

## Special Issue

# Production Technology, Innocuous Treatment and Recovery Technology of Lithium Ion Batteries

### Message from the Guest Editors

Electric vehicles (EVs) continue to gain market shares because of environmental problems and energy crisis. In the evaluation of EV contributions to sustainable transportation, it is important to consider the production of batteries. For example, sulfur oxides and carbon oxides are emitted when ore is smelted to recover lithium, cobalt, nickel, iron and phosphorus, etc. The impact can be mitigated through use of different materials in batteries. Furthermore, the recycling of batteries poses an opportunity to reduce demand for newly mined metals. Pathways for battery recycling include pyrometallurgical, hydrometallurgical, direct regeneration and other technologies that target the recovery of the critical material (cathode, anode, current collector, electrolyte, etc.) without significant alterations. This makes disassembly very important. Contributions to this issue will investigate the environmental impacts of today's lithium ion batteries, how emerging battery chemistries might reduce the environmental impact of batteries, and how opportunities for metal recovery through battery recycling can reduce the demand for newly mined metals.

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### Deadline for manuscript submissions

closed (31 October 2022)



## Metals

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## About the Journal

### Message from the Editorial Board

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.

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### Editors-in-Chief

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