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TMS 2024
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

Functional Nanomaterials 2024

Low-dimensional (0D, 1D, 2D) materials are a broad class of materials with emergent properties originating from their reduced physical dimensions, unique morphologies, and tunable chemistry. These low-dimensional materials offer exciting new opportunities for innovations in the technological frontiers critical for the sustainable future advancement of society, such as sustainable energy generation and storage applications, nano-optoelectronic devices, high-performance sensors, and advanced environmental and healthcare technologies.

The 2024 Symposium on Functional Nanomaterials will address all aspects of low-dimensional nanomaterials, encompassing: two-dimensional (2D), nanofilms, nanosheets, and monolayers, one-dimensional (1D) nanofibers, nanotubes, and nanowires, zero-dimensional (0D) nanoparticles and quantum dots, as well as their hierarchical assemblies, heterostructures, frameworks, and organic-inorganic hybrids.

Along with sessions for conventional nanomaterials, focused sessions will be dedicated to unique design/synthesis/fabrication/manufacturing/characterization strategies, novel integration routes for emerging functionalities, and advanced device applications.

Examples of session topics include but are not limited to:
- Synthesis, assembly, and characterization of low-dimensional materials
- Engineering hierarchical multi-scale structures and architectures consisting of low-dimensional materials and heterostructures thereof
- Design, fabrication, and measurements of high-performance functional devices based on nanomaterials
- Scalable processing/manufacturing (e.g., printing, lithography) on different flexible and/or rigid substrates
- Fundamental studies of emergent properties of architected nanomaterials and instrumentation/methods for characterization
- Interrogation of low-dimensional materials and their fundamental properties via in situ, operando methods
- Theoretical frameworks and computational/learning/data-intensive methods for modeling, predicting, understanding, and designing low-dimensional materials and their derivative systems

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QUESTIONS?
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