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### Smart composite materials for waste water remediation

Nanocomposites represent the new trend of research for scientists and industrial innovation. The product processes and applications are expected to contribute significantly to water and wastewater treatment. However, using nanocomposites in different products may release emerging and nanocomposites contaminants in the environment as well. Research into the environmental effects of nanotechnologies, emerging and nanocomposites has been more important nowadays. Carbon-based materials, either natural or engineered, such as carbon nanotubes, nano-diamonds and nanowires are used in biomedical applications, super-capacitors, sensors, and photovoltaics. The pollution of water sources by wastewater renders water unsafe to drink even in those places where water is plenty. Therefore, the knowledge of the treatment techniques in wastewater is highly essential. This study focuses on the status of nanocomposites in the removal of such contaminants from waste water.

### Biography

Ajay Kumar Mishra is a Full Professor of Nanotechnology and Water Sustainability Research Unit at College of Science, Engineering & Technology, University of South Africa, Florida Science Campus, South Africa since 2015. He is also working as Adjunct Professor at Jiangsu University, China. His research interests include "Synthesis of nanomaterials/composites, smart materials, and water research". He has authored over 100 scientific papers. For his outstanding research profile, he was awarded a number of international awards. He also served as an Associate Editor as well as member of the editorial board of many peer-reviewed international journals. He has edited several books by the renowned publishers and also reviewer of many international journals. He is serving as member of advisory board of a number of international scientific societies, conferences and workshops.

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