

NANOMATERIALS AND ENVIRONMENTAL RESEARCH LABORATORY

Faculty Details:



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About the Laboratory:

Nanomaterials and Environmental Research (NER) Laboratory was established in the Department of Chemical Engineering by Dr.K. Chithra in Dec 2014 illuminating on various cutting-edge areas of Chemical Engineering. The research group of this laboratory have been working on the state-of-the-techniques like adsorption, coagulation, electrocoagulation, ozonation, and advanced processes for the treatment of complex industrial wastewaters. Currently conversion of the sludge and solid waste generated from the wastewater treatment to bioenergy is under progress. The laboratory also throws limelight on the study of innovative technologies for nanomaterials synthesis and unravel its mechanism focussing on advanced biological and environmental applications.

Accomplishment:

M. Tech students research outcome in high impact factor journals:

MeenaChandrasekaran & K. Chithra, <https://doi.org/10.1080/17597269.2022.2113927>

Venkataraman Ragunathan & Chithra K, <https://doi.org/10.1016/j.molliq.2021.117954>,

G.Ragunathan, P.Rajagopal, K.Chithra, <https://doi.org/10.1016/j.clet.2021.100385>

Venkataraman Ragunathan et al.,2022. <https://doi.org/10.1007/s40203-022-00119-z>.

Venkataraman R, K. Chithra, <https://doi.org/10.1080/14786419.2021.1983813>.

Nivedha Ramanathan RM et al.,2019. <https://doi.org/10.1080/15567036.2019.1649747>

K. Chithra, R. T. Akshayaraj, K. Pandian, <https://doi.org/10.1007/s13369-018-3421-x>

Kumaran Chithra, Kumar Dhivya, <https://doi.org/10.5004/dwt.2017.20387>

Ph.D Scholars research outcome:

- Rajagopal P, Chithra K, Ajith S, Prasad S, <https://doi.org/10.1111/wej.12784>.
 - Rajagopal Perumalsamy et al., 2020. <https://doi.org/10.33961/jecst.2020.01249>.
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List of Major Equipment:

S.No.	Name of the Equipment
1.	Muffle furnace
2.	COD digester
3.	Turbidity meter
4.	Hot air oven
5.	Reactors
6.	Centrifuge
7.	Sonicator
8.	Orbital shaker

List of Research Scholars:

S. No	Scholars name	Thesis title	Year of passing/Status
1	Dr. Rajagopal P	Studies on evaluation of chemical and electrochemical coagulation processes for the treatment of complex industrial wastewater	June 2022 completed
2	Selvasugi K	Studies on safety and health issues in automobile industries	Confirmation completed
3	Venkataraghavan R	Studies on synthesis, characterization, and activities of nanoparticles	Coursework
4	Kavithakani A	Studies on industrial effluent treatment by coupled techniques	Coursework
