Topical Collection

Advances in Battery Materials

Message from the Collection Editor

During recent decades, the applications of rechargeable batteries have been rapidly expanded from portable electronic devices to electric vehicles and large-scale energy storage systems. In particular, the emerging applications require much higher performance standards—in terms of energy density, power, cycle life, and safety—than that of the state-of-the-art lithium-ion batteries (LIBs). The materials comprising the batteries inherently determine performances, primarily the cathodes, anodes, and electrolytes. During the last three decades, vigorous developments of battery materials have significantly improved the performances, and further developments are under way in the areas of advanced LIBs, all-solid-state batteries, Li-S batteries, and non-lithium-based batteries, including zinc-, sodium-, potassium-, magnesium-, and calcium-ion batteries. For this Topical Collection of *Batteries*, we warmly welcome the submission of original research articles or reviews on topics related to advances in battery materials, including synthesis, processes, physicochemical characterization, computational analysis, and mechanism analysis.

Collection Editor

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Message from the Editor-in-Chief

Take the opportunity to publish your original scientific work or a review paper concerning battery materials, battery technology or battery application within this new open access journal. Along with material science, the journal also addresses engineering and multidisciplinary research topics, such as cell and system design or storage system integration. Publishing proffers visibility for the benefit of other experts and facilitates discussion of the research results within the field. You are invited to publish your work, read published papers and to participate in topical discussions.

Editor-in-Chief

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