

Special Issue

Thermal, Mechanical and Radiation Stability of Nanostructured Metals

Message from the Guest Editors

Nanostructured metals exhibit unique combinations of properties and functionalities that are not typically found in their counterparts. These include mechanical strength, hardness, wear, transport, catalytic activity, and radiation tolerance, to name a few. However, very few of these metals, alloys, or metal matrix composites have found industrial applications, due largely to the poor stability of nanostructures. Understanding the stability of nanostructured metals is a rapidly emerging field that has the potential to greatly advance the integration of nanomaterials into applications with long term or extreme environments.

The format of welcomed articles includes full papers, communications, and reviews. Potential topics include, but are not limited to:

- Thermodynamic and kinetic stability of metals
- Solute and multiphase stability
- Nanostructured systems including: Nanocrystalline, Nanolayers, Nanoporous, Nanoscale precipitants
- Modeling via molecular dynamics, Monte Carlo, or mesoscale approaches
- Production via thin film growth, additively manufacturing, and bulk processing
- Extreme environments

Guest Editors

Dr. Khalid Hattar

Center for Integrated Nanotechnologies, Sandia National Laboratories, Albuquerque, NM 87185, USA

Dr. Fadi F Abdeljawad

Department of Mechanical Engineering, Department of Materials Science and Engineering, Clemson University, Clemson, SC, USA

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomaterials@mdpi.com

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About the Journal

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

Prof. Dr. Eugenia Valsami-Jones

School of Geography, Earth and Environmental Science, University of
Birmingham, Birmingham B15 2TT, UK

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