

## Nanomaterials and Low-dimensional Structures

Nanomaterials and low-dimensional structures possess unique properties that are often superior over those of bulk counterparts. For example, they can be stronger and tougher by prohibiting flaw sources. They can set back the diffusion length and mitigate the stress effect for much improved cyclic performance in lithium ion batteries or in solid-state hydrogen storage. Besides those recognized for superior mechanical and transport properties, some nanomaterials, especially graphene, exhibit novel electrical and magnetic properties for electronic device applications. For this symposium, we invite contributions in both experimental and theoretical fields, including fabrication, modeling, and manufacturing. The symposium aims to provide a platform for dissemination of the latest research results and for discussion of the future directions in this area.

Please submit your abstract/paper directly on the ICCES web site and email a copy to one of the organizers given below, before the deadline. When you submit your abstract/paper at the ICCES website, please identify this symposium for your presentation. Authors, whose papers are accepted, will be invited to submit a full length paper to be published in a special issue of the CMC (Computers, Materials, & Continua).

Specific topics may include but are not limited to:

- Physical properties of nanomaterials
- Nanomaterials for lithium-ion battery applications
- Nanomaterials for hydrogen storage
- Graphene and nanotubes – thermomechanical and electronic properties
- Nanomaterials and nanostructures for biomedical applications
- Nanoscale thermal transport at surfaces and interfaces
- Growth and structure evolution of low-dimensional materials
- Magnetic thin films and applications
- Multiscale modeling and simulations bridging length and time scales

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