Special Issue

Wear- and Corrosion-Resistant Cermet Coatings

Message from the Guest Editor

Cermet coatings deposited on metallic components have attracted tremendous attention owing to their capability of protecting the substrate from surface wear and corrosion. In the past decades, various coating materials including carbides-, nitrites- and oxide-based cermets: advanced fabrication techniques, such as thermal/cold spraying, PVD/CVD, laser cladding, and plasma transferred arc surfacing; as well as many posttreatment processes, have been developed. However, with the increasing demand on metallic materials applied to extreme environments, e.g., elevated temperature, oxidative atmosphere, strong impact, and abrasive conditions, it is very necessary to look for breakthroughs in current coating materials or viable alternatives. For this Special Issue, we invite high-quality contributions with innovative and significant findings and experiences in the field of cermet coatings. The topics of interest include, but are not limited to, the abovementioned aspects. Some bulk cermet materials that have excellent mechanical properties and can potentially be used for resisting wear and corrosion are welcomed as well.

Guest Editor

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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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