Special Issue

Catalytic Effect of Microwave Energy on Reaction Rate Enhancement

Message from the Guest Editor

Recently, increasing attention has been paid to using microwave energy in several fields of metallurgy, mineral processing, material preparation, and environmental applications. Microwave heating can accelerate the reaction rates, change the morphology of minerals, and improve the recovery of valuable metals. Recent studies have shown that the use of microwave energy results in a substantial enhancement in the rate of reaction when compared to conventional thermal heating. This Special Issue aims to cover the most recent progress on the usage of microwave energy to improve the reaction in the different fields of metallurgy, mineral processing, material preparation, and environmental applications. This includes, for example, achievements of microwave heating in the field of valuable metal recovery, microwave heating to improve the properties of minerals (i.e., magnetic and grindability), microwave heating application for waste treatment, microwave heating to accelerate the carbothermic reduction, and microwave heating to accelerate the chemical reactions.

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