Special Issue

Advances in Electrochemical Energy Storage Devices

Message from the Guest Editor

There is a growing interest in electrochemical energy storage devices to empower portable electronics, electric vehicles and to fulfil the need for the large-scale storage of stationary applications. Despite significant research efforts in recent years, there remain key challenges to be overcome in the near future. These include improvements to storage energy density and power density, conversion efficiency, cost, cycle life, battery weight and volume, and battery safety. Chemical and conceptual developments are progressing, with electrolytes, packaging materials, and electrode materials and structures also advancing. There has been a simultaneous focus on the development of flexible energy storage devices, motivated by the rise of wearable electronics. Furthermore, theoretical and experimental studies are seeking to understand the fundamentals of physicochemical processes, including electronic and ionic transport in electrodes, electrolyte phases and stability, electrochemical reactions, material phase changes, and mechanical and thermal stresses.

Guest Editor

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Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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