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# Two-Dimensional Materials: Synthesis, Characterization and Device Applications

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**Message from the Guest Editors** 

Dear Colleagues,

The fast development and surges of new two-dimensional materials provide exciting opportunities. Two-dimensional materials have shown extraordinary performance in energy storage, sensing, data processing, and flexible devices. This performance, and that of devices fabricated with 2D materials, depends on the synthesis process used, nanoscale characterization, and advanced fabrication techniques. This Special Issue on recent advances in 2D materials focuses on the synthesis, characterization, and device applications. It will be devoted to publishing original research articles or communications on two-dimensional materials with aspects of novel synthetic strategies and post-treatment, nanoscale imaging. situ in characterization, and device applications.

The 2D materials of interest include, but are not limited to:

- Graphene and its derivatives (graphene oxide, reduced graphene oxide, graphene quantum dot);
- Two-dimensional nitrides, oxides, and carbides;
- Transition metal dichalcogenides;
- Xenes;
- Two-dimensional Au, Ag Nanosheets.







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