Special Issue

Advanced Carbon/Ceramic Nanocomposites: Microstructure and Properties

Message from the Guest Editors

Advanced carbon/ceramic composites have become a key class of high-temperature structural materials due to their low density, excellent thermal stability, and superior mechanical performance. Recent progress in nanostructure design, interface engineering, and multi-scale architecture optimization has significantly expanded the performance boundaries of carbon/ceramic composites. This Special Issue aims to provide a comprehensive platform for the latest developments in carbon/ceramic composites, with a focus on nanostructure design, preparation strategies, and performance evaluation. Contributions addressing fundamental mechanisms and application-oriented research are both welcome. Topics of interest for publication include, but are not limited to:

- Design and fabrication of carbon/ceramic nanocomposites;
- Interface engineering and heterogeneous structure regulation;
- High-temperature mechanical behavior and damage mechanisms;
- Thermal transport and multifunctional properties;
- Advanced characterization and modeling of composite materials;
- Oxidation resistance and environmental stability;
- Emerging high-entropy and multiphase ceramic systems.

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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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