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TMS 2017
146th Annual Meeting & Exhibition



February 26 – March 2, 2017
San Diego, California, USA

2017 SYMPOSIUM ON FUNCTIONAL NANOMATERIALS: EMERGING NANOMATERIALS AND NANOTECHNOLOGY

Nanomaterials are a class of materials with morphology, properties, and structure or performance dominated by phenomena attributed to the “nano” length scale (<100 nm). These materials enable new opportunities for future technological innovation, because they exhibit novel electrical, optical, and magnetic properties that are absent in their bulk counterparts.

The 2017 Functional Nanomaterials symposium will address emerging nanomaterials techniques applications as well as conventional nanomaterials. Both conventional nanomaterials sessions and focused sessions will be held.

Topics of interest for conventional nanomaterials sessions include:

- Synthesis, characterization, and device applications of nanomaterials, including nanoparticles, nanowires, nanoribbons, carbon-based nanomaterials, thin films, quantum dots, etc.
- Use of nanomaterials in electronic, optic (photonic), magnetic, mechanical, thermal management, catalysis, sensing, energy harvesting/storage/conversion or other scientific applications
- Nanoscale modeling studies

Topics of interest for focused sessions include:

- Nanomaterials (such as 1D & 2D materials) and their integration for nanoelectronics information technology
- Nanomaterials and nanotechnology for 3D integration for next generation semiconductor applications
- Direct synthesis of nanomaterials into 3D architectures
- Organic-inorganic hybrid nanostructures: Synthesis, fabrication, and device applications
- 3D architecture techniques (e.g., compressive buckling, Dip Pen Lithography, direct laser writing, different 3D printing methods, etc.) for assembly of nanomaterials
- Design and synthesis of printable functional nanomaterials for electronics, energy and structural and biological applications
- Fundamental physical and chemical behaviors of nanomaterials observed during 3D integration
- Engineering applications of bulk structural nanomaterials and integration of functional nanomaterials into devices

ORGANIZERS

Jiyoung Kim, University of Texas, USA

Stephen McDonnell, University of Virginia, USA

Chang-Yong Nam, Brookhaven National Laboratory, USA

Vinu Unnikrishnan, University of Alabama, USA

Nitin Chopra, The University of Alabama, USA

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