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2D Materials for Electrochemical Energy Storage and Conversion

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closed (30 June 2023)

Message from the Guest Editors

This Special Issue will cover various aspects of the technology, engineering and applications demonstrating significant advances of two-dimensional materials in energy research. Since graphene was first experimentally isolated in 2004, innumerable other 2D materials such as transition metal oxides, transition metal carbides/nitrides (MXenes), dichalcogenides etc. have been increasingly investigated. The salient properties of these materials, including electrical conductivity, redox potential, and high packing density, as well as their surface chemistry (e.g., electrocatalytic activity and polarity), are unparalleled, offering them potential roles in electrochemical energy storage and conversion. Therefore, these 2D materials and their composites can be extensively exploited for electrochemical energy storage (supercapacitors, batteries, etc.) and energy conversion (fuel cells, thermoelectric devices, etc.). This Special Issue is focused on recent and innovative research articles forecasting the extraordinary potential of emerging 2D materials in energy-related applications, and will be informative and useful for the readers.

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Message from the Editor-in-Chief

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