



Two-Dimensional MXenes: Preparation, Properties and Applications

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Message from the Guest Editors

Dear Colleagues,

The problem of electromagnetic pollution is becoming more and more serious with the rapid development of the information age. MXene, a shining star of two-dimensional (2D) materials, perfectly showcases layered structure, outstanding electrical conductivity, tunable active surface, and excellent mechanical strength, all of which make it extremely attractive in various applications, in particular for the ever-growing market of microwave absorption (MA) and electromagnetic interference (EMI) shielding technology. The high conductivity endows MXene-based MAMs' strong dielectric loss and polarization loss. Similar to graphene, 2D MXene can be an ideal substrate material to couple with other loss materials to further improve the MA or EMI performance.

The present Special Issue of *Nanomaterials* is aimed at improving the MA or EMI performance of MXene and MXene-based MAMs, including pure MXene, MXene/dielectric materials, MXene/magnetic materials and MXene/multiple loss materials. In the present Special Issue, we have invited contributions from leading groups in the field with the aim of giving a balanced view of the current state-of-the-art in this discipline.





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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal-organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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