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TMS2024

153rd Annual Meeting & Exhibition

MARCH 3–7, 2024
HYATT REGENCY ORLANDO
ORLANDO, FLORIDA, USA
#TMSAnnualMeeting

SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2024 SYMPOSIUM:

ELECTRONIC, MAGNETIC, AND ENERGY MATERIALS

Electronic Packaging and Interconnection Materials

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 Pb free solders, Ag and Cu sintering, hybrid bonding, 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., Pb-free solder, micro bumps, Through-silicon-vias (TSVs), direct Cu to Cu 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 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 Pb-free solders for interconnections, plating, and thermal interface material (TIM) applications
- Developments in high temperature Pb-free solders and associated interconnects for automotive and power electronics
- Developments in low temperature Pb-free solder alloys and fine pitch solder joints
- Electromigration, thermomigration, stress-migration and mechanical effects
- Whisker growth in Sn, Sn-based alloys, and other metallic systems
- Advanced characterization methods as applied to interconnect technology
- Fundamental material behavior including phase transformations, computational thermodynamics, solidification, microstructure evolution, micromechanics, corrosion, mechanical, thermal, and electrical properties of solders and intermetallic compounds

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QUESTIONS?
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