



Grinding and Concentration Technology of Critical Metals

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Message from the Guest Editor

Dear Colleagues,

The global raw materials sector is expected to experience a noticeable shift towards new production methods in the coming decades. Climate change, cleaner production ways, and circular economy requirements must be conjugated to make new production routes greener, cleaner, and more efficient. This is going to be especially crucial in the case of the sources of critical metals. In the particular case of grinding operations, which is estimated to be up to 4% of global energy consumption—with very low efficiency—a really big challenge is faced.

The purpose of this Special Issue is to provide papers featuring the latest developments in the field of grinding technology applied to the production of critical metals from primary and secondary resources. This Special Issue welcomes work conducted in the following research areas: modeling and simulation in critical metals comminution, improvements in energy efficiency in conventional comminution, and new strategies to reduce grindability in critical metals ores (physical or chemical: grinding aids, microwave pretreatments, electrofragmentation, etc).





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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.

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