

Centre of Excellence in
Environmental Technology and Management
West Bengal University of Technology



The Microbial Technology Group led by Dr Shaon Ray Chaudhuri at West Bengal University of Technology has been working in the area of Environmental Technology and Management since 2004. It has received funds from different National funding agencies and set up a state of art facility for working on Bioremediation. It has transferred **three technologies** to the Industry. It has **3 US Patents** to its credit. It has **17 filed patents** in the field. One of its innovations won the **16th** position in the **DST-Lockheed Martin India Innovation Growth Award 2014**. It has received funding from MHRD for setting up this centre under the Frontier Area of Science and Technology Scheme. They are working in an interdisciplinary mode and plan to strengthen it further with participation from the Department of Biotechnology (Dr Jaya Bandyopadhyay), Department of Natural Science (Dr Indranil Mukherjee) as well as Department of Industrial Engineering and Management (Dr Pranab Dan). The principle focus of the centre would be to scale up the existing system for waste treatment to pilot scale with the objective of Technology Transfer, Manpower training, Strengthening of Research infrastructure and providing Consultancy.

These key areas include the following:

A. Nitrate and Phosphate sequestration from waste water:

- Optimize the system for nitrate and phosphate removal in 2000lit packed bed bioreactor in continuous mode
- Small prototype units for actual installation would be developed.
- Attempts would be made for technology transfer.
- Carry out detailed mathematical modeling for the system.

B. Soluble sulfate bioremediation:

- Scaling up to 1000 lit and operating in continuous mode so that technology could be transferred to mining and tannery
- Carry out detailed mathematical modeling for the system.

C. Ammonia Production from Dairy Effluent:

- Scaling up to 70 lit in continuous mode for optimizing ammonia production from dairy effluent.

D. Biosensor development using chemiluminescent microbe

E. Understanding Plant microbe interaction in medicinal plants in response to environmental stress.



Design-Expert® Software
Factor Coding: Actual
Percent reduction in nitrate concentration (%)
■ Design points above predicted value
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