



International Journal of Polymer Science

Special Issue on
**Polymers and Polymer-Based Materials in Fuel Cells
and Lithium-Ion Batteries**

CALL FOR PAPERS

Currently, fuel cells and lithium-ion batteries are two kinds of very hot research areas in the families of new clean energy sources. Polymers and polymer-based materials have been showing a lot of valuable applications in fuel cells and lithium-ion batteries. For example, polymer electrolyte membranes are the key components in proton exchange membrane fuel cells (PEMFCs) and polymer lithium-ion batteries. State-of-the-art membrane currently used for PEMFCs, such as Dupont's Nafion, shows a significant loss in conductivity due to the dehydration of the membranes when operating at high temperatures and/or low humidity conditions. The ionic conductivity of all-solid-state polymer electrolytes for lithium-ion batteries is still not high enough, and their lifetime and cost still remain big concerns. So research in these areas is valuable in either theory or application consideration.

The purpose of this special issue is to publish high quality research papers as well as review articles addressing recent advances on polymer and polymer-based materials in fuel cells and lithium-ion batteries. Original, high quality contributions that are not yet published or that are not currently under review by other journals or peer-reviewed conferences are sought.

Potential topics include, but are not limited to:

- ▶ Preparation of polymer electrolyte
- ▶ Characterization of polymer electrolyte
- ▶ New design for polymer electrolyte
- ▶ Simulation of ionic conduction in polymer electrolyte
- ▶ New application of polymer electrolyte

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ijps/ppbm/>.

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Manuscript Due

Friday, 3 June 2016

First Round of Reviews

Friday, 26 August 2016

Publication Date

Friday, 21 October 2016