Special Issue

Electromagnetic Processing of Metals

Message from the Guest Editor

The application of microwave energy to metallurgy can be traced back to the early 1960s, when a patent for microwave treatment of iron ores was granted. Since then, microwave processing of mineral ores, but also of metals, has been growing constantly, expecially during the last decade. This Special Issue will cover fundamental studies of microwave-metals interaction, as well as applications of microwaves to metallurgy (extractive metallurgy, preliminary operations, melting, sintering, metal powders production, thermochemical treatments,...) and emerging fields, like processing of intermetallics, high entropy alloys, metallic glasses and metal nanoparticles. Papers addressing dedicated equipment for microwave assisted metallurgy and environmetnal aspects of microwave metallurgy are welcome as well. This special issue will be an update on the latest developments of the field, inlcuding the current understanding of microwave-metal interactions.

Guest Editor

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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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