Special Issue

Carbon Dot Sensors, Volume II

Message from the Guest Editor

In 2004, a new family of carbon nanomaterials, named carbon dots or carbon quantum dots, was identified in the purification of carbon nanotubes. Meanwhile, these nanomaterials have been shown to have excellent photophysical and photochemical properties, and low toxicity, and can be produced from renewable materials under sustainable conditions. Currently, ongoing research is improving these features far beyond standard values. Carbon dots are becoming real alternatives to other luminescent nanomaterials in applications involving toxicity and natural resources sustainability issues. Fluorescent, chemiluminescent, and upconversion fluorescent carbon nanomaterials have been reported. These properties confer an important role in analytical/bioanalytical sensing chemistry and imaging/bioimaging because extended linear concentration ranges, very low detection limits, and high selectivity are foreseen and have already been demonstrated. The present Special Issue is focused on the sensor design, preparation, and analytical applications of carbon dots in currently analytical challenges in environmental and biological sciences.

Guest Editor

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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