Special Issue

Design, Preparation and Application of Novel Cemented Carbides and Cermets

Message from the Guest Editor

A variety of severe boundary conditions are faced in the production and application of cemented carbides (hardmetals) and cermets. These include social and health issues, localized resources, geopolitical problems, the price volatility of some raw materials, and restrictions by law. Hence, it seems important to search for alternatives to existing cemented carbides and cermets and their production which bear the potential to overcome these problems. This Special Issue will present the latest research in this area, including "green" technologies and fundamental research on the properties of the novel formulation of these composite materials. Especially, energy- and waste-saving technologies, the use of recycled materials, research on novel binder phases and alternative hard phases, as well as the optimized properties of conventional hard metals and cermets, which reduce material and energy consumption, should be addressed.

Guest Editor

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Deadline for manuscript submissions

closed (30 September 2023)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/145078

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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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