

Special Issue

Physical and Chemical Nature of Cemented Carbides

Message from the Guest Editors

High- and medium-entropy alloys (HEAs/MEAs) have emerged as promising multi-principal element systems due to their distinctive phase stability, enhanced mechanical performance, and excellent thermal resistance. Their integration into cemented carbides offers new opportunities to develop hard materials with improved toughness, wear resistance, and microstructural stability, addressing long-standing challenges in traditional WC-based composites. This Special Issue aims to showcase recent progress in incorporating HEAs and MEAs into carbide matrices through advanced powder processing and sintering technologies—such as mechanical milling, spark plasma sintering (SPS), hot isostatic pressing (HIP), and conventional sintering. Emphasis is placed on understanding the resulting structural and microstructural evolution, densification behavior, and mechanical properties. We welcome submissions focused on novel alloy compositions, processing–structure–property relationships, crystallographic analysis, and modeling approaches that support the design of next-generation hard materials. Contributions that bridge experimental and theoretical insights are particularly encouraged.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the crystal, where science merges with beauty and innovation.

Editor-in-Chief

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