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Advanced Electromagnetic Applications of Nanostructures and Their Composites

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Message from the Guest Editors

Dear Colleagues,

Nanostructure materials present novel dielectric and magnetic specialties compared with bulk counterparts, which endow absorber with wide effective absorption bandwidth and strong reflection loss intensity. Further, integrating nanostructured dielectric materials with magnetic materials bring this nanocomposites with multi-loss mechanism like magnetic-dielectric synergetic loss, interfacial polarization relaxation. The boosted impedance matching behavior and attenuated ability than single type contributes to more electromagnetic waves incidence and subsequent dissipation process, acquiring a wider effective absorption bandwidth of this most important point.

This Special Issue focus on the latest advanced electromagnetic composites of nanostructure with highly efficient microwave absorption capabilities. Any type of dielectric-magnetic nanocomposites including preparation, characterization, performance analysis and mechanism revelation are permissible. On this basis, nanostructure design of composites with excellent absorption properties would be preferred.

See more information at <https://mdpi.com/si/148951>. Look forward to your contributions.

Guest Editors



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Special Issue



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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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