



Advanced Chalcogenide Materials for Optoelectronic Applications

Guest Editor:

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Message from the Guest Editor

In the field of optoelectronics, advanced chalcogenide materials stand out due to their versatile applications and unique properties. This Special Issue focuses on the comprehensive exploration of chalcogenide materials, ranging from phase-change materials, chalcogenide glasses, and thin film solar cells, and extending to the area of 2D and layered structures. The focus is placed on both the synthesis and structural characterization of these materials, along with an in-depth examination of their optical and electronic properties, which are crucial for their functionality in optoelectronic devices.

A significant aspect of this issue is the investigation of phase-change materials (PCMs). Known for their quick and reversible transition between crystalline and amorphous states, they offer innovative avenues in data storage and neuromorphic computing applications. This is complemented by studies on amorphous semiconductors and nanocrystalline chalcogenides, paving new paths in material science. The phenomenon of ovonic threshold switching, inherent to these materials, highlights their potential in switching and memory applications [...].





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Message from the Editor-in-Chief

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