Special Issue

New Science Based Concepts for Increased Efficiency in Battery Recycling 2020

Message from the Guest Editor

There is no doubt that e-mobility will become a tremendous driving force for our future life. High demand for advanced materials in the batteries as well as political pressures in terms of collection and recycling rates raise the need for an extensive recovery of critical elements and a more sustainable use of raw materials. This Special Issue aims to make significant progress in designing innovative processes and understanding related mechanisms in the context of battery recycling. The idea of a circular economy is the point of origin for contributions, aiming at minimizing of waste streams and promoting re-use/recirculation of components, functional materials as well as elements. In order to minimize material losses and energy consumption, this Issue explores concepts for optimization concerning the interfaces between mechanical and thermal pre-treatments with metallurgical processes. Considering both principle aspects of circular economy and material design, the topics of special interest are those concerning recovery and re-use of critical metals like lithium, since their importance for technological applications often goes along with a lack of supply on the world market.

Guest Editor

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Message from the Editor-in-Chief

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Editor-in-Chief

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