Special Issue

Physical Metallurgy of Refractory Alloys

Message from the Guest Editor

The high melting temperature, high strength at elevated temperatures, low thermal expansion, and high heat conduction make tungsten a favored candidate material for terrestrial energy production facilities. Tungsten and its alloys are fabricated as powders through the reduction of tungsten oxide, consolidation by sintering, activated sintering or liquid phase sintering. Heavy tungsten alloys bound by nickel, iron or copper are used as radiation shields, balancing weights, and penetrators. At higher temperatures, tungsten alloys are used for tools and molds for metal and glass forming. A Special Issue of Metals will be devoted to the physical metallurgy of the metallic alloys of tungsten. It is intended to give an account of the 2021 scientific and technological state of the art of recent and potential developments of tungsten alloys and environmental protection (see the Keywords/Topics below). Your contribution to this 2021 account is highly valuable and appreciated.

Guest Editor

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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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