Special Issue

Crystalline Microstructures in Stainless Steels

Message from the Guest Editors

Although stainless steels were first created as long ago as the early 1900s, continuous improvement in alloy design and fabrication processes allows them to gain properties and widen their applications constantly. Nowadays, the corrosion resistance character of these steels is still their main trait, but many different properties have been optimized and may be exploited.

Thanks to its peculiar features, stainless steel is irreplaceable in many application fields. Stainless steel's crystalline microstructures may vary, be designed through chemical composition balance, and be tuned to obtain certain desired properties. Many new technologies which have been developed in recent years are able to deeply modify crystalline microstructures in extremely peculiar ways, such as severe plastic deformation, achieving extremely refined microstructures, and additive manufacturing, which may obtain ultra-fast solidification microstructures.

It is our pleasure to invite metallurgist researchers studying stainless steels to share their recent findings in this Special Issue.

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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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