

Details of Projects

Process Development/full scale/pilot scale

1. Technology for biohydrogen production from wastewater (pilot plant design with 10 m³ capacity) (MNRE, Government of India)
2. Designed and executed full scale anaerobic suspended film up flow reactor (110 m³) for treating chemical based wastewater, M/S Gland Chemical Ltd., Hyderabad.
3. Evaluation of treatment process for GACL effluents to integrated to RC for zero discharge, M/S Gujarat Alkali and Chemical Limited (GACL), Gujarat.
4. Fatty acid and Biohydrogen production from spent wash. M/S Lakshmi Organic India Ltd., Chimangaon, Satara (Dist), Maharashtra
5. Developed a process to treat bulk drug effluent employing anaerobic fixed film reactor, M/S NATCO Industries, Kothur.
6. Development of methodology to identify mercury contamination in environmental matrix and established a process for safe disposal of mercury contaminated soil, M/S Andhra Pradesh Pollution Control Board (APPCB), Hyderabad.
7. Designed and executed pilot scale anaerobic biofilm reactor facility (2.5 m³) for treating bulk drug effluents (DSIR PATSER Program, Government of India).
8. Process developed for the treatment of hypersaline wastewater treatment at 3.5% of TDS levels and demonstrated at Pilot scale (0.2 m³), M/S Jeedimetla Effluent Treatment Limited (JETL), Hyderabad.
9. Laboratory and pilot plant studies (2 m³) for the composite chemical wastewater treatment using UASB and ASP for CETP application, M/S Bulk Drug Association (BDA), Hyderabad.
10. Demonstration of alcohol production using yeast based crystals at a scale of 100/1000 liters, M/S Gauri Industries Ltd., Gauribidanoor.

Environmental Related Industrial Projects

1. Carrying capacity based strategic planning for sustainable industrial development of Visakhapatnam region based on water (surface) and soil quality. Environmental Protection and Training Research Institute (EPTRI), Government of Andhra Pradesh.
2. Review of effluent standards and development of emission standards for basic organic chemical manufacturing industry, M/s Central Pollution Control Board (CPCB), New Delhi.
3. Evaluation of environmental status of textile unit based on wastewater characterization, quantification and ETP performance, M/s Andhra Pradesh Pollution Control Board (APPCB).
4. Performance evaluation of effluent treatment plant (ETP), Sugar Unit III, Bhimadole, M/s The Andhra Sugars Ltd.
5. Environmental performance evaluation studies for Unit 1 and 2, M/S UNI-SANKYO, Hyderabad.
6. Environmental performance evaluation studies, M/S Vazir Sultan Tobacco Industries Ltd., Hyderabad

7. Rapid environmental impact (EIA) study for Hazardous waste secured landfill facility, M/S The Andhra Sugars Ltd., Kovvur.
8. Rapid environmental impact (EIA) studies for LPG bottling plant at Nagpur, Pune and Goa.
9. Development of methodology for estimation mercury in brine sludge, M/S The Andhra Sugars Ltd., Saggonda and Kovvur, M/S Bharat Petroleum Corporation Limited (BPCL)
10. Environmental Auditing for M/S Rallis Chemical Ltd., Hyderabad and M/S UNI-SANKYO, Hyderabad.
11. Rapid environmental impact (EIA) study for process conversion from mercury based to membrane based technology, M/S The Andhra Sugars Ltd., Kovvur
12. Rapid environmental impact (EIA) study for Black oil terminal plant at Paradeep, M/S Bharat Petroleum Corporation Limited (BPCL)

Grant-In-Aid Projects

On-going Projects

1. 'Bio-e-MAT project-Low-Cost and Efficient MFC Materials for Bioelectricity Production from Waste Materials (INDIGO-DST2-036). New INDIGO (Energy- New Energy Materials and Smart Grids) (collaborating with Tampere University of Technology, Finland; IIT-Delhi; Yildiz Technical University, Turkey) (No.DST/IMRCD/New Indigo/Bio-e-MAT/2014/(G)/(ii) dated 5th August 2014) (2014-17)
2. National Mission Mode Project on Hydrogen Production through Biological Routes, New Technology Group, Ministry of New and Renewable Energy, Government of India (2010-2016) (MNRE, No. 103/131/2008-NT dated 7th February 2010).
3. Dr.K. Arunasri, DBT-Biocare Program. Exploring the microbial diversity and hydrogenase activities in microbial electrogenic cell (MEC) for enhanced biohydrogen production from wastewater, DBT-Biocare (No. BT/Bio-CARe/06/463/2011-12 26th Sept 2013)) (Co-investigator)
4. Development of bio-electrochemical treatment (BET) process for enhanced treatment of wastewater in association with bioelectricity generation. National Bioscience Award for Career Development-2012, DBT (2013-16) (No.BT/HRD/NBA/34/01/2012 (vi) dated 02-09-2013.
5. Nodal and coordinating lab for project 'Development of Sustainable Waste Management Technologies for Chemical and Allied industries (SETCA)-CSC-0113', (Under Chemical Sciences Cluster) CSIR 12th Five Year Plan Project (2012-17).
6. 'Centre for Excellence: Waste Utilization & Management (WUM) –ESC0108' (under 'Engineering Sciences Cluster', CSIR 12th Five Year Plan Project (CSIR-NEERI)) (2012-17).
7. 'Photo-biological process to produce bioenergy through carbon sequestration and wastewater utilization-Biomass to Energy (BioEn)-CSC-0116' (Under Chemical Sciences Cluster, CSIR 12th Five Year Plan Project (2012-17))

Completed

8. Strengthening Networking on Biomass Research and Biowaste Conversion-Biotechnology for Europe-India Integration (SAHYOG)-EU-FP7-KBBE and DBT project (No. BT/IN/EU/07/PMS/2011 dated 29th December 2011) (2012-15).
9. Development of Solar Powered Microbial Fuel Cell (Photo MFC) for Integration with Photo Fermentative Biohydrogen Production for Bioelectricity Generation' (collaborating with IIT-Guwahati and TERI, New Delhi). DBT-Twining Project (BT/482/NE/TBP/2013 dated 31-03-2014) (2014-15).
10. Application of periodic discontinuous batch operation to enhance treatment efficiency of dye containing wastewater, Department of Biotechnology (DBT), Government of India (No. BT/PR11070/BCE/08/693/2008 dated 17th September 2010) (2010-13).
11. Harnessing of sustainable energy (bioelectricity) from industrial wastewater using microbial fuel cell (MFC), Department of Biotechnology (DBT), Government of India (2007-2010).
12. Heterogeneous water phase catalysis and oxides surface for bioremediation of low biodegradable industrial wastewaters, Council of Scientific and Industrial Research (CSIR) in collaboration with JNTU, Hyderabad (2007-2010).
13. Biohydrogen production by anaerobic fermentation using industrial wastewater. Department of Biotechnology (DBT), Government of India (2004-2007)
14. Development of Methods of removal of Arsenic from Industrial Effluents by bio-sorption and species alteration. sponsored by MHRD (collaboration with NIT Warangal) (2003-2006)
15. CSIR 10th Five Year Plan Project (2002-07) on Industrial Waste Minimization (CSIR-NEERI)
16. Development of anaerobic fixed film reactor for treatment of bulk drug effluents. Department of Scientific and Industrial Research, Government of India (2001-2004).