

Special Issue

Metal-Matrix Nanocomposites and Their Applications

Message from the Guest Editor

There is increasing interest in the development of metal matrix nanocomposites, since the addition of nanoparticles, nanowires, nanotubes, or nanolayers can create an extraordinarily high strength-to-weight ratio, and enhanced mechanical, physical and chemical properties over conventional materials. For the metal-matrix nanocomposites, the critical challenges involve the dispersion of nano reinforcing phases, control and optimization of interface structure, and theoretical mechanisms of mechanical and functional properties, etc. At the same time, the excellent and tailororable properties still make them very attractive in a variety of applications, such as aerospace, transportation, electronics and thermal management, etc. This Special Issue will highlight the latest progress in processing, interface modification, microstructure characterization, properties, and usage in a myriad of applications. Research areas may include (but not limited to) the following:

- Metal matrix nanocomposite
- Layered nanocomposites
- Nanoscale interface modification
- Processing
- Microstructure characterization
- Properties
- Application



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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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