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Intelligent Nanomaterials and Nanosystems

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Message from the Guest Editors

Huge effort is being expended to mimic brain attributes such as learning, computing, or signal processing. This Special Issue is dedicated to nanomaterials that are used to sense any external stimulus (mechanical, optical, thermal, biological, etc.) or that are able to self-organize, actuate, adapt their physical properties to external stimuli, or even compute. Learning and computing are the pillars of intelligent nanosystems and are the key issues that confer intelligence to a nanosystem. Here, neuromorphic computing based on artificial neurons and synapses and arrays based on them are the main vectors for the development of intelligent nanosystems. Artificial synapses and neurons can be implemented with a series of nanomaterials and used for learning purposes such as pattern recognition. Moreover, artificial retinas and other integrated circuits benefit from neuromorphic devices.



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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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