

## **BIO PRODUCTS LABORATORY**

### **Faculty Details:**



**Dr K V RADHA**

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### **About the Laboratory:**

The Bioproducts Laboratory is located in the Department of Chemical Engineering, A.C. Tech. Campus, Anna University Chennai. Bio product Laboratory (BP-L) led by Prof. Radha, came into being in 2011 and is an integral part of the Department of Chemical Engineering.

Bio products laboratory is a vibrant and multi-disciplinary community of researchers engaged in quality research and takes pride in production of value added products from wastes. It is an inventive lab from where the following processes, synthesis and productions are carried out. Presently the laboratory focusses research on:

- 1) Silver nanoparticles for Air pollution
- 2) Agar/silver nanocomposite film for packaging
- 3) PEG – PUFA conjugated dendrimers for targeted drug delivery
- 4) Copper/Silver/Zinc nanoparticles for medical and environmental applications
- 5) Eco-friendly Corrosion Inhibitor
- 6) Magnetic Nano adsorbent for dye removal in effluent

The philanthropic motive of Bioproducts laboratory is to unravel the difficulties in society with ground breaking research. Its priorities steer every researcher to quest the way to reach their goals.



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### **Accomplishments:**

### **Innovation:**

The first Patent in the Department of Chemical Engineering is from the Bioproducts laboratory.

On 14<sup>th</sup> October 2014, a patent was published for the work “Synthesis of FMPC and preparation of chitosan – FMPC particles”, by Dr. K.V.Radha and P.Thyriyalakshmi.

The second patent by Dr. K.V.Radha and V.ThamilSelvi titled “Corncob adsorbent for wastewater treatment” on 17<sup>th</sup> March 2016.

## **Industrial collaboration**

A nanofiber membrane for indoor air pollution in industries was developed with collaboration of Textile industry in Coimbatore and it is in trial stage for implementation.

Dr. Aarcha did her research with Technology Transfer Fellowship - Collaboration with Sri Chakra Private Clothing Ltd. for commercialization of the product.

## **Student Research Project:**

Dr. Arun did his PG research project under Student Project Scheme, TNSCST, Tamilnadu.

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## **List of Major Equipments:**

<b>S.No.</b>	<b>Name of the Equipment</b>
1.	B.O.D Incubator
2.	Incubator
3.	Orbital shaker
4.	Laminar air flow chamber
5.	Spectrophotometer
6.	Refrigerator
7.	Digital ultrasonic cleaner
8.	Double distillation
9.	Autoclave
10.	Binocular microscope
11.	Magnetic stirrer
12.	Centrifuge
13.	COD incubator
14.	Colorimeter

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**List of Research Scholars:**

S. No.	Name	Thesis Title	Year of passing/Status
<b>M.S (By Research)</b>			
1	D.Lakshmanan	Production of lovastatin from <i>Pleurotus ostreatus</i>	2013
2	R. Muralidharan	Production of polyhydroxybutyrate (PHB) from industrial effluent	2014
<b>Ph. D</b>			
1	Dr.Sabarnisha Begum	Biodegradation of Phenol in inverse fluidized bed biofilm reactor and optimizing the hydrodynamic and mass transfer characteristics	2014
2	Dr.Suresh S	Production and Characterization of Phytase from Microorganism and its Application	2015
3	Dr.Swapna Priya	Removal of tetracycline hydrochloride I.P using adsorption technique in packed bed reactor	2016
4	Dr.Thamilselvi V	Treatment of wastewater using nanoparticles from bacterial species	2016
5	Dr.Saranya S	Polymer coating of nanoparticles using Emulsification and solvent evaporation Techniques	2017
6	Dr.Thyriyalakshmi P	Synthesis of carbonate analogues and their applications	2017
7	Dr.Karthick C	Water treatment using silver Nanoparticles from <i>Enterobacter Aerogenes</i>	2017
8	Dr.Aarcha J	Synthesis of Nanofibers using Electro-spraying technique for Air Purification	2021
9	Dr.Supritha P	Antimicrobial and Phytochemical Constituents of Plants using various solvents	2022
10	V,Gopalakrishnan	Studies on Green Route Synthesis of Silver Nanoparticles and its applications	Pursuing
11	V.S.Selvi	PEG – PUFA conjugated dendrimers for targeted drug delivery	Pursuing

## BIOPRODUCTS LABORATORY - Gallery



