Special Issue

Ion-Containing Polymer Materials

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 salt-doped block copolymers are well known to increase ionic conductivity and achieve long-term cycling stability in Li-ion 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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Message from the Editor-in-Chief

Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.7.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Alexander Böker
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