

4th International Conference on **Pollution Control & Sustainable Environment**
&
6th Edition of International Conference on **Water Pollution & Sewage Management**
July 26-27, 2018 Rome, Italy

Functionalized polymeric electrospun nanofibers for efficient removal of toxic organics from water

Manjeet Jassal, Saurabh Suryavanshi and A K Agrawal
Indian Institute of Technology Delhi, India

Nanofibers high surface area to volume ratio can significantly enhance the activities requiring the use of increased surface area such as adsorption of chemical species in filtration or controlled release of loaded drugs or chemical moieties. β -cyclodextrin incorporated polystyrene and cellulose acetate nanofibers are electrospun by vertical solution electro spinning method and the prepared nanofibers are characterized by SEM, FTIR, RAMAN and UV-Visible spectroscopy to understand the changes in the nanofiber morphology and also to evaluate their potential activity for absorption of target molecular species like ortho-chloro phenol from aqueous solution has been studied.

Recent Publications

1. Kamlesh Panwar, Manjeet Jassal and Ashwini K Agrawal (2018) TiO₂-SiO₂ Janus particles for photocatalytic self-cleaning of cotton fabric. *Cellulose* 25:2711–2720.
2. Kamlesh Panwar, Manjeet Jassal and Ashwini K Agrawal (2018) Readily dispersible antimicrobial Ag-SiO₂ Janus particles and their application on cellulosic fabric. *Carbohydrate Polymers* 187:43-50.
3. Kamlesh Panwar, Manjeet Jassal and Ashwini K Agrawal (2017) Ag-SiO₂ Janus particles based highly active SERS macroscopic substrates. *Applied Surface Science* 411:368-373.
4. Kamlesh Panwar, Manjeet Jassal and Ashwini K Agrawal (2017) Atmospheric pressure plasma-assisted green synthesis of amphiphilic SiO₂ Janus particles. *Particuology* 33:50-54.
5. Deepika Gupta, Manjeet Jassal and Ashwini K Agrawal (2016) Electrospinning behavior of poly(vinyl alcohol) in DMSO-water binary solvent mixtures. *RSC Advances* 6:102947-102955.

Biography

Manjeet Jassal has completed her MS, MTech and PhD at IIT Delhi. She has an experience of over 13 years in the R&D division of Indian Petrochemical Corporation Limited (IPCL), a leader in petrochemical sector. Since 1999, she is a Faculty in Department of Textile Technology at IIT Delhi. She has authored more than 230 research publications in national and international journals, conference proceedings and books. She has worked in collaboration with several industries and institutions and has many patents and technology transfers to her credit. She has expertise in chemistry and characterization of polymers and textiles, hydrogels, superabsorbent materials, functional polymers and nanomaterials. Much of her work in the last few years is on the development and application of smart and functional polymers/fibers, electrospun nanofibers, nanoparticles and functional nanofinishes/coatings. She is a member of several professional societies and has won several awards.

manjeet @textile.iitd.ac.in

Notes: