Special Issue

Processing and Characterization of Magnesium-Based Materials

Message from the Guest Editor

The typical processing route of Mg parts incorporates a casting step and, subsequently, a thermo-mechanical treatment. In order to achieve the desired macroscopic properties and thus fulfill the service requirements, thorough knowledge of the relationship between the microstructure, the processing steps, and the resulting property profile is necessary. Modern characterization techniques allow for the monitoring of the microstructure evolution in situ. This provides more insight during solidification and under the following thermal and/or mechanical treatment as a function of processing parameters with the necessary time resolution. This Special Issue covers all the aspects of the characterization of solidification and processing of Mg-based materials. These include the in situ and ex situ experimental and computational investigations of metallurgical processes, phase-formation and transformations. Also included are the behavior under thermomechanical load of Mg, its alloys, and Mg matrix composites utilizing modern characterization and simulation techniques.

Guest Editor

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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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