Special Issue

Recent Progress in Electrode Materials and Electrolytes for Li-Based Battery Devices

Message from the Guest Editors

Lithium-ion batteries market is evolving constantly. Electric vehicles (EVs) manufacturers are continuously changing their preferences depending on cathodes/anodes features in terms of energy density, safety, cost, life and stability. For instance, the biggest and main shortcomings of current Electric Vehicles (EVs) running with Lithium-Ion Batteries (LIBs) are still the fairly limited range between recharges and the limited specific capacity of the cathode materials. In this context, rechargeable non-aqueous Li-Air Batteries (LABs) are believed to be a promising alternative for both electric vehicles and large-scale energy storage thanks to its high theoretical energy density. Fundamentally, Li-air devices need a bifunctional electrocatalyst to enhance the ORR/OER kinetics together with suitable electrolytes/solvents that do not degrade during battery cycling. This Special Issue will critically focus on the design of novel electrocatalysts together with recently adopted electrolytes/solvents showing boosted features for lithium-based devices. We kindly invite you to submit manuscript(s) for this Special Issue.

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Deadline for manuscript submissions

closed (10 October 2022)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/70289

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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