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Mechanical Metamaterials

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Message from the Guest Editors

Dear Colleagues,

Mechanical metamaterials are artificial materials with rationally designed microstructures to achieve unusual static mechanical properties (e.g., ultralight, negative Poisson's ratio, negative thermal expansion, anisotropic stiffness, pentamode, multistability) and dynamic behaviors (e.g., selective wave transmission, full-band vibration isolation, impact energy mitigation). Versatile mechanical metamaterial designs inspired by natural materials (such as honeycomb and wood), crystalline structures, and paper folding and/or cutting principles have been proposed. The development of advanced 3D and 4D manufacturing techniques enables the design and fabrication of mechanical metamaterials with complex unit cell geometries, micro- to nanoscales, and a wide range of engineering materials. In this Special Issue, we invite high-quality review and research articles that will contribute valuable knowledge to this thriving field.

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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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