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# **Ion-Containing Polymer Materials**

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### Message from the Guest Editors

Polymer materials represent a promising next-generation energy storage system and possess a variety of applications due to their low expense, mechanical properties, and efficient energy storage technologies.

Recently, two families of ion-containing polymers have attracted significant attention: salt-doped block copolymers and polyelectrolyte solutions. Lithium saltdoped block copolymers are well known to increase ionic conductivity and achieve long-term cycling stability in Liion batteries. Additionally, polyelectrolyte solutions play an important role in biology due to a broad range of applications, such as cosmetics, drug delivery, and environmental protections. Most importantly, novel synthesis techniques for new ion-containing polymers and the deep understanding of how they couple to ionic transport in Li-ion batteries guide future research directions to achieve various breakthroughs in performance metrics.

This Special Issue aims to provide a deep understanding of the phase transition, novel synthesis, atomistic models, and applications of ion-containing polymers. Original papers as well as reviews regarding these topics and related research areas are invited.







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# **Editor-in-Chief**

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