

Special Issue

Optical Properties of Two Dimensional Materials

Message from the Guest Editor

Two-dimensional (2D) materials with thicknesses down to a single atom have been extensively investigated since the exfoliation of graphene. Due to their reduced dimensionality, 2D materials exhibit an extraordinary optical response in comparison with bulk counterparts. In addition, spatial confinement and reduced dielectric screening of 2D materials causes strong Coulomb interactions, resulting in a room-temperature exciton formation with large excitonic binding energies. 2D semiconducting materials have exceptional optical absorption/photoluminescence in the visible and NIR range, which has opened up prospects for 2D materials exploration for use as absorbers, reflectors, light modulators in optical nanodevices, as well as in optoelectronics, energy applications, and sensors. This Special Issue aims to bring together detailed studies in the field of the optical properties of 2D materials and related heterostructures and to identify the crucial areas where progress can be made.

Guest Editor

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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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