Special Issue

Preparation and Characterization of Structural/High-Strength Steels

Message from the Guest Editors

High-chromium martensitic steels with low carbon (0.1% max) contents and additions of Mo, W, V, Nb, N and other elements are the main structural materials used in the steam circuit of modern power units due to their relatively high creep strength, good oxidation resistance at elevated temperatures and low cost. The aim of this Special Issue is to clarify the basic principles of alloying design, processing and applications, as well as new progress and findings in the field of high-chromium martensitic steels. The articles presented in this Special Issue will cover various topics, including but not limited to:

- Alloying design;
- Microstructure characterization;
- Mechanical behavior at elevated temperatures;
- Heat treatment and thermo-mechanical processing;
- Microstructural degradation and fracture behavior;
- Precipitation and coarsening of secondary particles;
- Corrosion, physical and mechanical behavior;
- Welding of similar and dissimilar materials;
- Microstructure–mechanical-properties relationships.

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

Editor-in-Chief

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