A.V.S.L.SAI BHARADWAJ
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Google Scholar Citations: https://scholar.google.com/citations?user=4DQ7Eh8AAAAJ

Objective:

To pursue a challenging position with a progressive, talent-oriented organization, this will enhance my personal and professional growth in a challenging area, needing a highly motivated and team-oriented person.

ACADEMIC QUALIFICATIONS:

Qualifications	Institute/Place	University/Board	Year of passing	Percentage of marks
PhD	National Institute of Technology Tiruchirappalli	National Institute of Technology Tiruchirappalli	2020 (Thesis Submitted)	8.0 CGPA
M.Tech (RESEARCH)	National Institute of Technology Rourkela	National Institute of Technology Rourkela	2015	8.71 CGPA
Btech	M.V.G.R College of Engineering , Vizianagaram	J.N.T.U Kakinada	2012	70.58%
Intermediate	Narayana Educational Institutions , Visakhapatnam	Andhra Pradesh State Board of Intermediate Education	2007	77.6%
10^{th} Class	V T College(School) Visakhapatnam	Andhra Pradesh State Secondary Board	2005	71%

ACADEMIC ACHIVEMENTS:

- Awarded scholarship from Ministry of Human Resources Development (MHRD), India while pursuing Doctor of Philosophy (PhD) in NIT-Tiruchirappalli from February-2016 to January-2020
- Awarded scholarship from Technical Education Quality Improvement Programme (TEQIP-II), India while pursuing Master of Technology (Mtech) in NIT-Rourkela from October-2012 to October-2014.
- Secured 18th rank in SRM University Entrance Examination 2012 in Chemical engineering Stream
- Secured 31st rank in Andhra Pradesh Post Graduate Engineering Common Entrance Test 2012 in Chemical Engineering Stream
- Lifetime Associate Member of Indian Institute of Chemical Engineers (IIChE).

Professional Experience:

- Worked as Intern from 01/05/2011 to 10/06/2011 at SMARTCHEM TECHNOLOGIES LIMITED, Srikakulam, Andhra Pradesh, India

Research Works Published in International Journals:

- **A.V.S.L.Sai Bharadwaj**, Madhu Singh, S Niju, K.M.Meera Sheriffa Begum, N Anantharaman. Biodiesel Production from Rubber Seed Oil Using Calcium oxide derived from Eggshell as Catalyst –Optimization and Modeling studies. *Green Processing and Synthesis.* 2019; 8: 430–442. **(SCI)**
- **Bharadwaj A. V. S. L. Sai**, Niju S., Begum K. M. Meera & Anantharaman N. Optimization and modeling of biodiesel production using fluorite as a heterogeneous catalyst, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 2019, Volume-41, NO-15, 1862-1878, https://doi.org/10.1080/15567036.2018.1549165. (**SCI**).
- **A.V.S.L. Sai Bharadwaj**, Niju S, K. M.Meera S Begum & Anantharaman N. Free fatty

acid optimization and modeling of biodiesel production from high viscous rubber seed oil– A comparative study of RSM and ANN, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*. 2019, DOI: 10.1080/15567036.2019.1668504 **(SCI)**

- **A.V.S.L.Sai Bharadwaj**, S Niju, K.M.Meera S Begum, N Anantharaman. Performance and Evaluation of Calcined Limestone as Catalyst in Biodiesel Production from High Viscous Non-Edible Oil. *Environmental Progress & Sustainable Energy*. 2019. Volume-39, Issue-3; DOI: 10.1002/EP.1334. **(SCI)**
- **Sai Bharadwaj Aryasomayajula Venkata Satya Lakshmi,** Niju Subramaniapillai, Meera Sheriffa Begum Khadhar Mohamed, Anantharaman Narayanan. Biodiesel Production from Rubber Seed Oil using Calcined Eggshells Impregnated with Al_2O_3 as Heterogeneous Catalyst- A comparative study of RSM and ANN optimization. *Brazilian Journal of Chemical Engineering*. 2020. Volume-37, Issue-2; 351-368. Doi:10.1007/s43153-020-00027-9 **(SCI)**
- **Bharadwaj A.V.S.L.Sai**, Niju Subramaniapillai, Khadhar Mohamed Meera Sheriffa Begum, Anantharaman Narayanan. Optimization of Continuous Biodiesel Production from Rubber Seed Oil (RSO) using Calcined Eggshells as Heterogeneous Catalyst, *Journal of Environmental Chemical Engineering*, 2020, 8, 103603. (**SCIE**).
- **Sai Bharadwaj Aryasomayajula Venkata Satya Lakshmi**, Niju Subramanianpillai, Khadhar Mohamed Meera Sheriffa Begum, Anantharaman Narayanan. Catalyst Reusability and Kinetic Modeling of Biodiesel Produced from Rubber Seed Oil. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*. 2020, doi.org/10.1080/15567036.2020.1785056 (**SCI**).
- Ch.VSubbarao, I.P Kalyan Chakravarthy, **A.V.S.L.Sai Bharadwaj**, K.M.M Prasad. Functions of Hydrotropes in Solutions. *Chemical Engineering and Technology*. 2012, Volume-35, 225-237. (**SCI**)
- **Sai Bharadwaj A.V.S.L**, Niju Subramanianpillai, Khadhar Mohamed Meera Sheriffa Begum, Anantharaman Narayanan. Esterification of High Viscous Rubber Seed Oil and its Applications: RSM vs ANN. *Environmental quality management* **(SCOPUS**) **(Status: Under Revision).**
- **Sai Bharadwaj A.V.S.L**, Niju Subramanianpillai, Khadhar Mohamed Meera Sheriffa

Begum, Anantharaman Narayanan. Effect of Rubber seed oil Biodiesel on Engine Performance and Emission Analysis. *Fuel* **(SCI) (Status: Under Review).**

- **Bharadwaj Sai Aryasomayajula Venkata Satya Lakshmi**, Niju Subramanianpillai, Khadhar Mohamed Meera Sheriffa Begum, Anantharaman Narayanan. *Environmental Progress & Sustainable Energy*. **(SCI) (Status: Under Review).**
- **Sai Bharadwaj A.V.S.L**, Niju Subramanianpillai, Khadhar Mohamed Meera Sheriffa Begum, Anantharaman Narayanan. Statistical and Sensitivity Analysis of Acid Value Optimization in Continuous Biodiesel Production from Rubber Seed Oil (RSO). *Journal of the Chinese Chemical Society*. **(SCI) (Status: Submitted).**
- **Sai Bharadwaj A.V.S.L**, Niju Subramanianpillai, Khadhar Mohamed Meera Sheriffa Begum, Anantharaman Narayanan. Acid Value Minimization in Rubber Seed Oil Conversion to Biodiesel using Al_2O_3/Calcined Eggshells as Catalyst - RSM and ANN Studies. *International Journal of Ambient Energy*. **(ESCI/SCOPUS) (Status: Under Revision).**

Research Works Published in International Book Chapters:

- Madhu, **Sai Bharadwaj A.V.S.L**, Niju S, Meera Sheriffa Begum K.M, Anantharaman N. Studies on Esterification Optimization of High FFA Content Pongamia Oil Using Box–Behnken Design. In: Pogaku R. (eds) Horizons in Bioprocess Engineering. 2019. Springer, Cham.

Research Works Published in National Journals:

- **Sai Bharadwaj A.V.S.L**, Niju Subramanianpillai, Khadhar Mohamed Meera Sheriffa Begum, Anantharaman Narayanan. Acid Value Optimization of Calcined Eggshells Catalyzed Biodiesel Produced from Rubber Seed Oil – A Response Surface Methodology (RSM) Approach. *Indian Journal of Chemical Technology* **(SCI)** (**Status: Under Review).**
- **A.V.S.L.Sai Bharadwaj**, Prof. R.K Singh. Utilization of Waste Tire Char and its Applications in Liquid-Phase Adsorption: A Review. International Journal of Advance

Chemical Science and Applications. 2014, Volume-1 Issue-2, ISSN (Print):2347-7601, ISSN (Online): 2347-761X.

- **A.V.S.L.Sai Bharadwaj**, Prof. R.K Singh. Preparation and Characterization of Activated Carbon Prepared from Waste Tire Char and its Applications in Liquid-Phase Adsorption. Environment Observer. 2014, Volume-21, ISSN: 2320-5997, 19-29.

Research Works Presented in International/National Conferences:

- Acid Value Optimization in Biodiesel Production From Rubber Seed Oil at ICASCE-2018, National Institute of Technology-Tiruchirappalli, Tamilnadu, India
- Studies on optimization of Acid Value in Bio-diesel produced from Rubber Seed Oil (RSO) using calcined Limestone, at 1st International Symposium on Analytical and Applied Pyrolysis-PYROASIA 2019, Indian Institute Of Technology Madras, India
- Utilization of Waste Tire Char and its Applications in Liquid-Phase Adsorption: A Review at ICET-2014, Bangalore.
- Characterization of Waste Tire Char and Its Applications In Waste Water Treatment-a review at RTCE-2014 in ANNA University, Chennai
- Preparation and Characterization of Activated Carbon from Tire and Biomass Char and it's Applications in Liquid Phase Adsorption at CHEMCON-2016 in ANNA University, Chennai.
- PRODUCTION OF LIGHT , MEDIUM OIL AND ELECTRICITY FROM WASTE PLASTICS at RIPPLES 2010 at Andhra University , Visakhapatnam
- HYDROGEN FUEL CELL TECHNOLOGY at SCHEMCON 2010 in R.V.R.J.C College of Engineering, Guntur.
- CORROSION CAUSE AND CURE at SCHEMCON 2010 in R.V.R.J.C College of Engineering, Guntur.

Research Workshops Attended:

- Attended for workshop on ENERGY CONSERVATION AND ALTERNATIVE OPTIONS-2016 at NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI, Tamilnadu, India.

- Attended for workshop on Nurturing IPR and TECHNOLOGY TRANSFER-2017 at NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI, Tamilnadu, India.
- Attended for workshop on ACS on CAMPUS at INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR, WESTBENGAL, India.

Academic Projects:

PhD (3 Years-11 Months)

- Synthesis, Characterization and Application of Biodiesel Prepared from Rubber Seed Oil using Heterogeneous Base Catalysts.

Research Work Carried:

- Synthesis and Characterization of different catalysts (prepared from solid waste/naturally occurring materials) which are used in biodiesel production process.
- Production of biodiesel from rubber seed oil (RSO) in batch reaction process using different synthesized catalysts.
- Optimization and analyzing the effect of experimental parameters (using Design Expert Version-10 Software) which influence rubber seed oil (RSO) conversion to biodiesel, and also on acid value of prepared biodiesel with different synthesized catalysts. (Optimization of experimental parameters is done using two different optimization tools namely response surface methodology (RSM) and artificial neural network (ANN).
- Comparison of the results obtained from batch reaction process with different catalysts and identification of best conditions achieved.
- Biodiesel production from RSO in batch reaction process using a modified catalyst (modified with the best one achieved from batch reaction process).
- Comparison of the all results obtained from batch reaction process with different catalysts and identification of best conditions achieved.
- Catalyst reusability and kinetic modeling with the best catalyst (observed from batch reaction process) at optimized conditions.
- Continuous production of biodiesel from RSO in a laboratory scale reactor: A comparison of different optimization tools (RSM and ANN).

- Characterization of synthesized biodiesel (both batch and continuous processes) using different analytical techniques (Fourier Transform Infrared (FTIR) Spectroscopic analysis, Physico-Chemical Characteristics, Gas Chromatography-Mass Spectrometry (GC-MS) and ^{1}H-Nuclear Magnetic Resonance (NMR) analysis)
- Performance and emission analysis of biodiesel produced from RSO.

Mtech (Research) (2 Years)

- Preparation and Characterization of Activated Carbon from Tire and Biomass Char and its Applications in Liquid Phase Adsorption.

Research Work Carried:

- Preparation and Characterization of Activated Carbon from Tire and Biomass (Castor seed and some chemicals impregnated to castor seed) Char.
- Chemical activation procedure using tubular furnace apparatus was adapted for activated carbon preparation.
- Analyzing the effect of activation temperature on yield percentage and surface area of prepared activated carbon.
- Characterization of synthesized activated carbon (Fourier Transform Infrared (FTIR) Spectroscopic analysis and Scanning Electron Microscopic (SEM) analysis).
- Studies on Adsorption of methylene blue (effect of process parameters) on synthesized activated carbon
- Studies on Adsorption equilibrium study (Langmuir Isotherm and Freundlich Isotherm)
- Comparison of adsorption capacity of synthesized activated carbon with other activated carbons.

Btech (6 months)

- Dissolution studies using Mixed Hydrotropes

Research Work Carried:

- Determination of solubility of liquid (ethyl acetate) in water using Hydrotropes (urea, tri-sodium citrate).
- Determination of solubility of solid (benzoic acid) in water using Hydrotropes (urea, tri-sodium citrate).
- Solubility of ethyl acetate in water in presence of different concentration of urea and

tri-sodium citrate Hydrotropes.

- Solubility of benzoic acid in water in presence of different concentration of urea and tri-sodium citrate Hydrotropes.

Research Areas of Interests:

- Development and characterization of novel materials from various solid waste/natural occurring materials.
- Production and application of biodiesel (batch and continuous reaction processes) from different vegetable oils.
- Development of continuous reaction process for production of biodiesel using different feedstocks (first and second generation) as catalysts.
- Application of modified catalysts in continuous biodiesel production.
- Utilization of waste materials as adsorbents in waste water treatment.
- Process optimization.
- Kinetic modeling (to analyze the rate constant and order of any reaction carried with).
- Development and application of second generation biofuels using different solid waste feedstocks.

Teaching Areas of Interest:

Academic subjects which I can handle are Biofuels, Chemical Reaction Engineering, Introduction to Chemical Engineering, Mass transfer operations, Mechanical Unit Operations, Momentum Transfer

Extra Curricular Activities:

- House Captain in Sri Prakash Vidya Niketan
- Runners – School Quiz Competition
- Worked as a Volunteer for HELP AGE INDIA ORGANISATION during school days.
- Worked as a Volunteer in ICFCE-2013, at National Institute of Technology-Rourkela.
- Worked as a Coordinator in Golden Jubilee Celebrations of Chemical Engineering

Department, at National Institute of Technology-Rourkela

Personal Details:	
Name:	A.V.S.L.Sai Bharadwaj
Date of Birth:	12th June 1990
Sex:	Male
Nationality:	Indian
Marital Status:	Married
Hobbies:	Watching cricket, Collecting different types of inspirational short messages, Photography
Languages Known:	Telugu, English, Hindi, Tamil (can speak)

References:

Dr. N Anantharaman (PhD Research Guide)
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