

## Special Issue

# Design, Performance, and Application of Lithium-Ion Batteries

### Message from the Guest Editor

With their advantageous high energy density, lithium-based energy storage systems power our daily lives, from smart phones to other consumer electronics. They also enable electrification of transportation systems and provide stationary storage of energy in the electrical grid, which is critical to developing a clean-energy economy. This Special Issue welcomes the submission of original research and review articles discussing the design, synthesis, and application of advanced lithium-ion batteries, to be published in the open access journal *Materials*. Topics of interest include 1) the advanced design of LIBs from a components point of view (electrodes, electrolytes, and additives) to thermal analysis; 2) simulation of LIBs from an electrochemical to thermal point of view to improve their performance and gain insight into their failure/improvement mechanisms; 3) advanced LIBs for high-performance energy storage applications; 4) advanced characterization of battery materials; and 5) application of LIBs from small- to large-scale systems.

### Guest Editor

Dr. Amin Rabiei Baboukani

Department of Mechanical and Materials Engineering, Florida International University, Miami, FL, USA

### Deadline for manuscript submissions

closed (10 January 2024)



## Materials

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## About the Journal

### 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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### Editor-in-Chief

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