

Name : **J.JAYAPRIYA**

Designation and Affiliation : Associate Professor  
Department of Applied Science and  
Technology,  
AC Tech Campus,  
Anna University Chennai 600 025, India



Date of birth : June 02, 1979

Permanent Contact Address : A126, Iris Court  
Mahindra World City, Paranur, Chengalpet

**Academic Qualification** :

	College Name	Area of Specialization	Year of passing	Marks Obtained
<b>Ph.D</b>	PSG College of Technology, Coimbatore. <b>University:</b> Anna University, Chennai	Microbial Fuel Cell	2012	-
<b>UG</b>	Shanmuga College of Engineering, Thanjavur <b>University:</b> Bharathidasan	Chemical Engineering	2000	71.8
<b>PG</b>	Coimbatore Institute of Technology, Coimbatore. <b>University:</b> Bharathiar	Chemical Engineering	2002	82.8

**Area of Research:**

- **Microbial Fuels Cells:** Biocompatible metal doped carbon electrodes fabrication, Applications of electrodes in microbial fuel cells, MFC for azo dye degradation, Design of MFC architecture
- **Reclamation of fish processing waste:** Protease extraction from fish waste purification and Characterization, application of protease in dehairing, fat liquoring of leather
- **Bioprocessing of Agro residues :** Lignin cellulolytic enzymes production, purification and application of enzymes in biosoftening of natural fibres

**Research Projects:**

<b>Funding Agencies</b>	<b>Title of the Project</b>	<b>Amount (Rs in Lakhs)</b>	<b>Status</b>
Department of Science and Technology (DST), New Delhi	Bioprocessing of agro-residues with coconut husk and jute for the production of lignocellulotenzymes with simultaneous softening process of natural fibres	Rs. 18, 15,357/-	Ongoing
Board of Research in Nuclear Sciences (BRNS)	Design and evaluation of anaerobic and aerobic sequential microbial fuel cell (MFC) for decolorization of textile effluent.	Rs.20, 61,000/-	Completed
Department of Biotechnology (DBT), New Delhi.	Design of pilot scale for extraction of Protease from the fish processing waste and its application in dehairing	Rs.24, 16,320/-	Completed
University of Grants Commission– Department of Atomic Energy	Detection & analysis of microbiologically influenced corrosion stainless steel in sea water using electrochemical noise technique	Rs. 7, 90,200/-	Completed
CTDT, Anna	Biodegradation of	Rs. 50,000 /-	Completed

University, Chennai	azo dyes by <i>Pseudomonas</i> <i>aeruginosa</i> for power generation		
Defence Research & Development Organisation (DRDO)	Bio Sensor for Air- Water Quality Measurement	Rs.47, 28,000/-	Completed
<b>Total</b>		1,18,60,877	

**Post doctoral research / Ph.D /M.Tech / MS Guidance:**

<b>PDF</b>	: -
<b>Ph.D</b>	: 2 (Completed) ;4 (Ongoing)
<b>M.E/M.Tech</b>	: 32

**Research publications:**

Category	Conferences	Journals
National		2
International	13	21

**Books:**

International publications	: 6
----------------------------	-----

**Awards/Recognitions:**

•

- International Travel Grant Fellowship by Department of Science & Technology, New Delhi in 2010, Paper Presentation in International Conference on “ Microbial Fuel Cell” Gwangju Institute of Science and Technology, South Korea,10-12 June 2009.
- Indian National Academy of Engineering Fellowship 2009 by National Academy of Engineering  
**Mentor:** Dr. U. KamachiMudali, Head, Corrosion Science and Technology Division (CSTD), (IGCAR), Kalpakkam.
- TamilNadu Young Scientist Fellowship (2006 ) by TamilNadu State Council for Science and Technology  
**Mentor:** Dr. C.Praveen, Scientist B, Computational Fluid Dynamics, @ CTFD Division, National Aerospace Laboratories , Bangalore 560017

**TECHNICAL RESEARCH PUBLICATIONS**

## INTERNATIONAL JOURNALS

1. Saranya R, Tamil Selvi A , **Jayapriya J**, Aravindhana R, “Synthesis of Fat Liquor Through Fish Waste Valorization, Characterization and Applications in Tannery Industry, 2020, Waste and Biomass Valorization, 1-11. Impact factor: 2.3
2. Pavanaditya B, Balasubramaniam Y, **Jayapriya J** , “Risk evaluation of oil and natural gas pipelines due to natural hazards using fuzzy fault tree Analysis”2019, Journal of Natural Gas Science and Engineering 66, 284-292. Impact factor: 3.841
3. Narayanasamy S, **Jayapriya J**, “Application of carbon polymer based electrodes for microbial fuel cells,” Reviews in environmental science and biotechnology 19, 595-620. Impact factor :4.957
4. Narayanasamy S, **Jayapriya J**, “Improved performance of Pseudomonas aeruginosa catalyzed MFCs with graphite/polyester composite electrodes doped with metal ions for azo dye degradation”,2018, Chemical Engineering Journal, 343, 258-269. Impact Factor:10.652
5. Saranya R. **Jayapriya J**, Tamil Selvi A, “ Purification, characterization, molecular modeling and docking study of fish waste protease, 2018, International Journal of Biological Macromolecules, 118, 569-583. Impact Factor: 5.162
6. Ilamathi R, **Jayapriya J**, “Microbial fuel cells for dye decolorization”, 2018, Environmental Chemistry Letters, 1-12. Impact Factor: 4.410
7. Pavanaditya B, **Jayapriya J**, “Risk Assessment Methodology for incorporating uncertainties using Fuzzy concepts: A Case Study for Construction Industry”, 2017, International Journal of Industrial Engineering, 1 (1), 8-16. Impact Factor:
8. Saranya R, Prasanna R, **Jayapriya J**, Aravindhana R, Tamil Selvi A, “Value addition of fish waste in the leather industry for dehairing”, 2016, Journal of Cleaner Production, 118, 179–186. Impact Factor:7.246

9. Venkatram Kiran A, **Jayapriya J**, Ravi M, “Evaluation and Predictive Model Development of Oxidative Stability of Biodiesel on Storage”,2016, Chemical Engineering Communications.203 (5), 676-682.Impact Factor:1.580
10. **Jayapriya J**, Abinaya P, Ramamurthy V “Decolorization and Degradation of monoazo and diazo dyes in *Pseudomonas* catalyzed microbial fuel cell” 2016, Environmental Progress & Sustainable Energy 35 (6), 1623. Impact Factor:1,989
11. Dhamodharan D, **Jayapriya J**, “Integrated Approach for Polycyclic Aromatic Hydrocarbon Solubilization from the Soil Matrix to Enhance Bioremediation” ,2015, Bioremediation Journal 19 (4), 287-295.Impact Factor: 2.040
12. Sangamithirai KM, **Jayapriya J**, Hema J, Manoj R “Evaluation of in-vessel co-composting of yard waste and development of kinetic models for co-composting”, 2015, International Journal of Recycling of Organic Waste in Agriculture, 4,157-165.Impact Factor: 1.640
13. Chandrasatheesh C, **Jayapriya J**, George RP, KamachiMudali, U, “Detection and analysis of microbiologically influenced corrosion of 316 L SS with Electrochemical Noise Technique”,2014, Engineering failure analysis ,42, 133-142Impact Factor:2.590
14. Sabtecha B, **Jayapriya J**, Tamilselvi A. “Extraction and characterization of proteolytic enzymes from fish visceral waste: Potential applications as destainer and dehairing agent”, 2014, International Journal of Chem Tech Research, 6, 4504-4510.Impact Factor:0.470
15. **Jayapriya J**, Ramamurthy V, “The role of electrode material in capturing power generated in *Pseudomonas* catalyzed fuel cells”, 2014, The Canadian Journal of Chemical Engineering 92 (4), 610-614Impact Factor: 1.687
16. **Jayapriya J**, Ramamurthy V, “Use of nonnative phenazines to improve the performance of *Pseudomonas aeruginosa* MTCC 2474 in fuel cells”, 2012, Bioresource Technology, 124:23-28.Impact Factor:6.96

17. **Jayapriya J.**, Judy Gopal., Ramamurthy V., KamachiMudali U, Baldev Raj, “Preparation and characterization of biocompatible carbon electrodes”, 2012, Composites Part B: Engineering, 43: 1329-1335 .Impact Factor:7.635
18. Saranya R., **Jayapriya J.** Tamilselvi A, “Dyeing of silk fabric with natural phenazine pigments from *Pseudomonas* species”, 2012, Coloration Technology, 128, 440-445.Impact Factor:1.480
19. **Jayapriya J**, Vigneswaran C “Process optimization for bio softening of lignocellulosic fiber with white rot fungi and specific enzymatic systems” 2010, Journal of Natural Fibers 7 (1), 17-33. Impact Factor:2.622
20. Vigneswaran C, **Jayapriya J**, “Effect on physical characteristics of jute fibres with cellulase and specific mixed enzyme systems”, The Journal of the Textile Institute, 2010, 101 (6), 506-513.Impact Factor: 1.260
21. Suganya D.S., Pradeep S., **Jayapriya J**, Selvi Subramanian, “Biobleaching in coir for value addition”, 2007, Asian Journal of Microbiology, Biotechnology and Environmental Sciences, Vol.9, pp 263 – 265. Impact Factor:0.110

#### **NATIONAL JOURNALS**

1. Sundaraselvan S, **Jayapriya J.** “Survival and Growth of Algae in Automobile exhaust gases”, 2009, National Journal of Technology, Vol.5, pp 8 – 11.
2. Suganya D.S., Pradeep S., **Jayapriya J**, Selvi Subramanian, “ Biosoftening of mature coconut husk for facile coir recovery”, 2007, Indian Journal of Microbiology, , Vol.47, 2 pp 164 – 166. Impact Factor:1.800

#### **INTERNATIONAL CONFERENCES**

•

1. **Jayapriya J**, “Risk assessment of workers exposure to silica dust in stone quarry sites Tamilnadu in International conference on Energy Environment and Industrial Safety A.C Tech Anna University, Chennai, during 22-23 February, 2018.

2. **Jayapriya J**, “Development of natural synthetic hybrid biocides for inhibition of microbial corrosion in International conference on Energy Environment and Industrial Safety A.C Tech Anna University, Chennai, during 22-23 February, 2018
3. **Jayapriya J**, “Design and optimization of microbial fuel cell for waste water treatment in International conference on Energy Environment and Industrial Safety A.C Tech Anna University, Chennai, during 22-23 February, 2018
4. **Jayapriya J**, “Polyaniline wrapped carbon cloth metal oxide nanocomposite for microbial fuel cell and its application in International conference on nanotechnology ideas innovations and initiatives IIT Roorkee india, during 06-09 December, 2017
5. **Jayapriya J**, “Preparation and characterization of polyester graphite composite for microbial fuel cells” in International conference on advances in functional materials Anna University Chennai, during 08 January, 2017
6. **Jayapriya J**, “Risk evaluation of oil and natural gas installations due to natural hazard using fuzzy fault tree analysis” in International conference on safety, Safety Centre IIT Gandhinagar, during 03-06 January, 2017
7. **Jayapriya J**, “A fuzzy multi criteria risk assessment methodology bases on failure” in International conference on safety, Safety Centre IIT Gandhinagar, during 03-06 January, 2017
8. **Jayapriya J**, “Microbial corrosion resistance of 316 L stainless steel with Ag doped TiO<sub>2</sub> films” in CORCON 2015 Chennai Trade Centre, during 19-21 January, 2015
9. **Jayapriya J**, “Microbial corrosion resistance behaviour of Ag doped TiO<sub>2</sub> cardanol epoxy nanocomposites coating on 316 L stainless steel” in International corrosion prevention symposium for research scholars IIT Madras, during 31 July to 01 August, 2015

10. **Jayapriya J**, Ramamurthy V and KamachiMudali U (2009) “Fabrication and characterization of electrode materials for microbial fuel cells”. Proceedings of 23<sup>rd</sup>, International conference on surface modification technologies (SMT 2009), GRT Temple Bay, Mammallapuram.
11. **Jayapriya J**, “Microbial corrosion resistance behaviour of ag doped tio2 cardanol epoxy nanocomposites coating on 316 l stainless steel” in International corrosion prevention symposium for research scholars IIT Madras, during 31 July to 01 August, 2015
12. **Jayapriya J** and Ramamurthy V (2009): “The role of electrode configuration in capturing power generated in microbial fuel cells”. Proceedings of Waste to Energy- 2<sup>nd</sup>, Microbial Fuel cell International Conference, GIST University, South Korea.
13. **Jayapriya J** (2003): “CFD analysis of a tubular power plant air preheater”. Paper presented in International Conference on Digital Aided Modeling and Stimulation organized by Mechanical Engineering Department, CIT, Coimbatore during 6 - 8 Jan, 2003.

### **BOOKS CHAPTERS**

1. **Jayapriya J** , Ramamurthy V.( 2015), Challenges to and Opportunities in Microbial Fuel Cells In. Navanietha Krishnaraj R, Jong-Sung Yu (ed), Bioenergy: Opportunities and Challenges (pp 87-95), Florida , USA :Apple Academic Press.  
ISBN NO 139781498722056.
2. **Jayapriya J**, Ramamurthy V. Electrochemical Performance Analyses of Biofilms (2019) In. Navanietha Krishnaraj, Rajesh Sani (ed), Bioelectrochemical Interface Engineering, (pp 1-19) [New Jersey](#), USA: Wiley Publishers.  
ISBN NO 9781119538547
3. Chandrasatheesh C , **Jayapriya J**,(2019) Biocorrosion, In. Navanietha Krishnaraj, Rajesh Sani (ed) Bioelectrochemical Interface Engineering,(pp 77-90), [New Jersey](#), USA: Wiley Publishers.  
ISBN NO 9781119538547



4. Saranya N, **Jayapriya J**,(2019) Unsaturated polyesters in microbial fuel cell and biosensors. In Sabu Thomas (ed) Unsaturated Polyester Resins Blends, IPNS, Composites and nanocomposites, (pp 557-578) Atlanta, USA, Elsevier Publishers.  
ISBN NO 9780128161296
  
5. **Jayapriya J** , Hema J , (2020) Sustainable Waste Management in Higher Education Institutions -A case study of AC Tech , Anna University, Chennai, India In Abu Zahrim Yaser( ed), (pp 163-172) Green Engineering for Campus Sustainability, New York , USA :Springer Publishers.  
ISBN No 9789811372599
  
6. **Jayapriya J**, (2021) Microbial Desalination Cells: Opportunities and Challenges, In Noel Jacob Kaleekkal, Prasanna Kumar S. Mural, Saravanamuthu Vigneswaran, Upal Ghosh (ed) Sustainable Techniques for Water and Wastewater Treatment, (pp 145-168) CRC press, USA [Taylor & Francis](#) Publishers.  
  
ISBN No 9780367510374
  
7. Saranya N, **Jayapriya J**, (2021), Conducting Polymers for Electrocatalysts .In Ram Gupta (ed), Conducting Polymers for Advanced Energy Applications, CRC press, USA, [Taylor & Francis](#) Publishers. (Accepted)
  
8. **Jayapriya J**, Sathyanarayana N. Gummadi , (2021). Scaling -Up and applications of microbial fuel cells In Jadhav(ed) - Scaling Up of Microbial Electrochemical Systems, Atlanta, USA, Elsevier Publishers.(Accepted)
  
9. Saranya N, **Jayapriya J**, (2021), Nanostructures and Nanomaterials in microbial fuel cells, Tuan Anh Nguyen (ed)- Nanotechnology in Fuel cells, Atlanta, USA .(Accepted).