Special Issue

New Advances in Low-Dimensional Materials and Nanostructures

Message from the Guest Editors

Modern high-tech production requires advanced nanomaterials and nanostructures with specified unique characteristics. The construction of next-generation technological processes is impossible without using an improved material base, so low-dimensional structures are of particular importance. The prospects for their application are very diverse. Due to their huge specific surface area, they are excellent adsorbents and catalysts, which is especially important in such areas as energy, biochemistry, and medicine. The miniaturization of electronics inevitably leads to the need to use appropriate semiconductor nanomaterials that differ from the traditional bulk ones, which will enable a significant increase in the speed of computing systems in the future. Articles on low-dimensional materials and nanostructures, including zero-dimensional, one-dimensional, and two-dimensional systems, are invited to this Special Issue. The synthesis, structure, various physicochemical characteristics, and applications of such materials are of great scientific and practical interest. Both experimental and theoretical research are encouraged.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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