Waste-Derived Nano-materials: Status, Impact and Future Prospects

Date: 7th October, 2021 Time: 14.00 - 16:00 IST (GMT +05:30)

Key features:

- Scope and use of the waste-derived nanomaterials and their environmental impact
- From lab to audience: Case studies based on the nanomaterials and associated Pros and cons

O Discuss new ideas on designs of safer chemical reaction and synthetic routes that yield enhanced sustainability outcomes

- S E-certificates
- Networking

Coordinator:

Dr Pushplata Singh, Fellow and Area Convenor, TERI

Co-Cordinator:

Dr. Ruchi Agrawal, Dr. Suneeti Singh, TERI

Key Speakers:

- Dr Prakram Singh Chauhan, DBT-IOC Centre for Advanced Bio-Energy Research, R & D, Indian Oil Corporation Ltd., Faridabad, Haryana
- Dr. Manashi Das Purkayastha, Food Engineering & Technology, Assam Agricultural University, Jorhat, Assam
- Dr. Deepesh Bhatt, Dept. of Biotechnology, SRK Institute, Veer Narmad South Gujarat University, Surat, Gujarat, India

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Background Concept:

Globally, around billion tons of waste is generated every year, causing drastic losses to the environment, atmosphere and human health. This situation has motivated the development and implementation of different policy strategies including complete bans on single use plastics, the reduction of hazardous substances and treatment of hazardous wastes to reduce their toxicity. Such waste materials (as municipal solid waste, household trash/refuse, hazardous waste, waste water such as sewage, e- waste, industrial sludges including radioactive waste) are a good source for the recovery of metals and other elements. In last few decades, sufficient progress has been made and a paradigm shift has now taken place to "create wealth from waste" using chemical or biochemical approaches rather than mere remediation of waste. Recent researches have demonstrated that such wastes bear tremendous potential for the synthesis of nano-materials. This webinar will highlight the various leads being taken to derive nano-materials from various waste resources via a 'Circular Economy' model, which is based upon principle of 'process', 'recycle' and 'reduce'.