Special Issue

Functional Nanostructures: Exotic Metals and Semiconductors for a New Story

Message from the Guest Editor

Growing demands on the multifunctionality of different nanostructures have triggered interdisciplinary research efforts on material science and nanotechnology. In this sense, emerging exotic metals and semiconductors such as high entropy alloys (FeMnCrCoNi etc.), metal nitrides (TiN, ZrN, Si3N4, HfNbTiVZrN etc.), quasicrystals (Al62Cu25Fe12 etc.), and metal–dielectric hybrids (SiAu) are timely for the fabrication of novel functional nanostructures. Over the last few years, such nanostructures have attracted increasing attention in diverse application from catalysis, biosensing, and nonlinear optics to electronics. The technology of fabrication of exotic metal and semiconductor nanostructures is also in its infancy. This Special Issue will highlight the latest advances in the design, fabrication, characterization, and application of exotic metal and semiconductor nanostructures (from thin films to nanoparticles). We invite researchers to submit their original research articles, letters, and reviews on fundamental and applied studies.

Guest Editor

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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

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