

## Special Issue

# Two-Dimensional Heterostructures: From Properties, Functionalization to Device Applications

### Message from the Guest Editor

This Special Issue aims to provide a comprehensive overview of the latest advancements in the field of two-dimensional heterostructures. As research in this area continues to evolve, two-dimensional heterostructures have emerged as a cornerstone for developing next-generation nano-devices, thanks to their unique properties and versatility. This issue features a collection of articles that delve into the fundamental properties of these materials, highlighting their electronic, optical, and mechanical characteristics. Furthermore, we explore various functionalization techniques that enhance their performance and tailor them for specific applications. Contributions from leading researchers will showcase innovative device applications, ranging from transistors and sensors to energy storage and conversion systems. By bringing together cutting-edge research and perspectives, this Special Issue aims to bridge the gap between fundamental science and practical applications, fostering collaboration and inspiring future work in the field. Both original research and review articles are welcome.

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### Guest Editor

Dr. Zhibin Yang

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### Deadline for manuscript submissions

closed (20 December 2025)



## Applied Sciences

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## About the Journal

### 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.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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