Special Issue

Trends in Modern Mineral Processing and Recovery Techniques Toward the Energy Transition

Message from the Guest Editors

This Special Issue aims to cover topics and foster debates concerning technological innovations in geometallurgy, focusing on mineral processing technologies and recovery techniques for ores, by-products, and waste streams, including critical raw materials (CRMs), while rebounding a responsible supply of strategic metals through sustainable metallurgy in the era of energy transition. To the trajectory of ecological modernization and development, the mining industry requires sustainable exploration/exploitation and the efficient processing of materials. To meet the fundamental needs in mining concerning low CO2 emission and energy consumption, intelligent mining, mining hazard management, and self-driving technologies are proposed to be implemented in order to obtain social, economic, and environmental outcomes. Additionally, old-standing mineral processing technologies (e.g., comminution—grinding/crushing; classification—particle size separation; beneficiation combined with metallurgy and dewatering—solid/liquid separation) serve as high-energy and cost-consuming methods, affecting the economy and environment.

Guest Editors

Dr. Evangelos Petrakis
Dr. George Xiroudakis
Dr. Platon N. Gamaletsos

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

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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.

Editors-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma
State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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