



Chhotubhai Gopalbhai Patel Institute of Technology

Department of Chemical Engineering

A report of One-day National Seminar
on
‘Nanowaste: Sources, Classification and Management’
Sponsored by ‘The Institution of Engineers (India)’

Title	Nanowaste: Sources, Classification and Management
Organizer	The Institution of Engineers (India) in association with Chemical Engineering Department of CGPIT.
Organizing Committee	Mr. Manu Samuel Ms. Parvathy Chandran Mr. Jitendra Kumar
Institute	CGPIT, UTU
Date, Time & Venue	17 January, 2020; 9:00 AM to 03:30 PM; Jatin Desai Hall
Speakers	Er. Kirti Shethna – Chairman, The Institution of Engineers (India), South Gujarat Local Centre, Surat. Dr. Jignasa Solanki – Associate Professor, Chemical Engineering Department, SVNIT, Surat. Dr. Chintan Pandya – Assistant Manager, Torrent Pharmaceuticals Ltd., Dahej.

Details of Seminar:

The seminar was intended to give an insight on various methods to identify the sources of nanowaste, their types and different ways to manage them. Nanotechnology has brought revolutionary changes in the lives of people around the globe in the past few years. It has direct and indirect involvement in our day to day life. Along with its numerous advantages, it also constitutes several disadvantages when it comes to the disposal of its derived products. Due to their small size, nanoparticles once released into the atmosphere

through different media like air, water, soil, etc. during or after use can't be controlled. Such particles cause serious damage to all the living and non-living components of environment. Therefore, detection of presence of nanoparticles in those components, to classify them based on their properties and proper disposal or management is of great importance. There were 110 participants (UG students, faculties and research scholars) in the seminar and total 5 technical sessions were conducted.

The first session was taken by Er. Kirti Shethna, Chairman, IE(I), SGLC. He started with an introduction of nanotechnology and further explained about the role of nanotechnology and nanoparticles in water treatment. He also discussed about the spent nanoparticles that are used in water treatment. The session was concluded with giving emphasis on water conservation with the help of several videos.

The 2nd and 3rd sessions were taken by Dr. Jignasa Solanki, Associate Professor, Chemical Engineering Department, SVNIT, Surat. In her first session, she started with detailing of properties of nanoparticles and their immense applications in various fields. The possibilities of nanowaste generation in various application areas and the mechanism in which they get released into atmosphere in various forms were also elaborated. Further, she explained in detail about various sources of nanowaste and potential damages they cause in the environment as well as human beings. Later on, in her second session she discussed about management of nanowaste depending on their source and properties. She also discussed a little about various energy storage applications of nanoparticles.

The 4th and 5th sessions were taken by Dr. Chintan Pandya Assistant Manager, Torrent Pharmaceuticals Ltd., Dahej. He started with a brief explanation of nanotechnology and the unique properties of nanoparticles in his first session. He discussed in brief about how the nanoparticles used for various applications get mixed with various components of environment and also gave an overall picture of the types of analytical method available for detection of nanowaste. Further, in his second session, he discussed in detail about various analytical methods used to detect nanoparticles followed by their safe disposal methods.

A valedictory function was arranged soon after the completion of all the five sessions along with participants' feedback. The seminar was a grand success with nice presentations and interactions.







