

Special Issue on
**Synthesis and Applications of
Two-Dimensional Polymer Materials in
Energy Storage**

CALL FOR PAPERS

Polymers have been widely used for modern apparatus due to their low density, low cost, high corrosion resistance, simple design, and easy processing. In particular, the spatial confinement of two-dimensional (2D) polymers triggers unique physical, chemical, electronic, and mechanical properties, as well as special surface morphologies, leading to a number of fascinating applications and thus they have been intensively investigated recently. A more profound understanding of the properties and fabrication strategies of the 2D supramolecular frameworks and polymers leads to a more in-depth realization of their importance as a new class of materials for energy storage.

The unique structure of 2D polymer paves the path to study the structure-property relationship during the electrochemical process, which is critically important when designing more advanced electrodes and other novel high-performance energy storage devices. Despite the rapid development of 2D polymers, more fabrication strategies or technologies are required to explore novel 2D porous polymers that meet the emerging energy storage needs driven by high power density and low cost.

This special issue aims to focus on novel fabrication approaches and emerging engineering applications of 2D polymers to envision their potential in energy storage applications, examples of which include supercapacitors, lithium-ion batteries, and electrocatalysts for various electrocatalytic reactions. Both original research and review papers are highly welcome.

Potential topics include but are not limited to the following:

- ▶ Synthesis and applications of 2D polymers and supramolecular assemblies for modern frontier energy storage applications
- ▶ New characterization methods for physical and mechanical properties of 2D polymers applied in energy storage
- ▶ Investigation of polymer dimensionality effect and structure-property relationship during the electrochemical process
- ▶ Modeling and simulations of heat and mass transfer phenomenon using 2D polymers for energy storage
- ▶ Design and synthesis strategies of novel 2D porous polymers for energy conversion and storage

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/apt/tdms/>.

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

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