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Inkjet Printing of Nanomaterials

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Inkjet printing is an enabling manufacturing tool for commercialization of nanomaterials in various devices, including fuel cells, batteries, supercapacitors, thin-film photovoltaics and transistors, sensors, etc. In recent years, significant advances have been made in the functionalization of printable nanomaterials in areas where conventional manufacturing methods became inapplicable. A common feature in all type of jetting technologies is the ability to dispense controllably drops in the range of pico- to nano- litter volumes at high rates (kHz). It allows precise uniformity control and introduces the possibility of printing 2D and 3D patterns. Inkjet printing systems offer a wide scale of application: From experimental platforms working with customized inks, up to mass manufacturing systems that can print rapidly and competitively on industrial scale. The technology is environmentally friendly due to waste minimization of the expensive precursors.

Keywords: inkjet printing; nanomaterials; energy devices; commercialization; 2D and 3D patterns

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Guest Editor



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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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