

# THE WORLD COMES HERE.

# TMS 2023

## 152<sup>nd</sup> Annual Meeting & Exhibition

MARCH 19–23, 2023  
SAN DIEGO CONVENTION CENTER &  
HILTON SAN DIEGO BAYFRONT  
SAN DIEGO, CALIFORNIA, USA  
#TMSANNUALMEETING



**SUBMIT AN ABSTRACT BY JULY 1 FOR THE FOLLOWING TMS2023 SYMPOSIUM:**

## ELECTRONIC MATERIALS

### Electronic Packaging and Interconnection

Continuing advances in microelectronic, opto-electronic and nano-electronic devices require new materials and technologies to meet the increasing electrical, thermal, mechanical, reliability, performance, and environmental demands placed on interconnects and packaging at all levels.

This symposium will address current research in packaging materials and processes, including lead-free solders, alternative interconnects, conductive adhesives, epoxy, substrates, 3D packaging, wafer level packaging, quality, reliability, and failure analysis. Topics of interest include, but are not limited to:

- Packaging materials and processes for next generation packages, e.g., 3D packaging, wafer level packaging, photonic packaging, Internet of Things (IoT), flexible electronics, wire bonding, automotive, and power electronics
- Interconnects for packages, e.g., lead-free solder, micro bumps, Through-silicon-vias (TSVs), direct copper to copper bonding, wire bonding, conductive adhesive, optoelectronic interconnects, transient liquid phase bonding, sintered nano-powder joints, polymer core solder balls and alternative interconnect materials at chip and package levels
- Additive manufacturing and 3D printing for the electronics industry
- Other packaging materials e.g., epoxy, molding compounds, epoxy flux, thermal interface material (TIM), substrate materials and process
- Quality, reliability, and failure analysis for next generation packages
- Continuing challenges in implementing lead-free solders for interconnect, plating, and thermal interface material (TIM) applications
- Developments in high-temperature lead-free solders and associated interconnects for automotive and power electronics
- Developments in low-temperature lead-free solder alloys and fine pitch solder joints
- Electromigration, thermomigration, stress-migration and mechanical effects

- Whisker growth in tin, tin-based alloys, and other metallic systems
- Advanced characterization methods as applied to interconnect technology
- Fundamental materials behavior including phase transformations, computational thermodynamics, solidification, microstructure evolution, corrosion, mechanical, thermal, and electrical properties of solders and intermetallic compounds

#### ORGANIZERS

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