National Institute of Technology Rourkela

Departmental Seminar

Seminar Title	: Workshop on Microplastics in the Environment
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Venue	: New Seminar Hall, Department of Chemical Engineering
Date and Time	: 05 Sep 2024 (11:00 am)
Abstract	: Microscopic plastics (MPs) are a specific type of developing environmental contaminant that has recently garnered growing attention. Investigations have uncovered the existence of microplastics in food items, as well as in the atmosphere, soil, and marine environments. Undoubtedly, microplastics are persistently infiltrating our systems on a regular basis. Ongoing research is being carried out to improve our understanding of the detection, distribution, and toxicological effects of microplastics. The programme included several continuous investigations in several domains of microplastic research, including the assessment of MPs' toxicity to human health, the concentration of MPs in diverse fish and coral species, the prevalence of MPs in surface water bodies such as lakes, rivers, ground water, and estuaries, case studies on MP pollution of the atmosphere, and the determination of the total extent of soil contamination caused by MPs, which is still pending due to challenges in acquiring MPs from soil samples. An exploratory conversation was conducted to examine the issues and constraints of the existing cutting-edge techniques for quantifying MPs. Performed an investigation into many sampling and sample preparation techniques for matrices. In recognition of the purpose of identifying and analysing microplastics, the workshop included hands-on training sessions on the instruments FTIR-microscope, the stereo zoom microscope, the ATR-FTIR, and the FESEM. In addition, the approaches for collecting samples were carried out by trawling with a Manta Net from Getalsud lake, which is one of the plastic polluted lakes in Ranchi. The distance that was travelled for the sample collection was approximately 500 meters on the surface waters of the Lake.