JOM, Vol. 75, No. 12, 2023
https://doi.org/10.1007/s11837-023-06264-w

GET READY FOR THE MAIN EVENT: TMS2024

Kelly Zappas

Strong technical programming, an active exhibition, and a collection of networking, social, and professional development events will come together under one roof for the TMS 2024 Annual Meeting & Exhibition (TMS2024), March 3–7 in Orlando, Florida, USA. The TMS Annual Meeting is the Society's biggest event of the year—regularly attracting more than 4,000 minerals, metals, and materials scientists and engineers from around the world.

This will be the first TMS annual meeting held in Orlando since 2015 and the first ever to take place at the Hyatt Regency Orlando. The setting is a different one from our most recent Orlando meeting, because it will not take place on Walt Disney World® property. Instead, the venue is located in Orlando's popular International Drive Entertainment District, which offers shopping, attractions, and a variety of dining options. International Drive is only 15 minutes from the Orlando International Airport; close to Universal Orlando, SeaWorld® Orlando, and Disney resorts; and just 20 minutes from downtown Orlando and other neighborhoods. The venue is also different from TMS2023 in San Diego, California, because attendees will not need to travel between a hotel and convention center. At TMS2024, all events will take place within the hotel complex.

This article provides an overview of the technical programming and networking event information available at *JOM*'s press time. Please visit the TMS2024 website at www.tms.org/TMS2024 to view the latest updates on the conference, to search programming and events plans, to reserve housing, and to register for TMS2024.

PREVIEW TECHNICAL PROGRAMMING

What interests you most? Is it materials for sustainability, energy technologies, or extreme environments? Artificial intelligence and data-enabled materials science? Processing for tailored performance? The TMS2024 technical program features more than 90 symposia planned in 11 technical tracks, exploring these topics and more.

This year's technical tracks are:

- Additive Manufacturing
- Advanced Characterization Methods
- Biomaterials
- Data-Driven and Computational Materials Design
- Electronic, Magnetic, and Energy Materials
- Light Metals
- Materials Degradation and Degradation by Design
- Materials Synthesis and Processing
- Mechanics of Materials
- Nuclear Materials
- Special Topics

Symposia and technical topics are developed by volunteer TMS leaders working in more than 30 technical committees, ensuring that programming comes from TMS members and is based on the interests of members working in industry, academia, and national laboratories.

SEARCH THE PROGRAM AND EVENTS CALENDAR

A Preliminary Program and Events Calendar is now available that allows users to search technical programming, committee meetings, social and networking events, and individual presentations planned for TMS2024. Use the dropdown menus for a broad search or type in a technical keyword (ex. aluminum, characterization) or event type (ex. committee, reception, student) for a more refined search. This popular tool, introduced last year, lets you find topics of interest quickly. New for this year is the ability to log in to the site and save your search results for future reference.

Please note that this tool is meant only to provide preliminary information on programming and events; the TMS2024 app will be available in February to allow you to build an official at-meeting schedule.

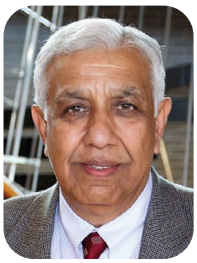
HONORARY SYMPOSIA

Five distinguished TMS members will be recognized at special honorary symposia, sponsored by TMS technical divisions and held as part of the TMS2024 Technical Program. Plan to join your fellow TMS members at these sessions.

Wole Soboyejo will be honored by the TMS Structural Materials Division at the symposium, **Materials Science for Global Development—Health, Energy, and Environment.** This symposium will provide an opportunity for participants to discuss the current interest and progress in advanced structural and functional materials that are relevant to global challenges and international development.

The TMS Functional Materials Division (FMD) will honor **Victorino Franco** at the symposium, **Advanced Soft Magnets and Magnetocaloric Materials.** This honorary symposium will cover several aspects of soft magnets and magnetocaloric materials, from novel material design to prototyping and validation.

The FMD will also honor **Uday B. Pal** with the **High Temperature Electrochemistry** symposium. This symposium will cover a broad range of topics related to the fundamentals and applications of high-temperature electrochemistry.

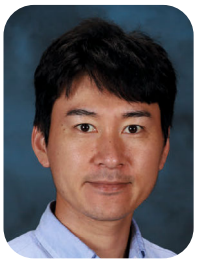


The TMS Light Metals Division will honor **Anil K. Sachdev** at **An Atoms to Autos Approach for Materials Innovations for Lightweighting**. This symposium will focus on how microstructure can be engineered to address challenges related to lightweight product design and manufacturing.

Takashi Nakamura will be honored by the TMS Extraction & Processing Division at the **Process Metallurgy and Environmental Engineering** symposium. This symposium will review the history of the research on the physical chemistry of smelting and recycling processes for nonferrous metals such as copper, lead, and zinc, and on the environmental issues related to the circulation of nonferrous metals.

FRONTIERS OF MATERIALS SYMPOSIA

Two symposia at TMS2024 will explore hot or emergent technical topics, organized by recipients of the TMS Frontiers of Materials Award. This award offers selected early-career professionals an opportunity to present symposia in topic areas that are novel, exciting, or not covered by existing TMS programming. In return, TMS2024 attendees benefit from the chance to explore future growth areas at the frontiers of materials research.



Takaaki Koyanagi, Oak Ridge National Laboratory, will host the symposium **Novel Ceramics Processes for Nuclear Applications.** This special session will bring together scientists and engineers to discuss opportunities and needs for key enabling materials processing for application in nuclear energy systems. As part of the session, Koyanagi will deliver the keynote presentation, "Development of Next-Generation Silicon Carbide Composites for Nuclear Energy."

The symposium **Physics-Informed Machine Learning for Modeling and Design of Materials and Manufacturing Processes** will be organized by **Pinar Acar,** Virginia Polytechnic Institute and State University. This event will feature presentations on modeling, multi-scale modeling, and the design of materials and manufacturing processes across different length scales (ranging from the atomistic scale to the macro-scale) using physics-informed machine learning techniques. Acar will deliver the symposium's keynote presentation, "Inverse Design for Crystal Plasticity Model Identification via Physics-Informed Neural Networks."

TMS2024 PROCEEDINGS

TMS2024 attendees in most registration classes receive free online access to the complete collection of proceedings publications. Before the meeting, preregistered attendees will receive information on how to download proceedings content. The following titles are planned:

- *Advances in Pyrometallurgy: Furnace Containment*
- *Characterization of Minerals, Metals and Materials 2024: Process–Structure–Property Relations and New Technologies*
- *Composite Materials: Sustainable and Eco-Friendly Materials and Application*
- *Energy Technology 2024: Carbon Dioxide Management and Other Technologies*
- *Light Metals 2024*
- *Magnesium Technology 2024*
- *Materials Processing Fundamentals 2024: Iron and Steel Production*
- *Rare Metal Technology 2024*
- *TMS 2024 153rd Annual Meeting & Exhibition Supplemental Proceedings*

SPOTLIGHT ON THE EXHIBITION

The TMS2024 Exhibition provides a venue for companies to recruit new talent and connect with influential purchasers and for attendees to meet new suppliers and discover new products. This year's exhibit will focus on products and services that support the most popular themes of the meeting, including:

- Additive manufacturing and 3D printing laboratory
- Melt processing, casting and recycling of aluminum
- Digital and robotic manufacturing
- Employee recruitment
- Software and publishing
- Testing and characterization, including mechanical behavior
- Thermo/mechanical processing equipment

Explore offerings in these areas and more when you visit the exhibit hall at TMS2024. The exhibition will be held at the Hyatt Regency Orlando—the same venue as other meeting programming and events—and will host two receptions that invite all attendees to enjoy appetizers, drinks, and networking with colleagues, exhibitors, and poster presenters. The exhibit hall will also be the location for the 2024 TMS Bladesmithing Competition, a display of blades forged by student teams from around the world and a consistently popular attraction at the TMS Annual Meeting & Exhibition.

New exhibitors are being added regularly; visit www.tms.org/TMS2024/Exhibit to view the most up-to-date floorplan and exhibitor list.

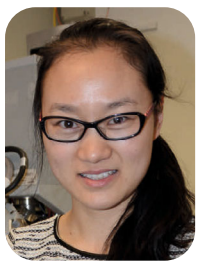
DIVISION LUNCHEON LECTURES

The TMS technical divisions will come together throughout the week at TMS2024 to enjoy camaraderie, celebrate award recipients, and hear about important topics relevant to their work at the Technical Division Luncheons. These events will feature the following invited speakers.

Structural Materials Division/Functional Materials Division Luncheon

Featuring Talks by the 2023 FMD and SMD Young Leaders Professional Development Award Recipients






Speakers: Jing Du, Penn State University; **Arun Kumar Mannodi,** Purdue University; **Dong Liu,** University of Bristol; and **Christopher Zenk,** Friedrich-Alexander-Universität

Extraction & Processing Division/ Materials Processing & Manufacturing Division Luncheon

Speaker: Dierk Raabe, Max-Planck Institut für Eisenforschung GmbH

Light Metals Division Luncheon

Speaker: Gregg Whigham, Aluminum Dynamics LLC

The presentations are free to all TMS2024 attendees, but you must purchase a ticket to these events to receive lunch. The cost per ticket is $75 and can be purchased through the TMS2024 registration form.

PREVIEW STUDENT EVENTS

TMS2024 will offer a number of competitions and events geared toward graduate and undergraduate student participants. Learn more about these activities—including the Bladesmithing Competition, Materials Bowl, student poster contest, student career forum, and more—in the Student Events section of www.tms.org/TMS2024 and in the article, "Prepare for Bladesmithing, Materials Bowl, and Student Poster Competitions at TMS2024," in the November 2023 issue of JOM: The Magazine.

RESERVE YOUR ROOM

Attendees can book rooms now at the Hyatt Regency Orlando with OnPeak, the official TMS housing provider, through the TMS2024 website. Those who book through TMS receive the following benefits:

- **Discounted Room Rates**: TMS and onPeak have negotiated discounted rates on hotel rooms for TMS2024 attendees.
- **Significantly Reduced Resort Fees**: All hotel guests are charged a resort fee of $38 per day, but that fee is reduced to $8 per day when you book through TMS and onPeak. This resort fee includes access to the property's fitness center, discounts on spa treatments and merchandise, and two I-Ride trolley tickets.
- **Discounts on Dining and Parking**: Receive a 10% discount at three of the resort's on-site eateries: B-Line, Descend 21, and Fiorenzo's. You'll also receive a 50% discount on self-parking if you bring a car to the hotel.
- **Complimentary WiFi**: Stay connected with complimentary internet access in your guest room.
- Also, guests who book by December 15 will be entered in a drawing for the chance to stay in one of the hotel's metropolitan suites free during the meeting. Visit the Housing section of www.tms.org/TMS2024 to reserve your room today.

REGISTER TODAY

Registration is now open for TMS2024. TMS members save 20% on meeting registration, so be sure to renew your membership before you register for the conference to lock in the discounted member registration rate. In addition, anyone who registers before **January 31** will also receive a 10% discount on meeting registration.

Visit www.tms.org/TMS2024 to register today, and plan to join your TMS colleagues in Orlando in March.

WHY TMS2024?

When asked to define the most important reasons to attend a TMS Annual Meeting, repeat attendee and 2024 TMS President Brad Boyce named three things: networking, learning, and sharing.

"It's great to meet colleagues from around the world who are sharing similar experiences," said Boyce in a video interview that explores the benefits of attending the TMS Annual Meeting.

"I've learned so much from the TMS annual meetings," Boyce continued. "Every year I come to these meetings with an open mind, and I realize how much more the field is doing that I didn't appreciate before I attended. I see where the field is going, and I meet other practitioners and I get inspired to go do better at my own work."

Visit www.tms.org/TMS2024 to watch the full video and to gain the perspective of one TMS member on how TMS2024 can benefit you and your career.