

## Special Issue

# Synthesis and Modification of Transition-Metal Dichalcogenides (TMDs) for Energy and Sensing Applications

### Message from the Guest Editors

Our Special Issue is focused on advances in graphene and 2D materials, including MXene, transition-metal dichalcogenides (TMDs), etc. The unique properties of 2D materials have been leveraged in the energy sector, sensors, wearable technology, environmental remediation, and more, owing to their subnanometer thickness and tunable chemical, physical, and electronic properties. The scope of this issue ranges from the synthesis, characterization, and surface modification of 2D materials to its practical applications. This issue focuses on the both scientific and engineering aspects of graphene and 2D materials with fundamental properties and the accomplishment of state-of-the-art photo- and electrocatalysts for water splitting, CO<sub>2</sub> reduction, pollutant degradation, and gas sensing. This Special Issue aims to provide a comprehensive overview of recent advances in graphene- and 2D-material-based catalysts, including their synthesis, characterization, and catalytic applications.

### Guest Editors

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*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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