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## Alleviating Climate Change and Pollution with Nanomaterials

Guest Editor:

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Deadline for manuscript  
submissions:

**closed (31 January 2019)**

### Message from the Guest Editor

Dear Colleagues,

Nanomaterials that can be utilized to extract carbon from air, capture dyes and toxic pollutants from water and degrade solid waste into useful products, are being developed:

- Researchers have developed nanoCO<sub>2</sub> harvesters that can suck atmospheric carbon dioxide and deploy it for industrial purposes, to help slow the climate-changing rise in atmospheric CO<sub>2</sub> levels.
- Most toxic dyes used in textile and leather industries can be captured with nanoparticles. Adsorption processes using materials containing magnetic nanoparticles are highly effective and can be easily performed because such nanoparticles have a large number of sites on their surface that can capture pollutants and don't readily degrade in water.
- Nanomaterials are also being explored for managing organic waste, which can pollute land and water if not handled properly. Relevantly, nanoparticles can accelerate the anaerobic digestion of the sludge, thus making it more efficient in terms of duration and enhanced production of biogas.

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Dr. Muralidharan Paramsothy

*Guest Editor*



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# Special Issue



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## Editor-in-Chief

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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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