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Ni (Co)-Based Superalloys

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Message from the Guest Editors

Aeroengines are known as the crown jewel of the aeronautic industry. Superalloys account for about 50% of aeroengines' total weight; therefore, the development of superalloys has become critical for industrial applications. The hot-end components of aeroengines, such as the combustion chamber, guide, turbine blade and turbine disk, are prepared from Ni (Co)-based superalloys. Improving the comprehensive properties of superalloys can effectively improve the combustion rate and thrust weight ratio of aeroengines. Hence, the scientific challenges presented by the design and preparation of new high-performance Ni (Co)-based superalloys are still a hot topic for research.

Through high-throughput calculation considering the relationship among the composition, preparation, microstructure and properties, the design efficiency of alloys can be significantly improved.

This Special Issue seeks original contributions and review papers on topics related to Ni (Co)-based superalloys covering their design, preparation, properties and applications in various fields.

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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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