Special Issue

Materials Structure and Properties: Prediction, Characterization, and Application

Message from the Guest Editor

Materials are at the heart of innovation, driving progress across science, engineering, and technology. This Special Issue aims to highlight a broad spectrum of cutting-edge developments in materials science, ranging from novel material design and structural prediction to property characterization and real-world applications. We welcome contributions that explore computational and simulation approaches such as first-principles calculations, machine learning, and artificial intelligence, which are accelerating material discovery and optimization. Experimental breakthroughs in synthesis and characterization, including those conducted under extreme conditions or utilizing advanced facilities like synchrotron X-ray and neutron sources, are also of significant interest. This Special Issue also invites interdisciplinary research connecting materials science to a wide array of applications, including but not limited to electronic and optoelectronic devices, condensed matter and quantum physics, astronomy, and earth and planetary sciences. Researchers from academia, national laboratories, and industry are encouraged to contribute their latest findings and perspectives.

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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