Special Issue

Epitaxial Self-Assembly of Magnetic Nanostructures

Message from the Guest Editor

The last three decades have been revolutionary for the field of nanoscience and nanotechnology. Most research efforts were naturally drawn to exploration of quantum confinement and single-electron tunneling effects in low-dimensional nanostructures, driven by the need to develop new-generation optoelectronic technology. Magnetic properties of nanometric size structures have received less attention in spite of the ever-growing demand for higher-density data storage and spintronic devices. This Special Issue of Nanomaterials will be dedicated to recent advances in magnetism of epitaxially self-assembled nanostructures, including experimental and theoretical aspects of growth and evolution of epitaxial nanostructures, their structural and magnetic ordering and phase transformations, and the resulting individual and collective magnetic behavior of nanostructure arrays. One of the most important questions we shall attempt to address is to what extent the observed magnetism is governed by intrinsic (bulk-like) and extrinsic (size effect) contributions.

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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