Special Issue

Advances in Nanoindentation and Nanomechanics

Message from the Guest Editors

This Special Issue aims to collate original research articles and reviews focused on the recent advances in nanoindentation and nanomechanics.

- Nanoindentation and its experimental applications as well as data analysis approaches including standardization and ontological approaches.
- (Nano-)mechanics of nanomaterials, nanostructures, thin films, multiphase materials, etc.
- Advances in instrumentation for mechanical testing at the micro- and nanoscale.
- Cutting-edge computational, modeling, data-driven, machine learning, and AI-supported approaches applied to micro- and nanomechanical topics.
- Techniques for measuring stress–strain relationships in micro- and nanostructures.
- Characterization of strain-rate sensitive deformation mechanisms.
- Fatigue and creep phenomena across multiple length scales.
- Techniques for hierarchical and functional materials' characterization across different length scales.
- In situ and in operando testing for micro- and nanomechanics.
- Micro- and nanomechanics of fracture, as well as adhesive and cohesive failures.
- Experimentally informed scale-bridging models.

We look forward to receiving your contributions.

Guest Editors

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

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