Special Issue

New Trends in Nanoscale Photonic Crystals and Their Photovoltaic Properties

Message from the Guest Editor

Photonic crystals have a periodic dielectric modulation with a spatial scale on the order of the optical wavelength. The design and optimization of the photonic crystals can be utilized in many applications by combining factors related to the combinations of intermixing materials, lattice symmetry, lattice constant, the filling factor, shape of the scattering object, and thickness of a structural layer. Due to their exceptional attributes, the potential applications of PhCs are highly prospective, ranging from gas sensing to optical filters, photonic papers, optical logic gates, lasers, inkless printing, and reflective flat displays. In recent years, the development of optical devices based on PhCs is taking place at a rapid pace. These devices can be utilized in various attention-grabbing applications, such as the monitoring/sensing of temperature, proximity, pressure, light, ultrasonic, chemicals, etc.

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.

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