

Guest lecture on “Bio-Hydrogen & Biofuel” in the dept. of BT

The Department of Biotechnology, has organized a Guest Lecture on the topic entitled “Renewable Fuels and Chemicals From Waste Through Biorefinery Format” VFSTR, on 27th October.

Dr. S. Venkata Mohan, Principal Scientist, CSIR-IICT, Hyderabad, a Shanti Swarup Bhatnagar awardee (2014) was the resource person. Dr. Mohan addressed 2nd year undergraduate students.

Breakthrough technologies and concepts in the fields of Solid waste Management were discussed elaborately. The focal points include Waste Refinery, Waste as feedstock, Waste remediation vs. Resource recovery and Enabling Technologies. He also shared knowledge on Energy spectrum, Usage of fossil fuels and the search for alternative feedstock. He was indicating that there is a transition from a linear economy from fossil fuels to a circular economy with bio-waste recycling wherein waste from one process will be the feedstock to the succeeding processes. Bio-waste and carbon-dioxide through waste refineries yield several bio-products and in the process happens waste remediation which would make our vicinity clean and green.

He highlighted the technical know and how to developed in his lab at IICT through MNRE and DST, Govt. of India, assistance in Bio-hydrogen production. Dr. Mohan says Hydrogen is having a huge potential as an energy resource and it would be the futuristic fuel. He described that the sewage having a maximum of Chemical Oxygen Demand (COD) yields more Hydrogen. The mixed cultures of bacteria along with acidogenic bacteria produce profusely Hydrogen and the same yields zero pollution in all automobiles. In Mumbai, TATA and Mahindra firms are using hydrogen on a trial basis in their vehicles. The present cost of Hydrogen gas is Rs.100/Kg. The bio-process intensification of waste waters from Hydrogen plant would be used for Mixotrophic algal culture to obtain diesel, Photo-fermentation for Hydrogen and Microbial fuel cell to obtain electricity. The guest lecture was convened by Dr. S. Krupanidhi, Professor & HoD, Department of Biotechnology.