



Journal of Nanomaterials

Special Issue on
Mechanical Behavior of Nanostructured Materials

CALL FOR PAPERS

Nanomaterials, which are principally of less than 100 nm in size (at least in one dimension), offer unique properties as compared to their coarse structured counterparts. Specifically, most important properties of nanomaterials include being mechanical, thermal, electrical, catalytic, and so forth.

Mechanical properties are generally referred to as stiffness, strength, ductility, fatigue, and so forth. Recent progress has been achieved in fabrication of nanocrystalline, inorganic, nonmetallic nanomaterials, composites with nanosized fillers, and biomaterials with nanosized structures. However, their potential applications are still limited due to the lack of understanding of the structure-property relations of these materials. This special issue aims to reflect recent advances in mechanical behavior of nanomaterials. We would like to invite investigators to contribute their original research and important review articles that will stimulate further discussion and research efforts along this direction.

The contributors are encouraged to address new methods for experimental characterization, theoretical analysis, and numerical modeling of mechanical properties of nanomaterials.

Potential topics include, but are not limited to:

- ▶ Microstructural and mechanical characterization of various nanostructured materials, for example, one-, two-, and three-dimensional nanomaterials
- ▶ Fabrication and mechanical characterization of various nanocomposites
- ▶ Fabrication and mechanical characterization of various nanocrystalline ceramics, metals and alloys, and nanoscale thin films and coatings
- ▶ Mechanical properties of biological or bioinspired nanomaterials, including soft nanocomposites
- ▶ Advanced microscopic and spectroscopic analysis and their applications in microstructural and mechanical characterization of nanomaterials
- ▶ Theoretical or numerical modeling of relation between structures and mechanical properties of nanomaterials and their interfaces

Lead Guest Editor

Ning Hu, Chongqing University,
Chongqing, China
ninghu@cqu.edu.cn

Guest Editors

Xi-Qiao Feng, Tsinghua University,
Beijing, China
fengxq@mail.tsinghua.edu.cn

Shaoyun Fu, Technical Institute of
Physics and Chemistry, Beijing, China
syfu@mail.ipc.ac.cn

Cheng Yan, Queensland University of
Technology, Brisbane, Australia
c2.yan@qut.edu.au

Guang-Ping Zhang, Institute of Metal
Research, Shenyang, China
gpzhang@imr.ac.cn

Jihua Gou, University of Central
Florida, Orlando, USA
jihua.gou@ucf.edu

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First Round of Reviews

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