Special Issue

Fabrication, Microstructure and Properties of Metal–Ceramic Composites

Message from the Guest Editor

Metals have a strong metallic bond in their crystals, which endows them with good electrical conductivity, thermal conductivity, and high tensile strength. However, their low hardness and wear resistance have inhibited their applications in harsh environments. On the other hand, ceramics possess a strong ionic or covalent bond in their crystals, showing a high elastic modulus and excellent high temperature stiffness. Therefore, ceramics are generally used in high-temperature fields, but their high brittleness is one difficulty still to be conquered. In order to continuously enhance the properties of both metals and ceramics, by tailoring the microstructure of metal–ceramic composites, it is believed that the properties of composites could be highly improved. In this Special Issue, papers regarding the preparation of these composites by powder metallurgy, 3D printing, or casting, etc., are welcomed. We invite those of you who are focusing on the fabrication process, microstructure tailoring, and property characterization, as well as promising applications of advanced metal–ceramic composites, to submit a manuscript.

Guest Editor

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Message from the Editor-in-Chief

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.

Editor-in-Chief

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