

## Special Issue

# Boron-Based Low-Dimensional Nanoclusters and Nanomaterials

### Message from the Guest Editors

Over the past two decades, researchers have achieved significant progress in predicting, synthesizing and characterizing various forms of boron nanomaterials. These materials exhibit distinct bonding configurations due to their low dimensionality, contrasting with the icosahedral structures found in bulk boron crystals. This structural diversity leads to intriguing physical and chemical properties, driving interest in boron nanomaterials within the materials science community.

Of particular note is the recent experimental realization of borophene. This breakthrough was achieved by depositing evaporated boron atoms onto Ag(111) surfaces under ultra-high vacuum conditions. Borophene's emergence has spurred extensive theoretical and experimental investigations, including a wide range of applications.

This Special Issue aims to comprehensively cover the theoretical design, experimental synthesis, characterization and understanding of the unique physical and chemical properties of boron-based nanoclusters and nanomaterials. Through this exploration, we seek to further elucidate the potential of boron nanomaterials for diverse applications in materials science and beyond.

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**Deadline for manuscript submissions**



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