Special Issue on

Graphene-Based Nanomaterials for Energy Related Applications

CALL FOR PAPERS

With growing concern for environmental protection in recent years, urgent research efforts are needed to develop alternative energy related systems that are efficient, economic, and environmentally friendly. Typical systems under consideration include solar cells, batteries, capacitors, fuel cells, and thermoelectric, photo- and electrocatalysts.

Graphene and its derivatives (graphene oxides, reduced graphene oxides) are intensively investigated in various energy storage and conversion systems, owing to their superior mechanical, electrical, physical, and chemical properties. Generally, these excellent properties could significantly improve the electrochemical performances of these energy related devices. However, the practical applications are still limited due to a lot of challenges, such as graphene synthesis, interface, electrochemistry, and capacity fading, in energy materials and systems. There is no doubt that the development of graphene-based nanomaterials could greatly help resolve these problems by rational structure or component designs.

This special issue aims to reflect recent advances in graphene-based nanomaterials for energy storage and conversion, especially for the above problems. We would like to invite researchers from all countries to contribute their original research and important review articles that will stimulate further discussion and research efforts along this area.

Potential topics include but are not limited to the following:

- ▶ Synthesis of graphene and its derivatives
- ▶ Graphene materials for aqueous or nonaqueous capacitors
- ▶ Graphene for lithium-ion batteries, sodium-ion batteries, lithium-sulfur batteries, and metal-air batteries
- ▶ Graphene materials as electrocatalysts for ORR, OER, and/or HER
- ▶ Graphene for photovoltaic devices

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/jnt/gbme/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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