Prof. A. ANNAM RENITA
Professor, Department of Chemical Engineering
Sathyabama Institute of Science and Technology
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OBJECTIVE

To produce highly skilled, research oriented and socially responsible professionals through ethical and innovative-teaching learning technologies and research methodologies.

ACADEMIC - RESEARCH IDENTITY

Orcid : https://orcid.org/0000-0003-1136-8217
Scopus : https://www.scopus.com/authid/detail.uri?authorId=37067013000
WoS Researcher ID: A-4280-2017
H-Index : 14

EDUCATION

Degree	Institution	Board/University	Year of Passing	Grade
Ph.D	Sathyabama Institute of Science and Technology	Sathyabama Institute of Science and Technology	2013	
M.Tech(Chemical Engineering)	A.C.Tech,Anna University, Chennai	Anna University	1999	**University Gold Medallist**
B.Tech - (Chemical Engineering)	Coimbatore Institute of Technology	Bharathiar University	1997	First class
H.S.C	St.Raphaels Girls Higher Secondary School	State Board	1993	First class with Distinction
SSLC	St.Raphaels Girls Higher Secondary School	State Board	1991	First class with Distinction

EXPERIENCE

Designation	Institution	From	To	No. of Years
Professor	Sathyabama Institute of Science and Technology, Chennai	2018	Till date	5 Year 8 months
Associate Professor	Sathyabama Institute of Science and Technology, Chennai	2010	2018	8 Year
Assistant Professor	Sathyabama Institute of Science and Technology, Chennai	2003	2010	7 Year
Lecturer	Sriram Engineering College, Chennai	2000	2001	1 Year

GOVERNMENT SPONSORED PROJECT

Role	Agency	Amount	Period	Project Title
Principal Investigator	ISRO - SHAR, Govt of India.	Rs.8,87,000	July 2019-Mar 2022	Design of a sampling instrument for the detection of toxic isocyanate vapours

SEED FUNDING PROJECTS

Role	Amount	Funding Agency	Period	Project Title
Co-Investigator	Rs.9,00,000	SIST	Oct 2020-Mar 2021	Multipurpose Unmanned Aerial Vehicle Agricultural Drone
Principal Investigator	Rs.1,00,000	DST-Technology Business Incubator	July 2022-June 2023	Eco bags
Co-Investigator	Rs.40,000	DST-Technology Business Incubator	June 2023-June 2024	Algal battery

CONSULTANCY PROJECT

Role	Sponsoring Organisation	Amount	Period	Project Title
Principal Investigator	Meenakshi Associates Pvt.Ltd, Trichy	Rs.1,00,000	March 2022-Mar 2023	Bio Digestor
Principal Investigator	University of Wisconsin	Rs.90,000	Jan-May 2023	Water Testing

PATENTS

Title of Innovation	Certificate Grant Number	Status
Portable Biogas Plant	351987-001/ 25.10.2021	Granted
Safety Net Testing Machine	341698-001/ 12.11.2020	Granted
Wind Mill Operated Solar Desalination System	367888-001/18.7.22	Granted
A Method For Removal Of Cadmium (II) from Aqueous Solutions	202241036041 A	Published
Method For Monitoring Durability And Ageing of Coloured Glass Using Sealants	202341075534	Published

BOOK CHAPTERS

Name of Book Chapter	Book Name	ISBN Number	Publisher
Valorisation of Waste Algal Boom for Value-Added Products	Bioprocess Engineering for Bioremediation	ISBN-13: 978-3030579104	Springer
Characterization and Optimization Studies on Hydroxyapatite Bioceramic Powder from Waste Eggshells	Bioprocess Engineering for a Green Environment	ISBN-13: 978-1138035973	Taylor & Francis

Application of computational chemistry for adsorption studies on metal–organic frameworks used for carbon capture	Computational Chemistry Methods	ISBN-10: 3110629062	De Gruyter

JOURNAL PUBLICATIONS

1. **Annam Renita, A,** Shanthanalakshmi,J Aravind Kumar *et al*. Energy Recovery and Clean water remediation using anti fouling PAN HFM. Energy Research 294,2024,130635. **I.F.9.0**.
2. **Annam Renita, A,** J Aravind Kumar *et al*. Emerging aspects of metal ions-doped zinc oxide photocatalysts in degradation of organic dyes and pharmaceutical pollutants–A review. *Journal of Environmental Management* 344 ,2023, 118614. **I.F.8.9**
3. **A Annam Renita**, S Sathish, J Aravind Kumar, L Nagarajan, SJ Sakthi Kumaran, S Sangeeth, Surface treated Phoenix sylvestris for bioadsorption of oil from aqueous solution: Isotherms and kinetic studies, Environmental Research, 209, 112836,2022. **I.F.8.4**
4. N Magesh, **A Annam Renita**, R Siva, N Harirajan, A Santhosh, Adsorption behavior of fluoroquinolone (ciprofloxacin) using zinc oxide impregnated activated carbon prepared from jack fruit peel: Kinetics and isotherm studies, Chemosphere, 133227, 2022. **I.F.8.9**
5. J. Aravind kumar ,T. Krithiga, S. Sathish, D. Prabu, **A Annam Renita**, S. Lokesh, R. Geetha, S. Karthick Raja Namasivayam, Mika Sillanpaa Persistent organic pollutants in water resources: Fate, occurrence, characterization and risk analysis, Science of Total Environment,154808,2022. **I.F.10.8**
6. Raji Atchudan,Thomas Nesakumar Jebakumar Immanuel Edison, **Annam Renita.A** Suguna Perumal, Rajangam Vinodh, Rajendran Suresh Babu, Ashok K Sundramoorthy, A, Yong Rok Lee, Facile synthesis of nitrogen-doped porous carbon materials using waste biomass for energy storage applications, Chemosphere, 289, 133225, 2022. **I.F.8.9**
7. Nagarajan L, Saravanan P, Kumaraguru K, **AnnamRenita A**, Rajeshkannan R, Rajasimman M. A facile approach in activated carbon synthesis from wild sugarcane for carbon dioxide capture and recovery: isotherm and kinetic studies. Biomass Conversion and Biorefinery,27:1-3,2022. **I.F.4.9**
8. J Aravind Kumar, S Sathish, T Krithiga, TR Praveenkumar, S Lokesh, D Prabu, **A Annam Renita**, P Prakash, M Rajasimman, A comprehensive review on biohydrogen production from brewery industrial wastewater and its treatment methodologies, Fuel, 123599,2022. **I.F.6.6**
9. J Aravind Kumar, T Krithiga, K Vijai Anand, S Sathish, S Karthick Raja Namasivayam, **AA Renita,** Ahmad, Kinetics and regression analysis of phenanthrene adsorption on the nanocomposite of CaO and activated carbon: Characterization, regeneration, and mechanistic approach, Journal of Molecular Liquids, 116090,2021. **I.F.6.2**
10. Harendra Kumar, , **A Annam Renita** ,S.Anuradha,Biodiesel production from preutilized cooking oil using a renewable heterogeneous eggshell-coconut pith

catalyst: Processoptimization and characterization, Environmental Progress & Sustainable Energy, e13632,2021. **I.F:2.4**

11. **A Annam Renita**, Kilaru Harsha Vardhan, P Senthil Kumar, P Tsopbou Ngueagni, A Abilarasu, Subi Nath, Pallavi Kumari, R Saravanan Effective removal of malachite green dye from aqueous solution in hybrid system utilizing agricultural waste as particle electrodes Chemosphere, 273, 129634, 2021. **I.F.8.9**
12. **A. Annam Renita**,Sunitha Salla,Shanthana Lakshmi Duraikannu Synthesis of acid free benzaldehyde by highly selective oxida-tion Combinatorial Chemistry & High Through-put Screening, 24 ,2021. **I.F.1.2**
13. Magesh N,**Annam Renita A.**,Senthil Kumar P., Stanley Abraham L, Adsorption of ciprofloxacin from aqueous solution using surface im-proved tamarind shell as an eco-nomical and effective adsorbent International Journal of Phytoremediation, 2021. **I.F.2.4**
14. J. Aravind Kumar , T. Krithiga , S. Manigandan , S. Sathish , A. Annam Renita , P. Prakash B.S. Naveen Prasad , T.R. Praveen Kumar , M. Rajasimman , A. Hosseini-Bandegharaei , D. Prabu , S. Crispin, A focus to green synthesis of metal/metal based oxide nanoparticles: Various mechanisms and applications towards ecological approach, Journal of Cleaner Production, 324 ,129198, 2021.**I.F:9.3**
15. N. Magesh ,A. Annam Renita, P. Senthil Kumar, Practice on treating pharmaceutical compounds (antibiotics) pre-sent in wastewater using biosorption techniques with differ-ent biowaste compounds. A review, Environmental Progress and Sustainable Energy,9,2020. **I.F:2.4**
16. **A Annam Renita**, P Senthil Kumar, S Anuradha Jabasingh ,Redemption of acid fuchsin dye from wastewater using de-oiled biomass: Kinetics and isotherm analysis Bioresource Technology Reports 7, 100300, 2019. **I.F.3.2**
17. Salla, S., Ankem, N.R., Kumar, P.S., **A Annam Renita** ,Micheal, K. Enhanced photo-catalytic activity of environment-friendly C/ZnFe 2 O nanocomposites: Application in dye removal Desalination and Water Treatment137,395-402, 2019. **I.F.1.2**
18. Dhanalashmi Kaliyaraj, Menaka Rajendran, Vignesh Angamuthu, **Annam Renita Antony**, Radhakrishnan Manikkam, Bioleaching of heavy metals from printed cir-cuit board (PCB) by Streptomyces albidoflavus TN10 isolated from insect nest, Bioresources and Bioprocessing,11,2019. **I.F.3.5**
19. A. Saravanan ,P. Senthil Kumar **, Annam Renita.A.** Hybrid synthesis of novel material through acid modification followed ultrasonication to improve adsorption capacity for zinc removal, Journal of Cleaner Production, 172 ,92-105, 2018.**I.F:9.3**
20. **Annam Renita, A.,** Kumar, N., Salla, S, Optimization of fermentation parameters using response surface methodology for biohydrogen pro-duction from urban waste, UPB Scientific Bulletin, Series B: Chemistry and Materials Science,126, 2018.**I.F:0.5**
21. **Annam Renita A**, P. Senthil Kumar, S. Srinivas S. Priyadharshini, M. Karthika A review on analytical methods and treatment techniques of pharmaceutical wastewater, Desalination and Water Treatment 87 ,160–178, 2017. **I.F.1.2**
22. **Annam Renita A**, Utharalakshmi N A Study on the Production of Bioethanol from *Portieria hornemannii* Seaweed, Der Pharma Chemica 9(6),87-89,2017. **I.F:0.5**
23. **Annam Renita.A**, Pooja Paul Chowdhury, Parveen Sultana, Prayashi Phukan, Azmin Hannan Utilization of waste eggshells for production of renewable catalyst for transesterification, International Journal of Pharmacy and Pharmaceutical Sciences 8(7),1-4, 2016.
24. **Annam Renita.A**, Kavitha.V, Lathasree.S, Abdul Rahman Reverse Osmosis Reject Brine as a Source of Struvite and Calcium Oleate ,Der Pharmacia Lettre 8(6),256-260,2016.

25. **Annam Renita.A**,Deepika Davuluri Extraction of Dye from marine macroalgae, International Journal of Chemtech Research 8(3)1060-1063,2015.
26. **Annam Renita.A**, Arvindh Kumar.J. Comparison of Homogeneous Base Catalysts and Heterogeneous Base Catalysts for Biodiesel Transesterification of Waste Cooking Oil, International Journal of Chemtech Research 8(2) 651-654,2015.
27. **Annam Renita.A**. Analysis of engine test and emission test of seaweed biodiesel for sustainable energy, Journal of Chemical and Pharmaceutical Research 7(2),755-760,2015.
28. **Annam Renita.A**, Nurshaun Sreedhar, Magesh Peter.D. Optimization of algal methyl esters using RSM and evaluation of biodiesel storage characteristics, Bioresources and Bioprocessing Springerlink 1:19,2014.
29. **Annam Renita A**, S. Sai Bhargav, Evin Joy Advanced Oxidation Process by Electro-Fenton Reagent, Advanced Materials Research Vols. 984-985 ,159-163, 2014.
30. **Annam Renita. A**,Sai Bhargav.S, Prince Kumar Evaluation of fuel properties of various biodiesel generation feedstocks, International Journal of Applied Engineering Research 1865-1869,2013.
31. **Annam Renita. A**, D Joshua Amarnath, A Study on the Optimization of Algal Biodiesel Reaction Parameters Using Response Surface Methodology, International Journal of Chemical Engineering and Applications 3(5)311-314, 2012.
32. **Annam Renita.A,** Joshua Amarnath.D. Preparation and Properties of *Sargassum myriocystum* Methyl Esters as an alternate fuel for automobile engines ,Indian Hydrobiology 14(2),139-144,2012.
33. **Annam Renita**, **A**. and Joshua Amarnath, D. *Caulerpa peltata* Methyl Esters as a Renewable Source of Energy, Asian Journal of Chemistry, 24(8),3653-3655, 2012.
34. **Annam Renita A.** and Joshua Amarnath, D Optimization of Reaction Parameters and Kinetic Studies on the Transesterification of *T.conoides* Methyl Esters, Journal of Advanced Biotech Vol.11(8) , 41-43,2012.
35. **Annam Renita A.** and Joshua Amarnath, D. Biodiesel from Biomass as an Alternate Fuel for Automobile Engines, National Journal on Advances in Building Sciences & Mechanics ,2(2), 17-21,2011.
36. **Annam Renita A**. and Joshua Amarnath, D. Multifaceted applications of Marine Macro Algae *Sargassum myriocystum,* Journal of Pharmacy Research ,4(11) 3871-3872,2011.
37. Anandhi.P,. **Annam Renita. A,** Studies on the effect of Nitrogen source and the growth of marine microalgae, IEEE Xplore ,395-397, 2010.
38. **Annam Renita.A**, Bhavani Damodharan Production Of Bio-Diesel From Marine Macro Algae, IEEE Xplore ,497-499, 2010.
39. Senthil kumaran, Joshua Amarnath, **Annam Renita.A.** Energy efficient technologies and contribution of industries ,IEEE Xplore ,395-397, 2010.
40. **A Annam Renita**, Shyam Saxena, Deepak K Shukla, Application Of Power Ultrasound For Nano-Particle Size Reduction Of Active Pharmaceutical Ingredients, International Journal On Applied Bioengineering,47,4-10,2008.

CONFERENCEPUBLICATIONS

1. **Annam Renita, A,**Satish.S, Prabu.D, Bioremediation of waste water by tailor made lemon grass adsorbents on oil, International Conference on Health, Energy and Materials, Hindustan Institute of Technology and Science,ICHEM'22,April 28-

29,2022

2. Kumar, H., **Annam Renita, A**., Anderson, A., Response surface optimization for biodiesel production from waste cooking oil utilizing eggshells as heterogeneous catalyst, Materials Today: Proceedings, 47, 1054-1058, CRMSC,Sathyabama Institute of Science and Technology,2021.
3. Dhas, A.A.G., Casmir, A., Sattar, S., Amjad, S.M., Joy, N., Alagu, K., **Renita**, A.,Effect of mixing two biodiesels on emissions in CI engine fuelled by candle nut and soap nut methyl esters-diesel blends, AIP Conference Proceedings, 2311, art. no. 020013, iCAM-22,Sathyabama Institute of Science and Technology,2020.
4. Dhas, A.A.G., Casmir, A., Greeshmanth, A.S., Kumar, C.D.K., Joy, N., Alagu, K., **Renita.A**,Performance test on C.I engines on improving the oxidation stability of biodiesel,AIP Conference Proceedings, 2311, art. no. 020016, iCAM-22,Sathyabama Institute of Science and Technology,2020.
5. Dhas, A.A.G., Casmir, A., P., S.K., Teja, T.R., Joy, N., Alagu, K., **Renita, A**.Performance enhancement of diesel engines using combined biodiesel, AIP Conference Proceedings, 2311, art. no. 020011, iCAM-22,Sathyabama Institute of Science and Technology,2020.
6. **Annam Renita.A**.,Veda Varshitha, Ajil Francis .Adsorption Of Congo Red Dye By Magnetic Nano Particles Synthesized From Food Waste ,International Conference On Energy And Environment ,NIT-Calicut,2018.
7. Harendra Kumar,**Annam Renita.A.,**Synthesis of a renewable heterogeneous catalyst for biodiesel from waste cooking oil ,Sathyabama University,ICBHE,2017
8. **Annam Renita,**Sai Lakshmi .Preparation of caffeine from waste coffee seeds CEEE -16,SSN Engg.College ,Chennai, 2016 .[**Awarded as a best oral paper**].
9. **Annam Renita**,Prayashi Phukan. Preparation of eggshell catalyst IGTEPC NIT,Trichy ,2014
10. **Annam Renita A**., Deepika, Nandhinee. Extraction of natural dyes and comparison with synthetic dyes RACEEE -14 SSN Engg.College ,Chennai,2014
11. **Annam Renita A**.,Sai Bhargav. Advanced oxidation process,ICRAMID,Pon Jesley college, Nagercoil,2014.[**Awarded as a best oral paper**].
12. **Annam Renita, A.**, Joshua Amarnath, D. A study on the optimization of algal biodiesel reaction parameters using Response Surface methodology", International Conference on Chemical Engineering and Applications–CCEA-2012, Hong Kong. 27-28 ,Oct .2012
13. **Annam Renita, A.** and Joshua Amarnath, D. Utilization of Algal Biomass by Transesterification for Eco-friendly Renewable Biodiesel, CEPEA, Anna University, 2012
14. **Annam Renita, A.** and Joshua Amarnath, D. Algal Oil Methyl Esters as a Renewable Alternative Fuel," International Conference on SET(Science ,Engg.& Tech.) VIT University , 207-212 ,2011
15. **Annam Renita** ,Durga Jeevitha, Joshua Amarnath. D Air Pollution Control Using TBC NCEC BITS-Pilani ,2006.

ADMINISTRATIVE EXPERIENCE

- **Former Head of the Department** 2 terms(2013-2015,2016-2018) for the Department of Chemical Engineering at Sathyabama Institute of Science and Technology, Chennai.
- University **ECO Club Coordinator**

- **Staff Co-ordinator of IIChE-Sathyabama Student Chapter** of Department of Chemical Engineering
- **NAAC Coordinator** for the Department of Chemical Engineering at Sathyabama Institute of Science and Technology
- **ISO Coordinator** for the Department of Chemical Engineering at Sathyabama Institute of Science and Technology
- **Year Co-ordinator** for the Department of Chemical Engineering at Sathyabama Institute of Science and Technology

HONORS

- **Research Award** for publishing in High Impact Factor Journals-2024 at Sathyabama Institute of science and Technology
- **Research Award** for publishing in High Impact Factor Journals-2023 at Sathyabama Institute of science and Technology
- **Research Award** for publishing in High Impact Factor Journals-2022 at Sathyabama Institute of science and Technology
- **Research Award** for publishing in High Impact Factor Journals-2022 at Sathyabama Institute of science and Technology
- **Best Paper Award** for oral presentation in International Conference on Recent Trends in Clean Technologies for Sustainable Environment CEEE -16: SSN College of Engineering, Chennai
- **Best Paper Award** for oral presentation in ICRAMID, Pon Jesley college, Nagercoil,2014
- **Best Paper Award** for oral presentation in RSTCS&CC, Sathyabama Institute of Science and Technology, Chennai, 2010.
- **Best Staff Award**- Sathyabama Institute of Science & Technology, 2009
- **Highest Cited Article** by Wiley Publications for the year 2021
- **Gold Medal, Anna University** –M.Tech-Chemical Engineering(2007-2009 batch)
- **President Award** for Guides 1992
- **Tamilnadu Merit Award** for High School Exam,1991
- **Reviewer in SCI Journals** which include
  Science of Total Environment
  Chemosphere
  Groundwater for Sustainable Development
  Journal of the Science of Food and Agriculture
  Biomass and Bioenergy
  Egyptian Journal of Petroleum
  Bio catalysis and Agricultural Biotechnology
  Ain Shams Engineering Journal
  Journal of Environmental Science and Technology
  Journal of Cleaner Production

GUEST TALK DELIVERED

- Resource Person for 5-day FDP on “Education for Sustainable Development” conducted by MAHSA University, Malaysia in association with Sathyabama Institute of Science and Technology during 12-05-2020 to 16-05-2020
- Chair Person for International Conference CTSE-2021 organized by Department of Chemical Engineering, SSN College of Engineering, Chennai.

RESEARCH GUIDANCE

- Guided two doctoral students in Sathyabama Institute of Science and Technology.
- Doctoral Committee member for 1 student in SSN College of Engineering, Anna University (2018-2022).

SUBJECTS HANDLED

- Chemical Reaction Engineering
- Food Technology
- Heat Transfer
- Universal Human Values
- Environment and Pollution Control
- Petroleum and petrochemical Technology
- Universal and Human Values
- Chemical Process Technology
- Environmental Pollution & Control
- Energy Engineering

RESEARCH INTERESTS

- Biofuels
- Adsorption
- Catalysis
- Waste Water Treatment-Adsorption and Electrochemical Techniques
- Chemiresistors
- Algal pigments and value added products

PERSONAL DETAILS

Date of Birth : April 01, 1976
Languages Known : English, Tamil and Hindi
Present Address : No.18,Shankar Nagar, Velachery
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Phone No. :7708710793

DECLARATION

I hereby declare that all the information presented above is true to the best of my knowledge.

Place : Chennai, India

Yours Sincerely

(Dr.Annam Renita.A)