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**TMS 2018**  
147<sup>th</sup> Annual Meeting & Exhibition



**MARCH 11 – 15, 2018**  
**PHOENIX, ARIZONA**

**SUBMIT AN ABSTRACT TO:**

## **ELECTRONIC MATERIALS**

# **ADVANCED MICROELECTRONIC PACKAGING, EMERGING INTERCONNECTION TECHNOLOGY, AND PB-FREE SOLDER**

Continuing advances in microelectronic, optoelectronic, and nanoelectronic 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 researches in packaging materials and process, including Pb-free solder, alternative interconnects, conductive adhesive, epoxy, substrates, 3D packaging, wafer level packaging, quality, reliability, and failure analysis.

Topics of interest include:

- Packaging materials and process 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, 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 interconnect, 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 materials behavior including phase transformations, computational thermodynamics, solidification, microstructure evolution, corrosion, mechanical, thermal, and electrical properties of solders and intermetallic compounds

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## **SYMPOSIUM SPONSORS**

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**ABSTRACT DEADLINE IS JULY 1, 2017. SUBMIT ONLINE AT [www.programmaster.org/TMS2018](http://www.programmaster.org/TMS2018).**

**QUESTIONS? CONTACT [programming@tms.org](mailto:programming@tms.org)**