Special Issue

Recent Advances in Structural Design and Synthesis of 2D Catalytic Materials

Message from the Guest Editor

Nowadays, the energy crisis and associated climate change caused by fossil fuel consumption, as well as the fact of reduced reserves, necessitate an urgent demand for the widespread use of sustainable and clean energy. Photocatalysis and electrocatalysis offer two key renewable, sustainable, and clean technologies that have the potential to meet global energy demands. Exploring efficient, low-cost, and stable catalysts undoubtedly plays an important role in pushing technological advancement. Two-dimensional (2D) materials are an emerging class of nanomaterials with a sheet-like structure. The high aspect ratio, high percentage of exposed atoms, and anisotropic characteristics endows 2D materials with good charge transport, more superficial active sites, stability, modifiability, suitable electronic band structure, and light absorption properties, and they thus have great potential to become high-performance advanced catalysts. The objective of this Special Issue is to publish outstanding papers that address cutting-edge advances, new ideas, and research results in the field of 2D Catalytic Materials.

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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