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Advances in Zr-Based Alloys (Volume II)

Guest Editor:

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20 July 2024

Message from the Guest Editor

Dear Colleagues,

Due to its outstanding anti-neutron irradiation and superior corrosion-resistance properties, zirconium (Zr) and its alloys have important structural and functional applications in the nuclear, chemical, and biomedical industries. Zirconium alloys are undoubtedly a very suitable candidate for the high-performance requirements of nuclear power materials for fourth-generation nuclear reactors. Zirconium-based alloys have better corrosion resistance than stainless steel, Ni-based alloys, and Ti-based alloys, and their mechanical and processing properties are also very suitable for manufacturing vessels and heat exchangers, etc. In the chemical industry, Zr-based alloys are increasingly used in many highly corrosive devices. We welcome research on the design and preparation, computer simulation, composition and property optimization, and new applications in response to the need for advanced high-performance Zr-based alloys in terms of high strength and high toughness, irradiation resistance, and corrosion resistance. Furthermore, you are welcome to review and comment on the research progress in Zr-based alloys.

We are looking forward to your valuable contribution!

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Editor-in-Chief

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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.

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