manufacturing developments, resource and supply chain issues, improvement and innovation in processing and fabrication, and life cycle and sustainability practices. In fulfilling this scope, *JOM* strives to balance the interests of the laboratory and the marketplace by reporting academic, industrial, and government-sponsored work from around the world.

#### About TMS:

The Minerals, Metals & Materials Society (TMS) is a professional organization that encompasses the entire range of materials and engineering, from minerals processing and primary metals production to basic research and the advanced application of materials.

#### Publishing Information:

*JOM* is an official publication of The Minerals, Metals & Materials Society and is owned by the Society. TMS has granted Springer the exclusive right and license to produce, publish, archive, translate, and sell *JOM* throughout the world. Publication Frequency: 12 issues per year. Springer, 1 New York Plaza, Suite 4600, New York, NY 10004-1562, USA  
*JOM* articles from 1949 to the present are archived at  
<https://link.springer.com/journal/11837/volumes-and-issues>

#### Secure Copyright Permission:

Submit permission requests at <http://www.springer.com/rights?SGWID=0-122-12-372399-0>.

#### Postmaster:

Send address changes to: *JOM*, Springer Nature, 200 Hudson Street, Harborside Plaza 2, Suite 503, Attn: Mailroom, Jersey City, NJ 07302, USA. Periodicals postage paid at New York, NY and additional mailing offices.

# TABLE OF CONTENTS

**JOM** Volume 77  
Number 5  
May 2025

## // FEATURES

- 8:** Honoring Alan Ardell, a True TMS Member:  
Patrice Turchi
- 11:** Announcing the 2025 TMS Young Leaders  
Awards: Kaitlin Calva
- 17:** Thank You to Our 2024 Peer Reviewers



## // DEPARTMENTS

- 3:** In the Final Analysis: James J. Robinson
- 4:** JOM Technical Topics
- 7:** TMS Member News
- 30:** TMS Meeting Headlines



# IN THE FINAL ANALYSIS

*"I don't like to look back, and I'm always worried about the next thing rather than resting on the laurels or the degradations of the last thing."*

—Steve Martin

In last month's column, I reflected on some of the laurels harvested by TMS during the period between TMS2024 and TMS2025. It was a pretty good run. Aside from an occasional "Hmmm" moment or two, it was certainly degradation-free. In fact, I'd take a repeat performance of 2024's outcomes for 2025 without hesitation.

I'm no longer so foolish as to make predictions, but I admit enthusiasm about several of the things that we are developing for the coming months:

- **TMS Specialty Congress 2025:** Launched in 2024, the annual TMS Specialty Congress series convenes the Society's recurring specialty meetings under one roof with one registration fee. Last year's congress was well reviewed by participants, and this June's installment shows signs of growing the curve a tick or two. TMS Specialty Congress 2025 should serve **400+ registrants** as it co-locates a trio of high-profile TMS events: (1) the 3rd World Congress on Artificial Intelligence in Materials and Manufacturing, (2) the 8th World Congress on Integrated Computational Materials Engineering, and (3) the 7th International Congress on 3D Materials Science.
- **Extraction 2025:** Extraction 2025 is jointly organized and co-managed by TMS; the Metallurgy and Materials Society of the Canadian Institute of Mining, Metallurgy and Petroleum; and the Society for Mining, Metallurgy & Exploration. This is the second time that these three societies have convened to host the intensely global Extraction event. The program for 2025 is exceptionally strong, hosting the famed triennial event Copper 2025 as well as the companionable quadrennial event Nickel-Cobalt 2025. There will be an array of multidisciplinary cross-cutting symposia, short courses, and plant tours offered to **800+ registrants**.
- **MS&T25:** The annual Materials Science & Technology meeting is a unique enterprise within the association community as three professional societies actively collaborate to co-manage this meeting of **3,000 participants**. The partners are TMS, the American Ceramic Society, and the Association for Iron and Steel Technology, and the relationship among the partners is convivial and equitable in sharing work and sharing returns. Adaptation and improvement are hallmarks of MS&T, with the latest being the addition of Ceramitec USA to the exhibition in September, joining the Advanced Materials Show USA under MS&T's big tent.
- **TMS2026:** The TMS Annual Meeting & Exhibition is a 24/7/365 focus of attention within TMS, and we are liking the preliminary indicators for the next iteration, which sees us returning to a TMS favorite: San Diego, California. Our earliest metric—the number of symposia proposed for the meeting—is tracking consistently with the record-setting pace set by TMS2025 in Las Vegas. San Diego has a long history of logging performance records for the Society, so we are excitedly contemplating the possibilities of welcoming **5,000 registrants**.
- **Artificial Intelligence as a Member Tool:** Before year's end, I anticipate that the Society will deploy an AI tool on the website to assist our **10,000+ TMS members** in accessing their benefits and Society information. I like what is evolving and think that we have a potent offering in the making.

Where are the worries? Well, Washington, D.C. has been resculpting much of the science and engineering landscape during 2025, and we are still processing what this all means. Hmmm.



James J. Robinson  
Executive Director



James Robinson

*I anticipate that the Society will deploy an AI tool on the website to assist our 10,000+ TMS members in accessing their benefits and Society information.*

Find peer-reviewed technical articles covering the full range of minerals, metals, and materials science and engineering in the May issue of *JOM: The Journal*. Each issue features several technical topics presenting a series of related articles compiled by guest editors. Below is a sample of articles that will appear in the May issue, based on information available at press time. TMS members can log in to [www.tms.org/Journals](http://www.tms.org/Journals) for full access to technical articles from *JOM: The Journal* and additional TMS journals. For the most up-to-date article listing, visit [www.tms.org/JOM](http://www.tms.org/JOM).

## // MAY 2025

### Annealing-Induced Phenomena of Mg Alloys

**Editor:** Benjamin Anthony, University of Florida

**Sponsor:** Magnesium Committee

"Investigation of Chemical Species in the Corrosion Barrier Layer on Thermal CO<sub>2</sub> Treated AZ91D Magnesium Alloy with Lithium Nitrate," **Yi-Feng Su**, et al.

"The Mechanical Property and Microstructure of Extruded Mg-8Sn-4Al Alloy with Different Extrusion and Heat Treatments," **Li Wandong**, et al.

"Investigation on Synergistic Deformation and Microstructure Evolution of Non-alloyed Ti/Mg Composites," **Pengfei Gao**, et al.

"Comparative Analysis of Microstructure and Properties Between Twin-Roll Casting AZ31B Alloy and Advanced Mg-Mn-Al-Zn Alloy," **Hengtao Wang**, et al.

"Microstructural Evolution and Mechanical Performance of Magnesium-Niobium Composites with Potential for Biomedical Applications," **Rawad Yaqoub Aljabr**, et al.

"Microstructure and Mechanical Properties of Mg-Al-Zn Alloy Prepared by SPS Sintering-Extrusion Combined Forming," **Tao Wang**, et al.

"Study on the Recrystallized Microstructure Evolutions of Mg-Gd-Based Alloys Using Pre-aging and Element Substitution," **Chun Xi**, et al.

"Improving Mechanical Properties and Grain Refinement Mechanism of a High-Speed Extruded Zn-Free Mg-5.2Al-0.37Mn (Mass%) Alloy Using Large Extrusion Ratio," **T. Nakata**, et al.

### Diffusionless Phase Transformations in Engineering Alloys

**Editors:** Mark Aindow, University of Connecticut; Ashley Paz y Puente, University of Cincinnati

**Sponsor:** Phase Transformations Committee

"Revealing the Impact of Initial Textures on Orientation Memory Effect During HCP → FCC → HCP Transformation in High-Purity Cobalt," **Yuhang Huang**, et al.

"Anisotropic Suppression of Martensitic Transformation in Precipitation-Hardened NiTiHf High-Temperature Shape Memory Alloys," **Eitan Hershkovitz**, et al.

"Study of the Constitutive Equations of Austenitic Stainless Steels under High Strain Rate Loading Considering Phase Transformation Effects," **Wenshuai Yang**, et al.

"Characterization of the  $\Sigma 9(114)[110]$  Symmetric Tilt Grain Boundary in NiTi and Its Relationship to the Martensitic Transformation," **Gabriel Plummer**, et al.

"Microstructural Evolution of Steel During Magnetic Field-Assisted Processing," **M.E. Hurley**, et al.

"Processing Conditions Dependent Evolution of Microstructure in Laser Additive Manufactured HT-9 Ferritic Martensitic Steel," **Madhavan Radhakrishnan**, et al.

"Effect of Ni Content on the Phase Stability and Shape Memory Effect of Non-equiatomically CrMnFeCoNi High-Entropy Alloys," **Jinsurang Lim**, et al.

## Energy Materials Production and Characterization

**Editors:** Erol Kurt, Gazi University; Shadia Ikhmayies, The University of Jordan

"Study on the Influence of the Flow Factor on the Performance of Vanadium Redox Flow Batteries," **Decebal Aitor Ispas-Gil**, et al.

"Hydrogen Station Model Design Using Functional Mock-up Units and Metaheuristics Optimisation," **Asier Gonzalez-Gonzalez**, et al.

"Synthesis, Characterisation and Electrochemical Performance of Calcium Ion Doped  $\text{LiFePO}_4$  Cathodes in Phosphogypsum for Advanced Lithium Ion Batteries," **Zhenhuan Zhang**, et al.

"Explorations of Energy Generation in a Two-Magnets Coil System Under a Large Spacer," **Erol Kurt**, et al.

"A Novel Multiple-Slot Pixel Patch Antenna for Wideband Terahertz Applications," **Kayhan Çelik**, et al.

"Synthesis of Monoclinic  $\text{ZrO}_2$ -Supported Cu/ZnO for Methanol Production from Carbon Dioxide," **Ömer Egemen Bol**, et al.

"The Influence of the Substrate Temperature on the Optical Parameters of Spray-Deposited Fluorine-Doped Tin Oxide (FTO) Thin Films," **Shadia J. Ikhmayies**

"Dependence of the Optical Parameters of Spray-Deposited CdS:In Thin Films on Film Thickness," **Shadia J. Ikhmayies**, et al.

## Green and Low-carbon Extractive Metallurgy of Nonferrous Metals

**Editors:** Leiting Shen, Central South University; Fiseha Tesfaye, Metso Metals Oy, and Åbo Akademi University; Hong Peng, University of Queensland

**Sponsors:** Recycling and Environmental Technologies Committee; Energy Committee; Aluminum Committee

"Extraction of Lithium from High-Sodium Wastewater Based on DBM/TBP Technology," **Jinjing Du**, et al.

"Decomposition of Mixed Rare Earth Concentrates Using Solid KOH," **Chuxuan Deng**, et al.

"Efficient Acid Leaching of Low Carbonate Copper Oxide Ore: A Focus on Impurity Minimization," **Faraz Soltani**, et al.

"Selective Extraction of Vanadium from Vanadium-Bearing Stone Coal by a Two-Stage Leaching Process," **Honghui Liu**, et al.

"Selective Leaching of Cadmium from Cold Filter Cake Using Green Deep Eutectic Solvent Choline Chloride-Oxalic Acid," **Mohammad Jafari-Basirabad**, et al.

"Atomic Economy Approach: Mutual Redox of Spent  $\text{LiFePO}_4$  and  $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$  in  $\text{H}_2\text{SO}_4$  System," **Yang Dai**, et al.

"Mechanism of Calcite Inhibiting Scheelite Decomposition During the NaOH Decomposition Process," **Jiangtao Li**, et al.

"A Material-Oriented Metallurgical Strategy to Prepare  $\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$  Cathode Material from Low-Nickel Matte," **Junkai Zhao**, et al.

"Effect of Synthesis Process on ZSM-5 Morphology from Non-ferrous Metal Tailings," **Jingwei Yu**, et al.

"Effect of Membrane Pore Size on Copper Recycling from Waste Printed Circuit Boards by Slurry Electrolysis," **Wenzeng Tian**, et al.

"Vanadium Recovery from Spent SCR Denitration Catalyst by Reductive Acid Leaching and Ammonium Precipitation," **Jie Chang**, et al.

"Highly Efficient Titanium Powder Production via Electro-Reduction of  $\text{TiO}_2$  in Commercial  $\text{CaCl}_2$  Molten Salt: Mechanism and Optimization Investigation," **Ali Shoghi**, et al.

"Leaching Behaviors of Germanium, Zinc and Iron from Germanium Distillation Residues by Water Leaching Followed by Alkaline Leaching," **Fan Wang**, et al.

"Study on the Chlorination Leaching of Gold and Copper from High Gold-Containing Material Based on Variable Stirring Speed," **Qingfeng Ling**, et al.

"Efficient Extraction of Lithium and Rubidium from Lepidolite by Medium-Temperature Chlorination Roasting-Water Leaching Process," **Anbang Su**, et al.

"The Effect of Palygorskite on the Properties of Copper-Nickel Smelting Slag-Based Cementitious Materials," **Kunqian Zhu**, et al.

"Studies on the Coordination Behavior and Stability of Fluorine-Cerium Complex Ions in Sulfuric Acid Solution System," **Pengfei Lai**, et al.

"Distribution Behaviors of Cr and S Between the High  $\text{Al}_2\text{O}_3$  Slag and Stainless Steel Master Alloy," **Shuai Wang**, et al.

"On the Accuracy of RANS Turbulence Models for CFD Simulations of Oxygen Jets in the EAF," **Samuel Fornah**, et al.

"A New In Situ-Formed Ferric-Aluminum (Hydr)Oxides Prepared by Red Mud for Arsenic Removal," **Haonan Liu**, et al.

"Technical Application of Recovery Nickel and Molybdenum from Nickel-Molybdenum Ore by Shearing-Enhanced Ammonia Leaching," **Shiyang Tang**, et al.

"Oxidative Bayer Digestion of Sedimentary Bauxite Aiming at the Extraction of Alumina from Chlorite," **Ming-li Wang**, et al.

"Removal of As in Copper Smelter Dust's Chlorinated Leaching Solution by SO<sub>2</sub> Reduction and the Subsequent Separation of Bi/Cu/Zn," **Zhuzhu Guo**, et al.

"Preparation of Na<sub>2</sub>FeO<sub>4</sub> from Red Mud Sodium Roasting and Alkali Leaching Residue with the Aid of Ultrasound," **Shuyue Guan**, et al.

"Iron Removal from Zinc Sulfate Solution by Neutralization Hydrolysis Method Using ZnO as a Neutralizer," **Zhihong Peng**, et al.

"An Alternative Route to Extract Indium from Chalcopyrite Concentrate," **Mehmet Umut Besirli**, et al.

"Treatment of Low-Grade Copper-Nickel Sulfide Ore by Gradient Sulfidation Roasting Method," **Yingying Shen**, et al.

"Separation of Iron and Synergistic Reinforcement of Scandium Leaching from a Scandium-Containing Tailing Based on Reductive Roasting," **Guanghui Li**, et al.

"Zinc Ferrite Conversion Kinetics and Mechanism During Roasting with Calcium Oxide," **Yuqi Zhao**, et al.

"Study on the Adsorption Mechanism and Desorption Process of Gallium and Vanadium in Practical Bayer Liquor by Amidoxime Porous Resin," **Lingyu Qu**, et al.

"Formation Mechanism and Structural Characterization of NaAl<sub>11</sub>O<sub>17</sub> Based on Solid-State Reaction," **Jihao Zhang**, et al.

"Refining of Secondary Pb with Retention of Sn Using Al and Ca Additions," **Daniel Malecha**, et al.

"Real-Time Automatic Detection of Sodium Aluminate Solution Concentration Based on PSO-BP Neural Network," **Dehua Geng**, et al.

"Development of Magnetite-Diatomite/ Carboxymethyl Cellulose Nanocomposite for Enhanced Chromium (VI) Removal from Tannery Effluent," **Gemechu Lemessa**, et al.

"Fluxing Options and Slag Operating Window for Metso's Sustainable DRI Smelting Furnace," **Joseph Hamuyuni**, et al.

"Research Progress on Comprehensive Recovery and Utilization of Gold-Bearing Tailings in China: A Review," **Xueyi Guo**, et al.

"Developments and Perspectives of Recycling Techniques for Rare-Earth Polishing Powder Waste," **Lin Chen**, et al.

"Titanium in the Industrial Titanomagnetite Metallurgy Processes: Effects and Recovery," **Zhengpei Yan**, et al.

## Localized Mechanical Property Assessment in Electronic Materials and Systems

**Editors:** Peter Hosemann, UC Berkeley; Daniel Kiener, University of Leoben

**Sponsors:** Nanomechanical Materials Behavior Committee; Electronic Packaging and Interconnection Materials Committee

"Theoretical Predictions for Elastic, Mechanical, Anisotropic, Electronic, and Optical Profiles of Wurtzite CdS, CdSe, and CdTe," **E. Güler**, et al.

"Mechanical Behavior of SnAgCu as an Electronic Packaging Solder and Its Comparison with Pure Sn," **X. Liu**, et al.

"Grain Rotation and Crack Propagation in Bulge-Tested Gold Films with 4D-STEM," **David D. Gebhart**, et al.

"A Comprehensive Methodological Approach Towards the Micromechanical Characterization of Lead-free Solder Joints," **Nadine Buchebner**, et al.

"Nanoindentation Crack Suppression and Hardness Increase in SrTiO<sub>3</sub> by Dislocation Engineering," **Jiawen Zhang**, et al.

"Experimental Evaluation of Interfacial Bonding Strength between 304 Stainless Steel Substrate and Electrodeposited Nickel Coating using Mesoscale Mechanical Testing Methods," **Yuxin Hu**, et al.

# TMS MEMBER NEWS

## Six TMS Members Join Ranks of NAE

Congratulations are in order for six TMS members who have been elected to the U.S. National Academy of Engineering (NAE) for 2025. Election to the NAE honors those who have made outstanding contributions to "engineering research, practice, or education including, where appropriate, significant contributions to the engineering literature" and to "the pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering, or developing/implementing innovative approaches to engineering education." It is among the highest professional distinctions for engineers.

New members will be formally inducted during the NAE's Annual Meeting in October.

*The following TMS members will be inducted as five of the 128 new U.S. members in the NAE:*



**Long-Qing Chen**, Donald W. Hamer Professor of Materials Science and Engineering at The Pennsylvania State University, was elected "for making the phase-field method the most powerful tool for predicting the mesoscopic microstructure and properties of engineering materials." A TMS

member since 2010, Chen has received the Functional Materials Division John Bardeen Award, the Cyril Stanley Smith Award, and the TMS Fellow Award.



**Elizabeth A. Holm**, Richard F. and Eleanor A. Towner Professor and Chair of the Department of Materials Science & Engineering at the University of Michigan, was elected "for achievements in the development and application of computational methods for understanding microstructural evolution and integrated computational materials engineering." A TMS member since

1993, Holm has served the Society as chair of the Structural Materials Division, chair of the Publications Committee, and TMS President.

She also served as a member of the TMS Foundation Board of Trustees. She has received the TMS Alexander Scott Distinguished Service Award and is a TMS Fellow.



**Don M. Lipkin**, professor at Texas A&M University, was elected "for innovations of coatings and rhenium recovery

*Photo credit: Texas A&M Engineering*

that contributed to higher efficiency and sustainability of jet engines and gas turbines." Lipkin has been a TMS member since 1997 and is a recipient of the TMS Research to Industrial Practice Award.



**Kristin Aslaug Persson**, Daniel M. Tellep Distinguished Professor in the Department of Materials Science and Engineering at the University of California, Berkeley, was elected "for pioneering data-driven materials design through the creation and stewardship of open materials databases and

associated data-mining algorithms." A TMS member since 2014, Persson has received the TMS Cyril Stanley Smith Award and Early Career Faculty Fellow Award.



**Linda S. Schadler**, dean of the College of Engineering and Mathematical Sciences at the University of Vermont, Burlington, was elected "for contributions to the fundamental understanding, property control, and commercial application of polymer nanocomposites." Schadler has

been a TMS member since 1993 and has served the Society as chair of the Education Committee. She has also served the TMS Foundation as a member of the Board of Trustees.

*The following TMS member will be inducted as one of 22 international members in the NAE:*



**Dierk R. Raabe**, director of the Department of Microstructure Physics and Alloy Design, at the Max-Planck-Institut für Eisenforschung in Germany, was elected "for contributions to the fundamental understanding of materials and to sustainable metallurgy."

As a TMS member since 1994, Raabe has been a featured speaker at several TMS events, including the TMS 2024 Annual Meeting & Exhibition (TMS2024) Additive Manufacturing Keynote Session and the Extraction & Processing Division/ Materials Processing & Manufacturing Division Luncheon Lecture and the TMS 2021 Virtual Annual Meeting & Exhibition AIME-TMS Anniversary Keynote Session for the Structural Materials Division. Raabe is a recipient of the TMS Light Metals Subject Award – Aluminum Alloys and the AIME Champion H. Matthewson Award.



# HONORING ALAN ARDELL, A TRUE TMS MEMBER

Patrice Turchi

The TMS family has lost a great scientist, excellent teacher, father, grandfather, brother, and a true friend in Alan Jay Ardell, who passed away on August 2, 2024, at the age of 85.

He was born in Brooklyn, New York, in 1939 to Sam and Mary Ardell and was the oldest of three children. He graduated from Mineola High School (Long Island) in 1956 and the Massachusetts Institute of Technology in 1960. He married Amy Rosenberg in 1960, and they had three children together. He earned his Ph.D. from Stanford University in 1964 and joined the faculty at the University of California Los Angeles (UCLA) in the Department of Materials Science and Engineering in 1968. He was named professor in 1974 and served as chair of the department from 1982–1986. Alan met his partner in life, Mery Ponte, in Brentwood, California, and they married in 1987. They shared a love of art, history, symphony, opera, fine cuisine, travel, and especially UCLA athletics. He retired after 40 years, in 2008, and went on to become the Program Director for Metals and Metallic Nanostructures at the National Science Foundation (NSF) Division of Materials Research. Alan has also served on numerous committees and review panels for the NSF, the Department of Defense, the Department of Energy, and more.

## RESEARCH AND INTERESTS

Alan's research interest spanned topics that included influence of stress on coarsening kinetics and microstructure in alloys containing coherent precipitates, Ostwald ripening in liquid metals, fracture toughness from small-specimen tests, high-temperature deformation, and the influence of internal and applied stress on the morphology, spatial correlations, and kinetics of coarsening of  $\text{Ni}_3\text{X}$ -type precipitates in binary Ni-X alloys (X=Al, Ga, Ge, Si, or Ti). Other research involved grain growth, pore coarsening, and fracture toughness of  $\text{MoSi}_2$ . Of special interest was the effect of grain size on

fracture toughness, measured using the miniaturized disk-bend test apparatus developed in his laboratory.

Alan Ardell's TMS Fellow Citation well summarizes the depth of his scientific contribution: "For his eminent authority in the science of phase transformation, particularly in the area of elastic effect on ripening and effects of microstructural changes on mechanical properties."

He was inducted as Fellow of ASM International in 1977, Fellow of The Minerals, Metals & Materials Society (TMS) in 1997, and received ASM International's Albert Sauveur Achievement Award in 2005. In 2024, he received the Oleg D. Sherby Award from TMS and the Edward A. Dickson Emeritus Professorship Award from UCLA (2023–2024) that honors outstanding research, scholarly work, teaching, and service performed by an emeritus or emerita professor since retirement. Ardell also got the Editor's Choice Award for 2022 from the *Journal of Phase Equilibria and Diffusion* for his paper on "Splitting of  $\gamma$  Precipitates in the Context of Phase Equilibrium, 43(6), 660–676 (2022), and the Editor's Choice Award for 2023 from the *Journal of Phase Equilibria and Diffusion* for his paper on "The Equilibrium  $\alpha$  (Al–Li Solid Solution) and Metastable  $\delta$  ( $\text{Al}_3\text{Li}$ ) Phase Boundaries in Aluminum–Lithium Alloys," 44(2), 255–268 (2023). He was also recognized for his outstanding performance as keynote speaker at the 2012 Annual Meeting of MRS-Taiwan.

Alan is widely recognized as a world leader in the field of microstructural evolution in alloys, known especially for his ability to bridge theory and experiment. Since his retirement from the UCLA Samueli School of Engineering in 2006, Ardell has continued to be productive both in terms of service and research. He became the program director for metals and metallic nanostructures at the National Science Foundation Division of Materials Research and has also served on numerous committees and review panels for the NSF, the Department of Defense, the Department of Energy and more.

## SHARING MEMORIES OF OUR FRIEND ALAN ARDELL

"I met Alan when he came from MIT to Stanford for graduate work in the fall of 1960. I liked him immediately, and we had been close friends ever since. Although Alan worked with Oleg Sherby on a project involving creep of zirconium, he gained fame for his work on the coarsening of coherent particles in precipitation strengthening alloys during his post-doctoral work at the University of Cambridge. There he published papers with R.B. Nicholson, one of which included an appendix written by J.D. Eshelby. During his time at Cambridge, he had the distinction of playing basketball with a future Senator, Bill Bradley, of New Jersey. A photograph of Alan at the foul line in a pickup game appeared in *Sports*

*Illustrated* in 1966. But basketball was not Alan's first love; it was baseball and the Brooklyn Dodgers. Alan and I used to play catch outside the Mining and Metallurgy building at Stanford to relax. Alan later returned to the field of creep, specifically, Harper-Dorn creep, where he developed a dislocation network theory that explained that mysterious phenomenon once and for all. His career was filled with insightful contributions on the microstructure and mechanical properties of alloys. My love for Alan was such that my wife and I chose 'Alan' for our son's middle name."

**W.D. Nix,**  
*Stanford University*

"Alan Ardell was a highly regarded colleague of mine, and I was deeply saddened when I learned last August that he had passed away. Alan was an outstanding researcher and cherished for his kindness, generosity, and positive attitude. There are the deep scientific discussions on the microstructure evolution resulting from ordering in Ni-Al alloys, attending one of his excellent talks, or going out to dinner at a conference, but there are so many personal fond memories I have of Alan. These memories still make me smile because they are testimony to Alan's personality.

"I learned about Alan's work during the late 1980s and 1990s when I was working on the development of thermodynamic descriptions of multicomponent Ti and Ni systems. His meticulous studies of coherent metastable equilibria in such systems were extremely valuable for my work, and I began to follow his publications and tried to attend his presentations whenever possible. Among these were the presentations that he gave on interfaces, their kinetics and thermodynamics about ten years ago, work that is of great importance for the understanding and modeling of materials at larger length scales. Alan was also an

excellent author. The quality of his papers is truly outstanding. The last two papers he submitted to the *Journal of Phase Equilibria and Diffusion* were a delight and were selected as Editor's Choice Articles. This recognition comes from both the editorial board and from international peers.

"Going out to dinner at a conference with Alan was special. Colleagues would join him for dinner at a fine French restaurant that he found in the conference town. One dinner that I remember in particular was in Columbus, Ohio, during an MS&T conference. The food was excellent and everybody had a great time until it came to paying the check. Everybody agreed to split the check evenly except Alan who insisted to pay exactly his share. At this time he was program director for Metals and Metallic Nanostructures at the National Science Foundation Division of Materials Research, and the ethics associated with this position was paramount to him. He was a stickler for details, not only in his scientific work but also in his adherence to rules.

"The community has lost a great man, mentor and friend, and his passing has left a great void."

**Ursula Kattner,**  
*National Institute of Standards and Technology*

"I have always admired Alan Ardell's work, which is characterized by his meticulous and thorough experimental studies and theoretical analysis. His work on coarsening and interfaces stands out as classics in materials science. In fact, I use some of his papers in my graduate course on phase transformations.

When Alan was at NSF, he recognized the value of one of my proposals (as opposed to a report by one reviewer) and awarded me an Eager grant

that was critical in allowing me to fund a graduate student to complete his PhD. Later at a Gordon Conference during a poster session, he met with the student and told me that he was pleased with the student's work and that he had made a good investment. I will always be grateful for his decision to fund the research."

**John Perepezko,**  
*University of Wisconsin-Madison*

## REMEMBERING ALAN ARDELL

### Marta Pozuelo

In 2005, I came to the U.S. as a Fulbright Postdoctoral Scholar to work with Prof. Alan J. Ardell on precipitation strengthening of inverse Ni-based superalloys. I was of course knowledgeable of his work, particularly his groundbreaking contributions on precipitation hardening. However, I had not met him in person before, so the opportunity to work with such an outstanding and world-renowned scientist was both thrilling and intimidating.

I was also really concerned that Alan had plans to retire (in fact I was his last postdoc at UCLA) so it was uncertain how long and significant our connection was going to be. However, we continued working together well after he moved away from Los Angeles and finally published our studies on disordered strengthening in 2017. Bringing this work to a point he was satisfied with was painstaking. Those who knew him well will not be surprised by this; by how scrupulous and thoughtful he was about his work, how resolved to build only on solid ground, how every sentence had to be applicable and accurate. But I will always treasure every minute, every email, and every iteration. Yes, I learnt a lot about coarsening mechanisms in metallic alloys from him, but what



Marta Pozuelo with Alan Ardell. Photo supplied by Marta Pozuelo.

The quote Alan provided when he was named a TMS Fellow well summarizes his dedicated membership to TMS: "My affiliation with TMS dates back to my student days and remains a cornerstone of my association with the community of physical metallurgists. The contacts made and information disseminated at TMS meetings have been of considerable value throughout my career. If peer recognition is indeed the true psychic income of our profession, my coffers are full. I feel privileged to be included in the company of the distinguished individuals who hold this honor."

In conclusion, Alan is widely recognized as a world leader in the field of microstructural

will always linger with me is his passion, the joy, and the pride of a genuine scientist for a job well done.

I'm grateful we remained close until his sad departure and that he was always there, interested, supportive, and encouraging. I'm certain many of my colleagues feel the same way, because if there was something Alan valued as much as science, that was his fellow scientists. He spoke so highly about his colleagues. Even after his retirement, he took so much delight on meeting new junior scientists at a conference or during his tenure as program manager for the NSF. I remember vividly walking the grounds of my first TMS meeting with Alan, terrified as I was for my first presentation. Alan made that first experience unforgettable for me, but what I remember the most was his joy of being surrounded by colleagues and friends. I was therefore not surprised to see him so touched and emotional on the days he received the 2023-2024 Dickson Emeritus Professorship Award from UCLA, and later the Oleg D. Sherby Award from TMS. Alan was actively working and publishing his research until very recently, strong and tough as the superalloys he was so fascinated with, his acute sense of humor unscathed by his declining health.

I was welcomed by Alan and his wife Mery at the LAX airport the day I arrived in the U.S. in 2005. For close to 20 years, Alan was my mentor and my friend, a wonderful host for all my family, and a very important figure in my life. We will miss him terribly. But I'll keep teaching his work in my lectures at UCLA, referring to him as one of the fathers of precipitation hardening. If only as a way to never really say goodbye.

**Marta Pozuelo is Adjunct Assistant Professor at the Department of Materials Science and Engineering of the University of California Los Angeles.**

evolution in alloys, known especially for his ability to bridge theory and experiment. Alan will also be remembered for his intellect, worldliness, and gentle sense of humor. His passion for classical and modern music on vinyl LP's, bridge, UCLA football and basketball, sweetbreads, fountain pens, and affogato will be remembered fondly by all who knew him.

**Patrice Turchi is a retired senior scientist from Lawrence Livermore National Laboratory and is a lifetime member of TMS. He served as TMS President in 2015.**

*Introductory photo supplied by Mery Ponte.*

# ANNOUNCING THE 2025 TMS YOUNG LEADERS AWARDS

KAITLIN CALVA



Growth. Connection. Community.

These are just some of the themes evident in the stories told on the following pages. These stories come from the outstanding individuals who demonstrate both the ability and the desire to serve the professions through active involvement in TMS. They are the 2025 recipients of TMS awards for emerging professionals: the TMS Young Leaders Professional Development Awards, International Scholar Awards, Early Career Faculty Fellow Awards, Frontiers of Materials Awards, and Young Innovator in the Materials Science of Additive Manufacturing Awards.

Receiving one of these awards comes with numerous tangible benefits, such as financial assistance to attend the TMS Annual Meeting & Exhibition and participate in division council meetings, special lectures and symposia, a TMS Board of Directors meeting, and more. And yet, attending the meeting is only the beginning.

Through these awards, young leaders receive invaluable opportunities to grow their careers, leadership skills, and professional networks. With this career milestone, they receive important recognition of their technical skills and encouragement to continue their contributions to the professions. From this experience, they strengthen their bond with the TMS community. This community is not simply a platform for collaboration and engagement with their peers and prominent members of the Society. It is a professional home for the next generation of materials science and engineering leaders.

The awards presented in this article were conferred during the TMS 2025 Annual Meeting & Exhibition (TMS2025), held on March 23–27, in Las Vegas, Nevada. Although TMS2025 has already taken place, be sure to add these new colleagues to your network and plan to join us at TMS2026 in San Diego, California, to celebrate the next class of TMS Young Leaders award recipients.

# TMS YOUNG LEADERS PROFESSIONAL DEVELOPMENT AWARDS

These awards help early career professionals to participate more actively in TMS. Young Leaders receive funding to attend the TMS Annual Meeting & Exhibition, where they are invited to join in Society leadership activities.

## Extraction & Processing Division (EPD)



**Amilton Barbosa Botelho Junior**  
Postdoc Associate, Massachusetts  
Institute of Technology

"Receiving the TMS 2025 EPD Young Leaders Professional Development Award is an incredible honor that reinforces my commitment to sustainable mining and the global energy transition. As a Brazilian scientist working in the U.S., I am dedicated to advancing eco-friendly materials and developing aqueous processes to recover critical materials from mining wastes—an essential endeavor for enabling cleaner technologies and advancing a circular economy. The support of the TMS community is invaluable as I work toward a future built on sustainable resource use and energy resilience."

"The support of the TMS community is invaluable as I work toward a future built on sustainable resource use and energy resilience."

—Amilton Barbosa Botelho Junior



**Gwendolyn Bracker**  
Assistant Research Professor, Worcester  
Polytechnic Institute

"The TMS annual meeting is a fantastic place to connect with the materials science community. I have always enjoyed both the technical discussions that occur with the sessions and the connectivity provided by the social events within the context of the meeting."

## Functional Materials Division (FMD)



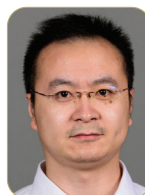
**Yu-chen Liu**  
Assistant Professor, National Cheng Kung  
University

"It is my great honor to be selected for the 2025 TMS FMD Young Leaders Professional Development Award. My first attendance at a TMS meeting started in 2015 as a Ph.D. student, and I became a symposium organizer in 2020. Attending TMS conferences has always been a thrilling opportunity to explore emerging research topics and connect with experts from around the globe. I look forward to actively contributing to the continued advancement of TMS in the future."



**Yu-Tsun Shao**  
Assistant Professor, University of  
Southern California

"The TMS FMD Young Leaders Professional Development Award is a great honor and powerful encouragement for early career scientists like me. By connecting with accomplished leaders and peers in the field, this award broadens my research scope, enabling us to explore new ideas and methodologies in functional materials. Through engagement in TMS activities, I am motivated to push the boundaries of my research and contribute to advancements in materials science."



**Kenan Song**  
Associate Professor, University of Georgia  
"This is a career development  
milestone."

## Light Metals Division (LMD)



**Lu Jiang**  
Research Fellow, Deakin University

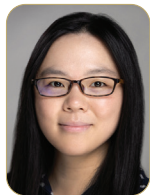
"I am truly honored to receive the LMD Young Leaders Professional Development Award. This opportunity will allow me to engage directly with TMS leaders, enhancing my professional growth and leadership skills through active participation in Society activities. I look forward to deepening my commitment and contribution to TMS."



**XiaoXiang Yu**  
Senior Scientist, Novelis Inc.

"Receiving the LMD Young Leaders Professional Development Award is a true honor and a milestone in my career, underscoring the value of collaboration within our community. TMS membership has provided invaluable opportunities for growth and innovation and for bridging connections between industry and academia. I am deeply grateful for the support of my colleagues, and this award inspires me to continue contributing to our remarkable network that champions advancement and professional development."

## Materials Processing & Manufacturing Division (MPMD)



**Lu Huang**

*Senior Researcher, General Motors*

"It is a great honor and privilege to receive the 2025 TMS MPMD Young Leaders Professional Development Award. Since attending my first TMS meeting in 2009, the Society has played a pivotal role in my professional journey, providing me with exceptional opportunities to share my research, exchange technical ideas with experts from around the globe, and build a robust professional network. I am deeply grateful for the support and opportunities TMS has afforded me and am committed to giving back to this community by continuing my engagement and contributions in various technical symposia, professional committees, and event activities."



**Nadia Kouraytem**

*Assistant Professor, Utah State University*

"I am grateful and honored to receive the TMS MPMD Young Leaders Professional Development Award. Since joining the Society during my postdoctoral tenure, TMS has provided me with an incredible platform to learn from the community, engage with its members, learn about cutting-edge research in materials science, and establish a strong foundation within my research area. This recognition further motivates me to contribute to TMS and support its vibrant community that has inspired my professional journey."

"This recognition further motivates me to contribute to TMS and support its vibrant community that has inspired my professional journey."

—Nadia Kouraytem



**Sneha Prabha Narra**

*Assistant Professor, Carnegie Mellon University*

"Since my Ph.D. graduation, TMS has been an incredible platform for my professional growth, offering me opportunities to lead workshops, organize symposia, and develop meaningful connections. Through the Society, I have found excellent mentors and collaborators who have been instrumental in shaping my career trajectory. I am grateful to TMS for creating a supportive network that has been pivotal to my ongoing professional development."

## Structural Materials Division (SMD)



**Wen Chen**

*Associate Professor, University of Southern California*

"I am truly honored to receive this TMS award. TMS has played a pivotal role in my career, providing opportunities to build lasting relationships, share knowledge, and stay engaged with advancements in our field. I look forward to continuing my journey with TMS, contributing to its vibrant community and mission of innovation."



**Trishelle Copeland-Johnson**

*Idaho National Laboratory*

"This award is an opportunity for me to further enhance my ability to advocate for the challenges of individuals who have been historically underrepresented, particularly in the materials sciences, which includes disciplines that have a direct impact on their quality of life and that of the communities they serve."



**Ala Qattawi**

*Associate Professor, University of Toledo*

"I am deeply honored to be selected for the TMS 2025 Young Leaders Professional Development Award. My involvement with TMS through participation in committees, annual meetings, and conferences has provided me with invaluable opportunities to collaborate and connect with researchers and industry partners in materials and manufacturing. I am excited at the increased opportunity that the Young Leaders Professional Development Award will provide and look forward to strengthening my commitment to advancing research and leadership within the SMD."

## EMPOWERING THE NEXT GENERATION



The opportunities and experiences offered by the awards highlighted in this article would not be available without the TMS Foundation and its commitment to developing the next generation of minerals, metals, and materials scientists and engineers. Visit [www.TMSFoundation.org](http://www.TMSFoundation.org) to learn more about the TMS Foundation's mission and signature programs or to make a donation today.

# TMS YOUNG LEADERS INTERNATIONAL SCHOLAR AWARDS

These awards function as an exchange program that provides early career professionals with the opportunity to present their work at international conferences.

## TMS Young Leaders International Scholar to the Federation of European Materials Societies (FEMS)



**Eva Zarkadoula**  
Senior R&D Staff, Oak Ridge National Laboratory

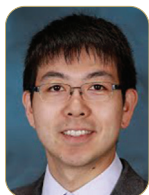
"I am very honored to be recognized with this award. I am grateful to the TMS Foundation for providing opportunities for networking and skill development

to researchers at all career stages and from all backgrounds and grateful for the support I have received from my mentors and my family. I am excited to represent TMS at the FEMS 2025 EUROMAT Meeting and connect with researchers overseas."

"I am grateful to the TMS Foundation for providing opportunities for networking and skill development to researchers at all career stages and from all backgrounds."

—Eva Zarkadoula

## TMS Young Leaders International Scholar to the Japan Institute of Metals and Materials (JIMM)

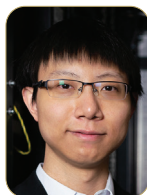


**Yue Fan**  
Associate Professor, University of Michigan

"I am deeply honored to receive the International Scholar recognition, which would not have been possible without the dedication of my research team

and the unwavering support of my department chair, Ellen Arruda. Since attending my first TMS conference a decade ago in 2015, I have considered it my professional home, as it offers an invaluable platform for young professionals to connect and collaborate with peers and leaders in our field. Looking ahead, I am excited to continue engaging with and serving the TMS community and to foster connections with international organizations like JIMM and beyond."

## TMS Young Leaders International Scholar to the Korean Institute of Metals and Materials (KIM)



**Yang Yang**  
Assistant Professor, The Pennsylvania State University

"TMS has been pivotal in my professional growth, offering invaluable opportunities to present my research, organize symposia, and connect with

leading experts in the research community. Receiving this award is a profound honor that will enable me to represent TMS at the KIM Fall 2025 meeting, share my recent work on short-range order in multi-principal element alloys, and strengthen ties between TMS and KIM. Thank you, TMS, for your support that not only advances my career but also fosters international collaboration and unity within our field."

## JIMM AND KIM SCHOLARS SPEAK AT TMS2025

The following scholars, selected by JIMM and KIM, delivered presentations at the TMS 2025 Annual Meeting & Exhibition in Las Vegas, Nevada, as part of the Young Leaders International Scholar Award Program.

### JIMM Young Leaders International Scholar to TMS



**Sharuto Karube**  
Associate Professor, Kyoto University

**Presentation:** "Spin Current Generation Driven by Altermagnetism and its Spintronic Applications"

### KIM Young Leaders International Scholar to TMS



**Gi-Dong Sim**  
Associate Professor, Korea Advanced Institute of Science and Technology

**Presentation:** "Aluminum-Carbon Thin Films with High Strength and Ductility"

## EARLY CAREER FACULTY FELLOW

This award recognizes assistant professors, invites them to make nontechnical presentations at the Emerging Professionals Tutorial Lecture at the TMS Annual Meeting & Exhibition, and asks them to program a symposium at the TMS Annual Meeting & Exhibition the year following the award presentation.



**Marie Charpagne**

*Assistant Professor, University of Illinois*

**Presentation:** "Pathways to Finding Your Own Driving Force as a Materials Scientist"

"TMS has been my home society since the very beginning of my career.

I am tremendously honored to be recognized with the Early Career Faculty Fellow Award and seize the opportunity to express my deep gratitude to the incredible mentors, colleagues, collaborators, and students who have accompanied me on this exciting journey. I strive to continue being a dynamic member of the community for many years to come."



**Aerial Murphy-Leonard**

*Assistant Professor, The Ohio State University*

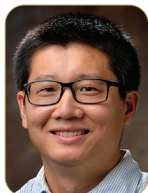
**Presentation:** "Exploring the Impact of Complex Metallic Alloys on Enhancing Fatigue Resistance and Educational Opportunities in

Marginalized Communities"

"TMS has been instrumental in my success as an assistant professor. The strong network and support I've gained through the organization have helped me grow both as a scientist and as a mentor. I am deeply grateful for the kindness and opportunities TMS has provided, and I cannot thank them enough for their invaluable contributions to my career."

## FRONTIERS OF MATERIALS AWARD

Recipients of this award are selected to organize symposia on hot or emergent technical topics at the TMS Annual Meeting & Exhibition and the TMS Fall Meeting at Materials Science & Technology (MS&T).



**Ling Li**

*Associate Professor, University of Pennsylvania*

"It is my great honor to receive this Frontiers of Materials Award. I am truly grateful to TMS for the privilege of organizing a special session on

biological and bio-inspired materials. The TMS community provides an ideal environment for in-depth discussions that advance new frontiers in this exciting and multidisciplinary field of materials research!"

Ling Li organized the symposium **Manufacturing Structural and Functional Materials with Complexity: Lessons from Nature** at the TMS 2025 Annual Meeting & Exhibition.



**Yu Zou**

*Associate Professor, University of Toronto*

"I am truly grateful for this recognition and that TMS provides me with the opportunity to organize a Frontiers of Materials Event! There is a growing interest in tailoring charged defects for

exceptional properties in structural and functional materials. I am looking forward to this emerging field providing a novel platform to develop novel materials, structures, and devices."

Yu Zou is organizing the symposium **Harnessing Charged and Chemical Defects for Exceptional Structural and Functional Properties** for the TMS Fall Meeting 2025 at MS&T, which will be held September 28-October 1 in Columbus, Ohio.

"The TMS community provides an ideal environment for in-depth discussions that advance new frontiers in this exciting and multidisciplinary field of materials research!"

—Ling Li

## YOUNG INNOVATOR IN THE MATERIALS SCIENCE OF ADDITIVE MANUFACTURING AWARD

Recipients of this award are invited to deliver a talk at the Additive Manufacturing Keynote session held at the TMS Annual Meeting & Exhibition.



**Atieh Moridi**

*Assistant Professor, Cornell University*

"Winning this award is particularly meaningful to me, as TMS has been my professional home and a key venue where my team and I have learned, grown, and shared our research.

Organizing the Alloy Design for Additive Manufacturing symposium over the past five years has been a great source of inspiration.

Now, receiving this recognition from the Society that has nurtured my growth is truly an honor. It reinforces my commitment to advancing innovation in our field and continuing to contribute to the TMS community."

Atieh Moridi gave the presentation, "Unlocking the Hidden Potential of Additive Manufacturing: Microstructure Control and Material Innovation," during the Additive Manufacturing Keynote Session at the TMS 2025 Annual Meeting & Exhibition.

### APPLY FOR A 2026 YOUNG LEADERS AWARD

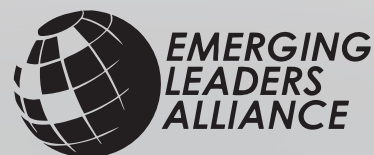
TMS Young Leaders are dynamic and driven individuals within the minerals, metals, and materials community. They possess leadership skills and are eager to participate in TMS initiatives that advance the Society's strategic goals. They embody qualities that indicate promise for advancing within TMS to take on more responsibilities through volunteer leadership roles.

If this describes you or someone you know, you might be a TMS Young Leader. Any professional TMS member in good standing age 40 or younger is eligible to apply for a TMS Young Leaders Professional Development Award or International Scholar Award. **Applications for the 2026 awards are due August 15, 2025.**

To view award criteria and access application forms, visit [www.tms.org/Awards](http://www.tms.org/Awards).

**Kaitlin Calva is an independent contributor and former editor of JOM: The Magazine.**

### APPLY FOR THE 2025 ELA CONFERENCE

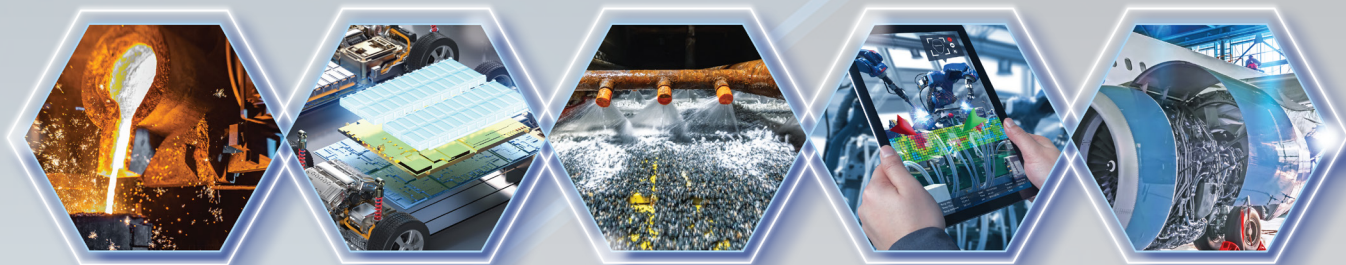


TMS is now accepting applications for the 2025 Emerging Leaders Alliance (ELA) Conference, scheduled for September 15–17, 2025, in Pittsburgh, Pennsylvania. Applicants must be TMS members, typically between ages 25–40, with rising or current leadership positions within their organizations. Interested members should send a letter of interest, one or two letters of recommendation, and a resume or curriculum vitae to Deborah Hixon, TMS Awards Program Manager, at [hixon@tms.org](mailto:hixon@tms.org). **The deadline to apply is May 15, 2025.**

Find more information at [www.tms.org/YoungProfessionals](http://www.tms.org/YoungProfessionals).

*Participation for seven TMS members to attend the annual ELA conference is funded through the TMS Foundation.*

# Thank You to our 2024 Peer Reviewers



**JOM** extends a heartfelt thank you to all volunteers who completed peer reviews in 2024 for articles in *JOM: The Journal*. We know that making time for service to the community can be a challenge. The audience and authors of *JOM* are indebted to these reviewers who so generously shared their knowledge and time to ensure that only the highest quality articles are published.

## The full list of 2024 reviewers follows.

Gurusampath Kumar A	Ali Akbar Abdollahzadeh	Folahan A. Adekola
Haja Maideen A	Niaz Abdolrahim	Adedotun Adetunla
Jerwin Prabu A	Shakoor Abdul	Devendra Adhikari
Rajesh A M	Mahmoud Abdullah	Ilaksh Adlakha
Praveen A S	Muhammad Raies Abdullah	Mohamed Afifi
Ahmed S. Aadli	Shaymaa Abbas Abdulsada	Sanjida Afrin
B. Aashranth	Hamid Abedi	Mahmoud Afshari
Aqeel Abbas	Nesreen Aboghnim	Okechukwu Agbasi
Naseem Abbas	Sepideh Abolghasem	Hossein Aghajani
Alireza Abbasi	Galina Abrosimova	Hamed Aghajani Derazkola
Mahmoud Abbasi	Maria Abu Bakar	Valeh Aghazadeh
Alaa Abd El-Rehim	Hanaa Abu Khoziem	Priyanka Agrawal
Abdalla Abdalla	Emre Acar	Rohit Agrawal
Mohamed Abdel-Aziz	Nil Acarali	Khairrel Rafezi Ahmad
Adel Mohamed Abdelkader	Mihira Acharya	Sazzad Ahmad
Walid Abdellah	Abuzer Acikgoz	Waqas Ahmad
Mehdi Abdelouahhab	Juliana Acordi	Reza Ahmadi
Mohamed Taha Abdelraheem	Venkata Snehith Adabala	Zohre Ahmadi
Ragab Abdelrahman	Zary Adabavazeh	Mehdi Ahmadi Najafabadi
Reza Abdi Behnagh	Benjamin Adam	Hossein Ahmadian
Ali Abdollahzadeh Ziabari	Jesse Adamczyk	Mohsen Ahmadipour
Mahmoud Abdollahy	Adewale Adegbenjo	Tanvi Ajantiwalay

Mohammad Akbari	Sayed Amer	Pradyumn Arya
Morteza Akbari	Kheira Ameer	Tesleem Asafa
Naveed Akhtar	Nawal Ameer	Somayah Asgary
Fatih Akkoyun	Dattaguru	Tessafa Ashagrie
Torgom Akopyan	Ananthapadmanaban	Khansa Ashfaq
Ayesha Akter	N.S. Anas	Yugo Ashida
Anwar Al Gamal	Alexandra Anderson	Ali Ashrafi
Shadi Al Khateeb	Deirdre Anderson	H. Ashrafi
Shamshad Alam	David Andersson	Hesam Askari
Miltos Alamaniotis	Bernoulli Andilab	Amir Hossein Assari
Emre Alan	Veera Brahmacharyulu	Semih Ates
Alankar Alankar	Angalakuditi	Güldane Ateşoğlu
Jonathan Alarie	Polyxeni Angelopoulou	Desmond Attah-Kyei
Amar Albaaji	Xanthopoulou	Thierry Auger
Noe Alba-Baena	Muhammad Anis-Ur-Rehman	Behzad Avishan
Talib Albayati	Dalaver Anjum	Shikha Awasthi
Chris Aldrich	Burri Ankaiah	Samuel Awe
Yasin Alemdağ	Li Anqing	Olusoji Ayodele
Markus Alfreider	Amir Reza Ansari Dezfoli	Aditya Ayyagari
Salh Alhammadi	Magdalena Antonowicz	Ammasi Ayyandurai
F.F Alharbi	Helmut Antrekowitsch	Tariq Aziz
Addisu Negash Ali	Luiz Antunes	Sara Azmi
Heba Ali	Zubia Anwer	Sonia Azzaza
Md. Lokman Ali	Xiaohui Ao	Prakashaiah B G
Mohamed Ali	Fatih Apaydin	Sharath B N
Zulqarnain Ahmad Ali	Jonathan Apell	Nagaraja B S
Ziad Alismaeel	Jinoop Arackal Narayanan	Nazim Babacan
Rawad Aljabr	Dia Eddin Arafah	Aziz Babapoor
Murat Alkan	Iñigo Aramendia	Sm Jagadeesh Babu
Bandar Almangour	Ali Aras	Yusuf Badali
Faris M. Al-Oqla	Mohammad Ardestani	Farzad Badkoobeh
Irem O. Alp	Kristyn Ardrey	Madhusudan Baghel
Phil-Jacques Alphonse	Muhammad Arif	Behrouz Bagheri
Mazen Alshaaer	Alexander Arkhipov	Ebad Bagherpour
Emre Altaş	Osman Armağan	Zahra Bahri
Mahmut Altiner	Sixtos Arreola-Villa	Guangzhu Bai
Ammar Alyasari	Muhammad Arshad	Kaikai Bai
Kingsley Amatanweze	Volkan Arslan	Xu Bai
Omid Amelirad	Nana Arthur	Bharat Bajaj
	Arulselvan Arumugham Akilan	

Anurag Bajpai	Ismail Bencherifa	Bahram Boroughani
Parikshit Bajpai	Seif Eddine Benhammouda	P Subhash Bose
Devarajan Balaji	Birgul Benli	Amilton Botelho Junior
Nagasivamuni Balasubramani	Aurelie Benoit	Abderrazzak Boudouma
Senay Balbay	Aziz Bentis	Zakaria Boumerzoug
Esra Balci	Santanu Bera	Patrick Bowen
Selami Balci	Rohit Berlia	Quentin Boyadjian
Daniel Baldomir	Camille Bernal-Choban	Gwen Bracker
Nithin Baler	Jean Berteau	Stephan Broek
N Bharath Ballal	Shishira Bhagavath	Xiangning Bu
Raju Banda	Abhishek Bhansali	Federica Buccino
Din Bandhu	Nikhil Bharat	Joseph Buhagiar
Rajat Banerjee	Anant Bhardwaj	Brady Butler
Anuj Bansal	Arjak Bhattacharjee	John Butler
Shenxu Bao	Arnab Bhattacharyya	Adam Bydalek
Kianoush Barani	Ijaz Bhatti	Jesper Byggmästar
Abdelkhalek Barbouchi	Suresha Bheemappa	Vinothkumar C M
Praful Bari	Subba Rao Bheemavarapu	Suleyman Cagan
Anwesha Barik	Vishal Bhojak	Mehmet Cagirci
Dallin Barton	Ankit Bhojani	Gaoshen Cai
Abhishek Barua	Priyam Bhowmik	Wenjun Cai
Azmat Bashir	Shashank Dutt Bhyravajoshulu	Yang Cai
Hymavathi Basireddy	Zhenzhong Bian	Dandy Calla Choque
Naga Batti	Svetlana Bibanaeva	Patrick Callahan
Thomas Battle	Yusuf Bicer	Jesús Emilio Camporredondo
Jean Sebastien Baumann	Hülya Biçer	Elisa Cantergiani
Ranjit Bauri	Magdalena Bieda-Niemiec	Brian Cantor
Behzad Bavarian	Nick Birbilis	Fabin Cao
Salil Bavdekar	Jayasree Biswas	Guoping Cao
Ismail Bayar	Ciro Bitondo	Jian Cao
Salih Bayca	Andrew Bobel	Jing Cao
Amit Behera	Natalia E Boboriko	Lei Cao
Behrooz Beidokhti	Valdis Bojarevics	Lingling Cao
Brahim Belahcene	Jae Bok Seo	Ruitao Cao
Sefiu Bello	Giovanni Bolelli	Sheng Cao
Nikolay Belov	Steven Boles	Yang Cao
Manuel Beltrán-Zúñiga	Ravi Kiran Bollineni	Yulong Cao
Festus Ben	Aravinda Reddy Bommareddy	Zhao Cao
Sara Benalia	Satish Babu Boppana	Jorge Carlier
	Tushar Borkar	Adele Carradò

Riccardo Casati	Shuai Chen	Prince Cobbinah
Ahu Celebi	Songjinag Chen	Theresa Coetsee
Silvia Cere	Tianyi Chen	Jorge Luís Coleti
Deniz Cetin	Wei Chen	Ömer Cora
Zeynep Çetinkaya	Wen Chen	Andre Costa E
Yanfu Chai	Xianhua Chen	Jorge Costa Silva
Min Chan	Xin Chen	Thercio Costa
Guddakesh Kumar Chandan	Yongming Chen	Raghavendra Cr
S. Chander	Youxing Chen	Catalin Croitoru
Ali Dad Chandio	Yuanlin Chen	Robert Cromarty
Leh-Ping Chang	Yuliang Chen	Carl Cross
Jia Changyuan	Zechao Chen	Hao Cui
Mallikarjun Channalli	Chu Cheng	Jun Cui
Channabasavaiah Channappa	Gongjin Cheng	Junjia Cui
Chien-Wei Chao	Haoran Cheng	Pengxing Cui
Indrajit Charit	Jigui Cheng	Senlin Cui
Marie-Agathe Charpagne	Wei-Li Cheng	Xiao-Lei Cui
Saikat Chatterjee	Yang Cheng	Angela Cusanno
Bingxv Chen	Zhi Cheng	Adam Cwudziński
Chao Chen	Mulugeta Cheru	Ricardo Alexandre Galdino Da Silva
Chengcheng Chen	Shashank Chetty	Modupeola Dada
Chih Chen	Suresh Vidyasagar Chevuri	Sara Dafé
Chih Chen	Atharva Chikhalikar	Esen Dağaçan
Chih-Ming Chen	Shemang Chindo	Hossna Darabi
Cong Chen	Anthony Chiu	Jens Darsell
Desheng Chen	Edson Chiwandika	Anil Kumar Das
Dong Chen	Seongmook Cho	Arpan Das
Guo Chen	Zungsun Choi	Bappa Das
Jiang Chen	Diana Cholico	Hrishikesh Das
Liang Chen	Amit Choudhari	Sanjeev Das
Lin Chen	Sonal Choudhary	Surya Kanta Das
Lin Chen	Jijo Christudasjustus	Sriswaroop Dasari
Liyu Chen	Mansheng Chu	Dibakar Datta
Mengjun Chen	William Chuirazzi	Shubhabrata Datta
Mengjun Chen	Alexander Churyumov	Grace De Leon
Min Chen	Yasemin Ciftci	Rodrigo De Souza
Qiang Chen	Emre ÇiNkiliç	Francesco D'Elia
Shifu Chen	Mateusz Ciszewski	Nicolò Della Ventura
Shiliang Chen	Noelle Easter Co	Abayneh Getachew Demesa

Mehmet Emin Demir	Jiaqi Duan	Rasoul Fatahi
Bona Deng	Wenjun Duan	Adel Fathy
Guanyu Deng	Tomasz Durejko	Adel Fathy
Lei Deng	Thywill Dzogbewu	Eni Febriana
Ming-Yang Deng	Mark Easton	Mamoun Fellah
Zhigan Deng	Thomas Ebel	Qingming Feng
Yi Denghao	Mónica Echeverry-Rendón	Yali Feng
Chaitanya Deo	Kaveh Edalati	Yuqing Feng
Nicholas Derimow	Francis Edoziuno	Zhongxue Feng
Jay Desai	Mert Efe	Wang Fengkang
Maharshi Dey	Noureddine El Hasbaoui	Begoña Fernández
Abhijeet Dhal	Nahed El Mahallawy	Patxi Fernandez-Zelaia
Ajit Dhamdhare	Seyed Hossein Elahi	Kyle Fezi
Nikhil Dhawan	Dr Walaa M. Abd El-Gawad	Kip Findley
Abhijeet Dhiman	Abdallah Elsayed	Michael Fischlschweiger
Jinghui Di	E. Elsayed	Ismael Flores
E. Díaz	Charles Enloe	Roberto Fornari
Cesar Diaz-Caraveo	Alicia Enslin	Boutheina Ben Fraj
Hajo Dieringa	Dinc Erdeniz	Lesley Frame
Satyavan Digole	Adriana Eres-Castellanos	Peter Franke
Hongsheng Ding	Seyed Ali Erfani Mobarakeh	Enrique Frutos-Myro
Zhao Ding	Serafettin Eroglu	Kozo Fujiwara
Lukas Dion	Mikael Ersson	Dhanesh G Mohan
Mouhamadou Diop	Markus Erwee	Shanthi G
Raj Dishwar	Dmitry Eskin	Dhanesh G. Mohan
Bowen Dong	Hector Espejo	Supreeth Gaddam
Wenxiong Dong	Seyed Alireza Etesami	Chandra Sekhar Gahan
Mark Dorreen	Zafer Evis	Sebastián Gámez
João Henrique Dos Santos	Céline Falentin-Daudre	Min Gan
Aichun Dou	Chenkang Fan	Zhengtao Gan
Edward Dreizin	Jianglei Fan	Sharanabasava Ganachari
Jean-Marie Drezet	Xianqiang Fan	Krishna Ganesan
Sebastien Dryepondt	Chris Fancher	Patrick Ganster
Jiang Du	Changming Fang	Bingliang Gao
Jiaojiao Du	Gang Fang	Haiyan Gao
Jing Du	Li Fang	Meng Gao
Jun Du	Towhid Faraji Shovay	Peng Gao
Wenjia Du	Hafiz Muhammad Tahir Farid	Qiuzhi Gao
Yuzhou Du	Amirreza Farnia	Rugao Gao
Huamei Duan		

Tinghong Gao	Tianhong Gu	Liangyan Hao
Xinyu Gao	Suresh Gudala	Yulin Hao
Yanfei Gao	Mohamed Guendouz	Zhentaoh Hao
Yawei Gao	Armagan Gul	Barun Harichandan
David Garcia	Onur Güler	Ravi Sankar Haridas
Jesus Garcia	Anurag Krishnakedar Gumaste	Katika Harikrishna
Marco Arturo Garcia-Renteria	Sivagaami Sundari Gunasekaran	Mostafa Hassani
Akshay Garg	Ali Günen	Purnima Hazra
Maneesha Garg	Bekir Güney	Liang He
Mayank Garg	Guodong Guo	Ni He
Nayak Gargi	Hao Guo	Junlin Heng
Sujeet Gautam	Jingfeng Guo	Taufiq Hidayat
Kenneth Geelhood	John Guo	Seyed Hojjatzadeh
Henry Geerlings	Qiang Guo	Manas Likhith Holekevi
Emmanuel Georgiou	Ruipeng Guo	Chandrappa
Farzin Ghadami	Shengfeng Guo	Noah Holtham
Mehdi Ghobeiti-Hasab	Xiaotong Guo	Tim Horn
Satadal Ghorai	Xueyi Guo	Peter Hosemann
Daniel Gianola	Yanbing Guo	Santosh Hosmani
Jeffery Gibeling	Yufeng Guo	Longgang Hou
Brian Gibson	Yunfa Guo	Ruiqing Hou
Mihajlo Gigov	Ashish Kumar Gupta	Zhaoyang Hou
Amares Singh Gill	Rajeev Gupta	Chengyang Hu
G Girish	Upendra Gupta	Fang Hu
Francis Gitau	Vipul Kumar Gupta	Hj Hu
Brian Gleeson	Nilesh Gurao	Jing Hu
Alexandra Glover	Bharat Gwalani	Kai Hu
Eeshani Godbole	Ngoc San Ha	Ming Hu
Yingxin Goh	James Haag	Yong-Jie Hu
Haijun Gong	Ummay Habiba	Yucheng Hu
Minglong Gong	Benjamin Hackett	Ching-Chien Huang
Xuzhong Gong	James Haley	Hailong Huang
Yanbing Gong	Joseph Hamuyuni	Lingyun Huang
Zhanpeng Gong	Jinkyu Han	Yinsheng Huang
Jerard Gordon	Ning Han	Yuanding Huang
Tomas Grejtak	Songyang Han	Yukun Huang
Malcolm Griffiths	Tingzhuang Han	Niranjan Hugar
Daniela Grigorova	Yimo Han	Chang-Yu Hung
Pavel Grudinsky	Ying Han	Megan Hurley

Shahid Hussain	Handong Jiao	Michael Kesler
Henry Hutcheson	Bingjie Jin	Saira Khan
Bevis Hutchinson	Xiaodong Jing	Poonam Kharangarh
Oluchukwu Igboenyasi	Denny John	Georgii Khartcyzov
Sedat Ilhan	Rahul John	Rajesh Khatirkar
Chukwunwike Iloeje	Katelyn Jones	Razieh Khoshhal
Asim Iltaf	Blessy Joseph	Nayna Khosla
Sadia Ilyas	Sameehan Joshi	Gokhan Kilic
Muhammad Imran	Shubham Joshi	Volkan Kilicli
Farhan Ishrak	Jinrong Ju	Jihye Kim
Suhaina Ismail,	Yang Jun	Alexey Kirichenko
Sachin Jadhav	Rajesh Kumar Jyothi	Lina Kjellqvist
Amin Jafari-Ramiani	Sunu Surendran K.T.	Joseph Kleindienst
Ashish Jain	Sourabh Bhagwan Kadambi	Jonah Klemm-Toole
Manish Jain	Satish Kailas	Zachary Kloenne
Joseph Jakes	Kawa Kaky	Alexander Klyushnikov
Visharad Jalan	Jagannathan Kalathi	Mustafa Kocadağistan
William James	Alireza Kalhor	Nagaraja Kodihalli
Bharat Jasthi	Prafull Kamble	Amanda Koh
Kumar Jata	Hossein Kamran	Reza Kolahchi
Sabah Javaid	Rangasayee Kannan	Yashwant Koli
Ps Jena	Amlan Kar	Sergey Komarov
Ina Beate Jenssen	Halil Karakoç	Hassan Koohestani
Thomas Jewett	Mohammad Karamoozian	Ertan Kosedag
Cheng Ji	Mostafa Karamouz	Maria Kosmidou
Vincent Ji	Aseel A Kareem	Anand Babu Kotta
Yanzhou Ji	Anna Kareer	Ravi Sankar Kottada
Bin Jia	Chandrakala Kari	Tihomir Kovačević
Weitao Jia	Sajjad Karimi	L Krishnaraj
Zheng Jia	Achmad Karisma	Thomas Kronberg
Jikang Jian	Sanoj Karki	Shibo Kuang
Pan Jian	R. Karuppasamy	Amit Kumar
Aoke Jiang	Veera Venkata Nagaraju	Manoj Kumar
Baocheng Jiang	Kasagani	Nand Kumar
Deyu Jiang	Eshetie Kassegn	Naveen Kumar
Feng Jiang	Megumi Kawasaki	Pankaj Kumar
Ripeng Jiang	Esad Kaya	Prakash Kumar
Runjian Jiang	Alicja Kazek-Kesik	S. Shashi Kumar
Tao Jiang	Deqing Ke	Santosh Kumar

Sujeet Kumar	Haojie Li	Lu Lin
M Kumaran	Haoyu Li	Ms. Leqi Lin
Ajita Kumari	Jing Li	Qiaoli Lin
Julia Kundin	Jingjing Li	Xi Ling
Richard Kunter	Lan Li	Klaus-Dieter Liss
Davron Kurbanov	Lei Li	Bingbing Liu
Gizem Kurt	Lin Li	Chenhui Liu
Andrew Kustas	Lu Li	Cong Liu
Alisson Kwiatkowski Da	Meng Li	Fei Liu
Sunyong Kwon	Qiang Li	Fupeng Liu
Changquan Lai	Rengeng Li	Guihua Liu
Chaobin Lai	Ruoxin Li	Hao Liu
Aaditya Lakshmanan	Shaofu Li	Honghui Liu
Andromeda Laksono	Shengyen Li	Huan Liu
Amrita Lall	Wenjie Li	Jiaxin Liu
Mylan Lam	Wenya Li	Jitao Liu
Chiranjivi Lamsal	Wenyuan Li	Lijun Liu
Yongting Lan	Xiaodong Li	Mabao Liu
Veronika Laurinavichyute	Xingbin Li	Shuhong Liu
Nathaniel Lawson	Xinsheng Li	Tingkun Liu
Adamantia Lazou	Xubin Li	Xun Liu
Sophie Le Cann	Xuewen Li	Yahui Liu
Min Hyung Lee	Yan Li	Yajing Liu
Seok-Woo Lee	Ying Wai Li	Yanzhen Liu
Seungcheol Lee	Yujun Li	Yingxia Liu
Tae-Kyu Lee	Zehao Li	Yiyang Liu
Yousub Lee	Zhaocan Li	Yu-Chen Liu
Juyoung Leem	Zhaofeng Li	Yue Liu
Lei Lei	Zheng Li	Yuemei Liu
Ming Lei	Zhengwei Li	Zhongqiu Liu
Qian Lei	Ziqing Li	Zhongwu Liu
Zuosheng Lei	Chien-Lung Liang	Zhuo Liu
Andreas Leineweber	Zhi Liang	Stephen Lobo
Brian Lester	Wuping Liao	Mujun Long
Patrick Leveque	Xinjiang Liao	Xu Longhua
Bo Li	Peter Liaw	Jiawei Lu
Fei Li	Jonathan Ligda	Liming Lu
Guangshi Li	Hojun Lim	Shenglu Lu
Guofeng Li	Chaowalit Limmaneevichitr	Walter Luscher

Jinfang Lv	Yifei Meng	Himansu Nanda
Zhiqing Lv	Vanessa Meraz	Mohan Sai Kiran Kumar
Raju M	Antonio Mercado Perez	Yadav Nartu
Aiyuan Ma	Mohsen Mesbah	Abdollah Nasiri
Chunyu Ma	Pratima Meshram	Nashat Nawafleh
Jiayu Ma	James Metson	Sanjeev Nayak
Limin Ma	Amirhossein Meysami	Sabereh Nazari
Mingming Ma	Zhuang Miao	Alok Negi
Yilong Ma	Elena Mikeli	Raymond Neuberger
Takalani Madzivhandila	Sean Mills	Eric Neuman
Suraj Maganty	Hamed Mirzadeh	Preston Nguyen
Chinmaya Mahapatra	Amit Misra	Stuart Nicol
Petra Maier	Bernhard Mitas	Eshwara Nidadavolu
Alafate Maierdan	Michael Mizak	Daniel Moreno Nieto
Natt Makul	Mario Mocker	Fangkun Ning
Aniruddha Malakar	Ehsan Mohammad Sharifi	Fei Niu
Arup Mandal	Masumeh Mohammadzadeh	Haijun Niu
Praveen Mane	Sudipta Mohapatra	Piotr Noga
Thomas Mann	Nur Farhana Diyana Mohd Yunos	Kazuhiro Nogita
Guttikonda Manohar	Meymanat Sadat Mohsenzadeh	Wojciech J. Nowak
Ramya Manohar	Jon Molina-Aldareguia	C.C Nwaeju
Vaso Manojlovic	Yuttana Mona	Eric Nyberg
Xiaodong Mao	Khashayar Morshed-Behbahani	Nnaemeka Nzeh
M Marikani	Tomasz Moscicki	Ömür Can Odabaş
Fabrizio Mariosi	Marium Mostafiz Mou	Jihun Oh
Raja Marthi	Wangzhong Mu	Chiamaka Okafor
Ana Maria Martinez	A. Mubark	Eyitayo Olakanmi
Mahbub Alam Maruf	Manoj Mugale	Joao Oliveira
Karine Masenelli-Varlot	Sarang Muley	Sakip Onder
Peyman Mashhadi Keshtiban	Marta Multigner	Bogustaw Onderka
Paul Mason	Sean Murray	Ping Ou
Mohammad Masoumi	James Mwase	Shih-Fu Ou
Alice Mateescu	Keerthivasan N	Derya Öz Aksoy
Oksana Matselko	Hari Babu Nadendla	Mustafa Ozturk
Atul Maurya	Tetsuya Nagasaka	Roshith P
Daniel Mcconville	Lakshmi Nair	Saranya P
Pedro Medeiros Ribeiro	Alfonso Najera	Akshat Pachauri
Hui Meng	Steven Naleway	Sai Krishna Padamata
Xiangxi Meng		Darren Pagan

Michael Pagan	Debora Lyn Porter	Xiaona Ren
Chad Painter	Erwin Povoden-Karadeniz	Yu Ren
Amirhossein Pakseresht	Adam Powell	Md Reza-E-Rabby
Manas Paliwal	Andrey Pozdniakov	M. Akbar Rhamdhani
Heinz Palkowski	Srivatsa Pradeep	Mustafa Rifat
Chaochao Pan	Asisha Pradhan	Jacob Rindler
Hao Pan	Nagarajan Pragadish	Tommi Rinne
Hongbo Pan	Anamika Prasad	Baljinder Riyar
Jinzhe Pan	Joshua Pribe	Christopher Rock
Junqing Pan	Julia Puerstl	Manel Rodriguez Ripoll
Sagar Pande	Suneeti Purohit	Sal Rodriguez
Phromphong Pandee	Barbara Putz	Aashish Rohatgi
Karthik Pandiyan G	Liang Qi	Anthony Rollett
Xin Pang	Yixiao Qin	Vyacheslav Romanov
Radhika Panickar	Rabia Qindeel	Sarshad Rommel
George A. Pantazopoulos	Haozheng Qu	Edoardo Rossi
Vinayak Parale	Maria Quintana	Aditya Roy
Yash Parikh	Ramesh R S	Shufeng Ruan
Joohyun Park	Farshad Rabiei	Andreia Ruivo
Jun-Sang Park	Bhimarao Raghupatruni	Alagarsamy S V
Deepak Patel	Nima Rahbar	Balaguru S
Jayesh Patel	Renjith Rajan Pillai	Abhinav Saboo
Payank Patel	L. Rajeshkumar	Ritesh Sachan
Carlo Paternoster	Jovid Rakhmonov	Prem Sagar
Amit Patil	Łukasz Rakoczy	Deepak Sahoo
Namdev Patil	Arvind Ramachandran	Partha Sahoo
Brian Patterson	Prahalada Rao	Silani Sahoo
Eric Payton	Vivek Rao	K. K. Sahu
Guishang Pei	Imkong Rathi	Indradev Samajdar
Hong Peng	Arne Petter Ratvik	Sumant Samal
Yawei Peng	Mukesh Raushan Kumar	Imam Santoso
Zhiwei Peng	Pratik Ray	Souriddha Sanyal
Linus Perander	Seyed Razavian	Rahul Sarkar
Lorena Perez	Bandi Venkata Reddy	Mariola Saternus
Tim Pickle	Maximilian Regenber	Tiphaine Schott
Ramana Podugu	Janin Reifenrath	Brian Schuster
Reeju Pokharel	Guillaume Reinhart	Rüdiger Schwarze
Mayur Pole	Neng Ren	Hajar Sdira
Andrew Polonsky	Qing-Qiang Ren	Anastasiia Semenko

Binayak Sen	Chathuri Silva	Fenglong Sun
Samuel Senanu	Hannah Sims	Pei Sun
David Senior	Swee Leong Sing	Y. Sun
Audrius Senulis	Alok Singh	Yu Sun
Herma Dina Setiabudi	Anirudh Singh	Yuehua Sun
Rasit Sezer	Ashish Singh	Zhiqian Sun
Yagnesh Shadangi	Balwant Singh	Debashish Sur
Sohail Shah	Gurpreet Singh	Andrey Suzdaltsev
Mohd Shaikh	Indeevar Singh	Sasikumar Swamiappan
Morteza Shaker	Mahander Pratap Singh	Attila Szlancsik
Farnaz Shakib	Vivek Singh	Sarithnaidu T
Sumath Shankar	Subbarayan Sivasankaran	Khaled Talaat
Lixiong Shao	Ahmed Sobhy	Chaobo Tang
Zongping Shao	Il Sohn	Shaochun Tang
Fariborz Sharifianjazi	Faraz Soltani	Wei Tang
Abhishek Sharma	Bo Song	Xin Tang
Aishani Sharma	Kaikai Song	Xiao Tao
Ashutosh Sharma	Peng Song	Prithwish Tarafder
Lochan Sharma	Ying Song	N.L. Tarwal
Jiahong Shen	Yunfeng Song	Pekka Taskinen
Jianghua Shen	Mohammad Sourì	Mohammad Taufique
Leiting Shen	Juliano Soyama	Scott Taylor
Yu-An Shen	Jaijith Sreekantan	Lucas Teeter
Bharath Shetty	Soumya Sridar	Kirubel Teferra
Shih-Chen Shi	Kiranbabu Srikakulapu	Karel Tesař
Wenwu Shi	Rajiv Srivastava	Fiseha Tesfaye
Yu-Sheng Shi	Siddhartha Srivastava	Damien Texier
Jeffrey Shield	Tomasz Stasiak	T.T. Thabethe
John Shimanek	Douglas Stauffer	Saket Thapliyal
Sagar E. Shirsath	Mike Stawovy	Eric Theisen
Sunil B Shivarudraiah	Aaron Stebner	Dan Thoma
Ajay Shukla	Sonja Steinbach	Lei Tian
Neha Shukla	Matthew Steiner	Liang Tian
Pavel Shurkin	Jean-Charles Stinville	Zhongliang Tian
Moses Siame	Zijian Su	Ekaterina N Tokmakova
Minna Siekkinen	Dmitry Sukhomlinov	Hung Tran
Geoffrey Sigworth	Ummul Sultana	Prabhat Tripathy
Prabaha Sikder	Swapam Suman	Pramanshu Trivedi
Wim Sillekens	Binhan Sun	Elissa Trueman

Alex Trukhanov	Liang Wang	Yan Wu
Kwong Ming Tse	Mingyu Wang	Winy Wulandari
Scott Turnage	Qi Wang	Xiaoli Xi
Yusuf Usta	Qiang Wang	Longgong Xia
Uwa Uyor	Shuai Wang	Re Xia
Alexander Vakhrushev	Tianhao Wang	Sihao Xia
Dmitry Valeev	Wenbo Wang	Bin Xiang
Marie-Aline Van Ende	Xiang Wang	Li Xiang
Jere Vänskä	Xiang Wang	Huaqiang Xiao
Soumya Varma	Xiaohong Wang	Junhui Xiao
Romain Vayron	Xin Wang	Wei Xiao
Gihan Velisa	Yanbo Wang	Boyi Xie
Viswanathan Venkatachalapathy	Yannan Wang	Hongwei Xie
Dirk Verhulst	Yi-Wun Wang	Yi Xie
Minerva Maria Vierunketo	Yiyu Wang	Ying Xie
Ganesh Kumar Vijayakumar	Yu Wang	Hongxuan Xing
Sriram Vijayan	Yuchu Wang	Xiangdong Xing
Vineeth Vijayan	Yun Wang	Xiang Xiong
N.N Vishwanathan	Yunzhi Wang	Xunhui Xiong
Valeria Vistoso	Zhenhua Wang	Guiyin Xu
Olena Volkova	Zhi Wang	Lei Xu
Samuel Wagstaff	Zhigang Wang	Peng Xu
Ganesh Walunj	Jordan Weaver	Qingwei Xu
Xingbang Wan	Chenlong Wei	Qiong Xu
Baomin Wang	Fuan Wei	Yangli Xu
Changhong Wang	Guangsheng Wei	Sichuang Xue
Changtao Wang	Wei Wei	Rajesh Yadav
Chaohong Wang	Christopher Weinberger	Yukinori Yamamoto
Chengshan Wang	Ryan Welch	Defeng Yan
Chengyan Wang	Joe Wendorf	Qi Yan
Fulin Wang	Wei Weng	Zihao Yan
H.P. Wang	Brian Wisner	Fang Yang
Haozheng Wang	Chathuranga Witharamage	Jianguang Yang
Hongyang Wang	Thomas Wolfe	Shufeng Yang
Jian Wang	Tonya Wolfe	Siyuan Yang
Jianfeng Wang	Albert T. Wu	Yafeng Yang
Jian-Li Wang	Jia-Min Wu	Yi Yang
Kun Wang	Shengxi Wu	Youjian Yang
	Tair-I Wu	Yuanhang Yang

Andrey Yasinskiy	Baoguo Zhang	Kaikui Zheng
Baris Yavas	Chengyang Zhang	Shili Zheng
Elena Yazhenskikh	Chuan-Hui Zhang	Sixue Zheng
Zihao Ye	Guangzong Zhang	Xiaoxiong Zheng
Yee-Wen Yen	Haitao Zhang	Yong-Xing Zheng
Hwasung Yeom	Hao Zhang	Tong Zhifang
Ting-Feng Yi	Haozhi Zhang	Ying Zhong
Erol Yilmaz	Honggang Zhang	Cunlong Zhou
Houshang Yin	Hongliang Zhang	Jun Zhou
Shenghua Yin	Jian Zhang	Le Zhou
Zhi Yin	Jianbo Zhang	Li Zhou
Zhixiong You	Juhua Zhang	Qiusheng Zhou
George Young	Junkai Zhang	Shiwei Zhou
Dawei Yu	Lei Zhang	Xuefeng Zhou
Michael (Seungju) Yu	Lin Zhang	Yz Zhou
Qiulin Yu	Lin Zhang	Chengbo Zhu
Shengfu Yu	Peng Zhang	Ning Zhu
Xianghao Yu	Ru Zhang	Shuo Zhu
Xiaoxiang Yu	Shiyang Zhang	Yunhui Zhu
Yang Yu	Shuting Zhang	Haizheng Zhuang
Yangyang Yu	Wei Zhang	Wuhao Zhuang
Guangyin Yuan	Wei Zhang	Ilya Zhukov
Guohui Yuan	Weiguang Zhang	Břetislav Zidlicky
Yuan Yuan	Weiguang Zhang	Johan Zietsman
Huo Yuanming	Xuezhe Zhang	Olga Zinovieva
Qiang Yue	Yali Zhang	Reza Zolfaghari
Muhammad Qasim Zafar	Yanbin Zhang	Guijin Zou
Mudasar Zahoor	Yingyi Zhang	Jijun Zou
Stanislav Zak	Zhihao Zhang	Ning Zou
Giovanni Zangari	Changlong Zhao	Yuanmin Zou
Janez Zavašnik	Guolong Zhao	Brian Zukas
Guang Zeng	Hongliang Zhao	Zulai Li Zulai Li
Luqi Zeng	Ke Zhao	Weiran Zuo
Muhammad Zeshan	Shengdun Zhao	Xiaowei Zuo
Baicheng Zhang	Zhuo Zhao	

# TMS MEETING HEADLINES

**JOM**  
THE MAGAZINE

Meeting information is current as of March 4, 2025. For the most recent updates on TMS-sponsored events, visit [www.tms.org/Meetings](http://www.tms.org/Meetings).

## TMS Specialty Congress 2025



June 15–19, 2025  
Anaheim, California, USA

### Housing Deadline: May 23, 2025, 5:00 p.m. PT

TMS Specialty Congress 2025 will feature distinguished speakers across its co-located meetings. The All-Congress Plenary will include **Zi-Kui Liu**, The Pennsylvania State University. Keynote speakers will include **Bryce Wilcox**, Milwaukee Tool, for ICME 2025, and **Vikram Deshpande**, University of Cambridge, for 3DMS 2025.

[www.tms.org/SpecialtyCongress2025](http://www.tms.org/SpecialtyCongress2025)

## Extraction 2025 Meeting & Exhibition (Extraction 2025)



November 16–22, 2025  
Phoenix, Arizona, USA

### Register Now

Don't miss your opportunity to gather with the global extractive metallurgy community for several days of networking and learning on a broad range of topics. Extraction 2025 will feature the 12th International Copper Conference (Copper 2025), the 6th International Symposium on Nickel and Cobalt (Ni-Co 2025), and cross-cutting symposium.

[www.extractionmeeting.org/Extraction2025](http://www.extractionmeeting.org/Extraction2025)

## Materials in Nuclear Energy Systems 2025 (MiNES 2025)



December 7–11, 2025  
Cleveland, Ohio, USA

### Abstract Submission Deadline: June 2, 2025

The MiNES conference series is an outgrowth of the TMS Microstructure Processes in Irradiated Materials Symposium and the American Nuclear Society (ANS) Nuclear Fuel and Structural Materials Symposium, with both societies invested in the quality and success of the MiNES series.

[www.tms.org/MiNES2025](http://www.tms.org/MiNES2025)

## OTHER MEETINGS OF NOTE



### TMS Fall Meeting 2025 at Materials Science & Technology (MS&T25)

September 28–October 1, 2025  
Columbus, Ohio, USA

[www.tms.org/TMSFall2025](http://www.tms.org/TMSFall2025)



### TMS 2026 Annual Meeting & Exhibition (TMS2026)

March 15–19, 2026  
San Diego, California, USA

[www.tms.org/TMS2026](http://www.tms.org/TMS2026)



### TMS Specialty Congress 2026

June 21–25, 2026  
Anaheim, California, USA

[www.tms.org/SpecialtyCongress2026](http://www.tms.org/SpecialtyCongress2026)

## CO-SPONSORED MEETINGS

### OTC Brasil 2025

October 28–30, 2025  
Rio de Janeiro, Brazil

*Co-sponsored by TMS*

### The 12th Pacific Rim International Conference on Advanced Materials & Processing (PRICM12)

August 9–13, 2026  
Gold Coast, Australia

*Co-sponsored by TMS*

### The 11th International Symposium on Lead and Zinc Processing 2026 (Pb-Zn 2026)

November 1–6, 2026  
Sendai-city, Japan

*Co-sponsored by TMS*

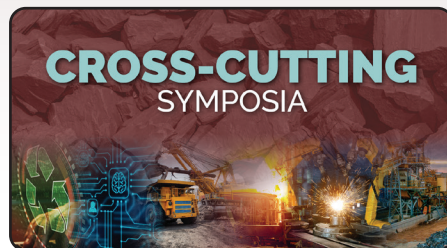


**REGISTER NOW**

**NOVEMBER 16-22, 2025**

Sheraton Grand at Wild Horse Pass  
Phoenix, Arizona, USA | #ExtractionMeeting

**FEATURING:**



**DON'T MISS YOUR OPPORTUNITY TO  
GATHER WITH THE GLOBAL EXTRACTIVE  
METALLURGY COMMUNITY.**

**ORGANIZING SOCIETIES:**



For more details and to register visit:

**[www.extractionmeeting.org/2025](http://www.extractionmeeting.org/2025)**

# THE WORLD COMES HERE **TMS** 2026

155<sup>th</sup> Annual Meeting & Exhibition

#TMSAnnualMeeting



**March 15–19, 2026**

San Diego Convention Center  
and Hilton San Diego Bayfront  
San Diego, California, USA

[www.tms.org/TMS2026](http://www.tms.org/TMS2026)

## CALL FOR ABSTRACTS OPENS MAY 2025!

Plan to present your work at the meeting that  
the global minerals, metals, and materials  
community calls home.

---

### MARK YOUR CALENDAR

**July 1, 2025:** Abstract Submission Deadline

**March 15–19, 2025:** Conference Dates

**March 16–18, 2025:** Exhibit Dates

