Special Issue

Modelling and Experimental of Polymeric Materials for Electrochemical Energy Conversion and Storage Systems

Message from the Guest Editors

In recent decades, there has been a growing increase in the use of electrochemical systems for energy production and storage to minimize the environmental impact caused by CO2 emissions from fossil fuels. Low-temperature fuel cells, electrolyzers, Li-ion batteries, and redox flow batteries are just a few examples of eco-friendly devices. Polymers are a part of these systems as ion-conducting membranes or separators, among others. The optimized design and synthesis of polymers is critical to achieve good electrochemical and mechanical properties for improved performance and extended durability. In this regard, mathematical modelling plays an essential role to explore aspects that are difficult to examine experimentally, such as percolation transport mechanisms at the microscopic scale and local volume-averaged fluxes at the macroscopic scale. Therefore, the coupling of modelling and characterization techniques is indispensable to predict the behavior of polymeric materials and assist the optimization of their properties via modification of the synthetic route.

Guest Editors

Dr. Pablo A. García-Salaberri

Department of Thermal and Fluids Engineering, University Carlos III of Madrid, Madrid, Spain

Dr. María T. Pérez-Prior

Department of Material Science and Engineering and Chemical Engineering, IAAB, Universidad Carlos III de Madrid, 28911 Leganés, Spain

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Polymers
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
polymers@mdpi.com

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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 4.9.

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
Fraunhofer-Institut für Angewandte Polymerforschung, Lehrstuhl für Polymermaterialien und Polymertechnologie, Universität Potsdam, Geiselbergstraße 69, 14476 Potsdam-Golm, Germany

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