

## Resume

<b>Name</b>	<b>Dr. P. Priyadharsini</b>
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<b>Institution</b>	<b>Sathyabama Institute of Science and Technology</b>
<b>Date of Birth</b>	<b>30/06/1987</b>
<b>Gender</b>	<b>Female</b>
<b>Category</b>	<b>OBC</b>

### Academic Qualification

<b>S. No</b>	<b>Course</b>	<b>Month &amp; Year of Passing</b>	<b>Institution</b>
1.	Ph. D (Chemistry)	2022	Sathyabama Institute of Science and Technology
2.	M. Phil., (Chemistry)	2013	ManonmaniumSundaranar University, Tirunelveli.
3	M.Sc., (Chemistry)	2011	ManonmaniumSundaranar University, Tirunelveli.
4	B.Ed.,	2008	ManonmaniumSundaranar University, Tirunelveli.
5	B.Sc., (Chemistry)	2007	ManonmaniumSundaranar University, Tirunelveli.

### **Ph.D thesis title, Guide's Name**

Thesis title: Invitro Analysis of Bioethanol Production Using Rejects Of *Kappaphycus alvarezii* Blended With Food Waste

**Guide Name: Dr. Dawn. S.S.**

### **EXPERIENCE:**

<b>Designation</b>	<b>No. of Years</b>	<b>Periods</b>	<b>Institution</b>
Scientific Assistant	8 months	December 2021 to till	Centre for Waste Management – ‘International Research Centre’ Sathayabama Institute of Science and Technology, Jeppiaar Nagar (OMR), Chennai- 600 119, Tamil Nadu, India.
Research scholar	3 years	August 2019 to 2021	(Centre of Excellence for Energy Research) Sathyabama Institute of Science and Technology
Junior Research Fellow (JRF)	3 Years 2 months	Feb 2015 to April 2018	Sathyabama Institute of Science and Technology
Assistant Professor	1 Year	June 2012- May2013	Infant Jesus College of Engineering & Technology, Thoothukudi
Assistant Professor	8 months	June2014 to january2015	Prince Dr. K. Vasudevan college of Engineering, Chennai

### **Academic Events**

<b>S.No</b>	<b>Academic events</b>	<b>Attended</b>
1	International conferences	10
2	National conferences	8
3	Workshop	10
4	Seminar	5
5	Trainings	10
6.	Faculty Development program	2

## **Award/Prize/Certificates**

1. “Organic Pot” selected in Confederation of Women Entrepreneurs (COWE), Tamil Nadu – one among Top 3 ideas, conducted by Anna University in association with Department of Science and Technology (DST)
2. “Patho- Controller” was selected in BEST – 2015 Top 20 Ideas conducted by ABLE India in association with Department of Biotechnology (DBT).

## **Area of Specialization:**

Biomass and biofuel, Energy and environment, Waste utilization and valorization, Wastewater treatment

## **Research Publications**

- [1] **Priyadharsini Packiyadhas & Dawn Shanmuganantham Selvanantham** (2020): Compositional and structural evaluation of *Kappaphycusalvarezii* rejects and solid food waste blends for bio ethanol production, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, <https://doi.org/10.1080/15567036.2020.1806405> [IF: 3.4].
- [2] **Priyadharsini P., Dawn, S.S.** Optimization of fermentation conditions using response surface methodology (RSM) with kinetic studies for the production of bioethanol from rejects of *Kappaphycus alvarezii* and solid food waste. *Biomass Conv. Bioref.* (2021). <https://doi.org/10.1007/s13399-021-01819-w> [IF: 4.98].
- [3] **Priyadharsini P, Dawn S.S, Arun. J.** Four Stroke Diesel Engine Performance and Emission studies of Ethanol Recovered from *Kappaphycus alvarezii* reject -Solid Food Waste Mixed Substrates and its Blends, *Chemosphere* <https://doi.org/10.1016/j.chemosphere.2021.132689> [IF: 8.9].
- [4] **J Jayaprabakar, SS Dawn, A Ranjan, P Priyadharsini, RJ George, S Sadaf, C Rajeswara Rajha** Process optimization for biodiesel production from sheep skin and its performance, emission and combustion characterization in CI engine, *energy* <https://doi.org/10.1016/j.energy.2019.02.140> [IF: 8. 8].
- [5] **J Arun, N Nirmala, P Priyadharsini, SS Dawn, A Santhosh, KP Gopinath, M Govarthanan,** A mini review on bioderived carbon and its nanocomposites for removal of organic pollutants from waste waters. *Materials Letters*, <https://doi.org/10.1016/j.matlet.2021.131476> [IF: 3.4].
- [6] **N Nirmala, V Shriniti, K Aasresha, J Arun, KP Gopinath, SS Dawn, A Sheeladevi, P Priyadharsini, Kathirvel Birindhadevi, Nguyen Thuy Lan Chi, Arivalagan Pugazhendhi,** Removal of toxic metals from wastewater environment by graphene-based composites: A review on isotherm and kinetic models, recent trends, challenges and future directions, <https://doi.org/10.1016/j.scitotenv.2022.156564> [IF: 10.7].

- [7] J Arun, T Sasipraba, KP Gopinath, **P Priyadharsini**, S Nachiappan, N Nirmala, SS Dawn, Nguyen Thuy Lan Chi, Arivalagan Pugazhendhi, Influence of biomass and nanoadditives in dark fermentation for enriched bio-hydrogen production: A detailed mechanistic review on pathway and commercialization challenges, <https://doi.org/10.1016/j.fuel.2022.125112>, [IF: 8.03].
- [8] **Priyadharsini P.**, Dawn S.S., Investigation of Hydrolysed Solid Food Waste For Enhanced Bioethanol Production Using Baker's Yeast- An Ecological Waste To Energy Biofuel Technology ICASSET – 2020 (**Conference proceedings**).
- [9] **Priyadharsini. P**, S. Theodore David, Joel “Natural dyes and their FT-IR spectroscopy studies” International Journal on Applied Bioengineering, Vol 8, Issue 2, July 2014
- [10] **Priyadharsini. P**, S. Thodore David, Joel “Corrosion Inhibition And Antimicrobial Activity Of Some Natural Dyes” National Journal on Chembiosis Vol 5. Issue 1. April 2014
- [11] Jenisha, S. Theodore David, **J P.Priyadharsini** “Schiff base ligand its complexes and their FT-IR spectroscopy studies” International Journal on Applied Bioengineering, Vol . 9 No. 1, January 2015
- [12] Jenisha, S. Theodore David, **J P.Priyadharsini** “Schiff Base Ligand Its Complexes And Their Analysis” National Journal on Chembiosis., Vol . 5, No. 2, January 2014

## **Roles and Responsibilities:**

### **Students project:**

1. Property Evaluation Of Food Waste/Biomass For Methanol Synthesis.
2. Production Of Bioethanol From Biomass And Its Performance Evaluation Of Petro-Ethanol Blend Using Four Stroke Engine.

### **Product developed using waste materials:**

1. Solid soap from waste cooking oil
2. Liquid soap from biodiesel byproduct bioglycerine
3. Shoe polish using biochar and biodiesel byproduct bioglycerine
4. Multi purpose washing liquid from organic waste

## **Hands on Experiences in handling high end Instruments**

1. Operation of Quality Analysis of solvents using YL clarity 6500 Gas Chromatography equipped with FID and TCD detector
2. Operation of 50 L biodiesel production pilot plant
3. Operation of Biodiesel Characterization equipments such as Muffle furnace, Bulk density apparatus, Viscometer, Copper strip corrosion test bomb, Flash point and Fire Point Apparatus, Cloud point and pour point Apparatus, Digital Bomb Calorimeter etc for testing the quality of different oil and biodiesel samples
4. Operation of 5L hydrothermal reactor

## **Training program conducted**

- One-Day Training on Proximate Analysis and Characterization of Biomass for Bio ethanol Production (Convener)
- One day Training on Biofuel Compositional Analysis and Data Interpretation Techniques using Gas Chromatography- Flame Ionization Detector & Thermal Conductivity Detector (GC- FID/TCD) (Co- Convener)
- One Day Training on Biodiesel Production and Characterization as per ASTM Standards (Co- Convener)
- Two Weeks Intensive Training on Resourceful Waste Conversion Technologies (Co- Convener)

