Special Issue

Advances in Nanostructured Alloys: From Design to Applications

Message from the Guest Editors

Nanostructured alloys have recently gained significant attention due to their exceptional physical, chemical, and mechanical properties, which set them apart from conventional alloys. Their nanoscale structures make nanostructured alloys highly promising for applications in catalysis, energy storage, coatings, biomedical engineering, and structural materials. This Special Issue, "Advances in Nanostructured Alloys: From Design to Applications", seeks to showcase cutting-edge research in this dynamic field. We invite original research and review articles on topics including, but not limited to:
Nanostructures and functional properties;
Mechanical properties, strength, and deformation mechanisms;
Synthesis and processing methods of nanostructured alloys;
Microstructure–property relationships;
Advanced characterization methods;
Phase stability and thermal behavior;
High-entropy alloys and complex concentrated alloys;
Applications in catalysis, energy storage, and coatings;
Theoretical and computational studies.
We welcome contributions that advance the fundamental understanding and real-world applications of nanostructured alloys.

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

Prof. Dr. Eugenia Valsami-Jones
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