

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

Prof. Dr. Chunfeng Hu

School of Materials Science and Engineering, Southwest Jiaotong University, Chengdu 610031, China

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Metals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

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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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Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

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Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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