Special Issue

Recycling of Rare Earth Metals

Message from the Guest Editor

Renewable energy is rapidly expanding worldwide. Many countries have set a goal to achieve carbon neutrality by 2050. As a result, the demand for critical metals (typically rare earth elements (REEs)) is set to rise. However, the higher utilization of these metals can have a negative impact on the environment since the processes involved in mining and extracting them from minerals produces a large carbon footprint. Therefore, under the condition that critical metals are expected to be utilized more, the discovery of recycling processes with a much lower carbon footprint has become critical. The Special Issue will cover recent studies conducted on the advanced recycling technology of REEs based on hydrometallurgy, solvometallurgy, and electrometallurgy. More specifically, research themes may include, but are not limited to, leaching, separation, and purification, the recovery of compounds or metals, and the production of magnets using recycled rare earth materials on both a lab-scale and a (pilot) plant scale. In addition, discussions concerning the pretreatment process for the separation of REEs and non-REEs from waste magnets or scraps are also welcome.

Guest Editor

Dr. Kyeong Woo Chung

Resources Recovery Research Center, Mineral Resources Division, Korea Institute of Geoscience and Mineral Resources (KIGAM), Daejeon 34132, Korea

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Metals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

mdpi.com/journal/metals

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About the Journal

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

Prof. Dr. Yong Zhang
Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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