Special Issue

Two-Dimensional Materials for Optoelectronic Devices

Message from the Guest Editors

Two-dimensional materials with a unique two-dimensional structure exhibit some surprisingly unique properties due to quantum effects. The graphene family, TMDCs, 2D oxides, other 2D materials, and van der Waals heterostructures, owing to their strong light–matter interaction and photon absorption, have rapidly established their prominence in the field of photodetectors with applications focused on ultrafast and ultra-sensitive photodetection in a broad range of ultraviolet, visible, infrared, and terahertz. 2D materials and their heterostructures provide an exciting platform for future optoelectronic applications in many respects, exhibiting excellent performance benefits at the device level and allowing comfortable integration with existing silicon electronics and photonic technologies. There are many other techniques and applications for 2D material optoelectronic devices. 2D materials are rapidly advancing into new areas of discovery, such as phototransistors, photonic memories, photocatalysis, photovoltaics, photonic neuromorphic devices, etc. It is my pleasure to invite you to submit a manuscript for this Special Issue. Full papers and reviews are all welcome.

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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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