

Special Issue

Powering the Future: Cutting-Edge Advancements in Materials Processing and Battery Manufacturing

Message from the Guest Editor

The demand for lithium-ion batteries has increased dramatically in recent years, particularly driven by the fast-growing electric vehicle market. The development of innovative materials processing and manufacturing technologies alongside new battery materials are important to further reduce battery cost and improve energy density, fast-charging, safety, and lifetime. Considering the huge manufacturing quantity of batteries at present and its projected increase in the future, more sustainable manufacturing processes that can save production energy and cost, as well as reduce environmental impact and carbon emission are highly desirable. Simultaneously, these technologies have to meet the fast and large-scale production demand and/or must be transferable to the current mass production lines to reduce capital investments. As such, great challenges exist in the pathway to develop new materials processing and manufacturing technologies for lithium-ion batteries. This Special Issue aims to publish the latest research in materials processing and manufacturing technologies for lithium-ion batteries that can contribute to more sustainable energy storage in the future.

Guest Editor

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Message from the Editorial Board

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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