Special Issue

Materials and Their Performance Characterization in Extreme Environments

Message from the Guest Editors

With the rapid development of aerospace, nuclear energy, ocean exploration, and other cutting-edge fields, the preparation of high-performance advanced materials and understanding the properties of the materials in extreme environments (such as ultra-high temperature, ultra-low temperature, strong radiation, high pressure, and corrosive media, including those with microstructure and macroscopic properties, etc.) have become key challenges in the fields of materials science and engineering. This Special Issue will discuss key topics such as failure mechanisms, multi-scale modeling, advanced characterization techniques (including experimental and theoretical characterization), and the design of high-performance advanced materials that can adapt to extreme conditions. By promoting interdisciplinary dialog, this topic will bridge the connection among experimental methods, theoretical frameworks, and engineering applications, ultimately supporting the development of materials, technologies, and more in extreme environments.

Guest Editors

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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 *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

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