

Special Issue

Optical Properties and Applications of Semiconductor Nanomaterials

Message from the Guest Editors

Semiconductor nanomaterials hold immense potential for next-generation applications across diverse fields, including energy harvesting, electronics, optoelectronics, chemical sensing and biosensing, and catalysis. Their distinctive optical properties, which differ significantly from those of bulk materials, arise primarily from the quantum size effect and their high surface-to-volume ratio. These optical characteristics are intricately linked not only to the atomic structure and electronic properties of the materials but also to their size, shape, and surface functionality. Topics of interest include, but are not limited to, nanoparticles, quantum dots, nanomaterials, thin semiconductor layers, metal oxides, perovskite nanomaterials, and low-dimensional materials and their versatile applications. This Special Issue focuses on the synthesis, detailed characterization, and diverse applications of semiconductor nanomaterials. We invite submissions of original research articles and review papers that contribute to advancements in the field of semiconductor nanomaterials.

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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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