

# Dr S. Joseph Selvaraj

Associate Professor of Chemistry

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**About Me:** I enjoy my profession of teaching Chemistry

## Education:

- 1988: B. Sc. Chemistry – St. Xavier’s College, Palyamkottai – 627 002, Passed in FIRST Class
- 1990: M. Sc. Chemistry - St. Joseph’s College, Tiruchirappalli – 620 002, Passed in FIRST Class
- 1991: Passed in SLST conducted by Tamil Nadu Government
- 2007: Ph.D. Chemistry - St Joseph's College, Tiruchirappalli 620002 Area of Specialization: Natural Products Chemistry

## Professional Qualifications and Experience

- 2002: Orientation Course – UGC Sponsored Orientation course • Academic Staff College, Bharathidasan University, Tiruchirappalli 620024
- 2005: Refresher Course – UGC Sponsored Refresher course Academic Staff College, Bharathidasan University, Tiruchirappalli 620024
- 2007: Refresher Course – UGC Sponsored Refresher course Academic Staff College, Madurai Kamarajar University, Palkalai Nagar, Madurai, 625021
- 2007: M. Phil. Guideship – Bharathidasan University, Tiruchirappalli – 620 024
- 2009: Ph.D. Guideship – Bharathidasan University, Tiruchirappalli – 620 024

## Skills

- Curriculum Designing Skill as a member of BoS of Dept of Chemisty
- Organizing Skills – Seminars, Conferences and Meetings

## LIST OF PUBLICATIONS

- S.G. Savari, and S.J. Selvaraj, The efficient method for the electrochemical oxidation of benzyl alcohol to benzaldehyde using potassium iodate in a biphasic medium *Materials Today Proceeding* 68, 428-441,(2022). <https://doi.org/10.1016/j.matpr.2022.07.255>
- Susila G. Savari, and S. Joseph Selvaraj, Performance of Potassium Iodate as an Electrocatalyst for the Oxidation of Secondary Alcohols Utilizing a Platinum Electrode in a Biphasic Medium, *Anal. Bioanal. Electrochem.*, Vol. 16, No.2,163-174 (2024) <https://www.doi.org/10.22034/abec.2024.711553>
- Savari Susila. G, A. John Bosco and S.J. Selvaraj, Fabrication of a New Platinum Electrode Modified with Bismuth Sulphide and Carbon Paste for Electrocatalytic Oxidation of Benzyl Alcohols in a Biphasic System, *Chemistry Africa* Vol.7, No.4, <https://doi.org/10.1007/s42250-024-00990-7>
- Savari Susila. G, A. John Bosco and S.J. Selvaraj, Fabrication of molybdenum disulfide/carbon paste (MoS<sub>2</sub>/CP) nanocomposite as a modified platinum electrode for electrocatalytic oxidation of benzyl alcohol in biphasic electrolysis, *Journal of the Indian Chemical Society* 101, (2024) 101202, <https://doi.org/10.10164/jics.2024.101202>
- Savari Susila. G, and S.J. Selvaraj, Biphasic Inspired Electrocatalytic Oxidation of Substituted Alcohols to Aldehydes or Ketones with Platinum Electrode Using Potassium iodate as a Mediator, *Journal of Emerging Technologies and Innovative Research (JETIR)*, July 2022, Volume 9 Issue 7 (784-790)
- Savari Susila. G, and S.J. Selvaraj, Novel electrocatalytic oxidation of benzyl alcohol on various electrodes in a biphasic medium using potassium periodate as a mediator, *International Journal of Chemical and Biochemical Sciences(IICBS (ISSN 2226-96 14)*, 22(2022):244-256
- Savari Susila. G, and S.J. Selvaraj, The Highly Effective Electrochemical Oxidation of Substituted Benzyl Alcohols in A Biphasic Medium Is Mediated by Bromate on A Platinum Electrode, *Anal. Bioanal. Electrochem*, Vol. 15, No. 7, 2023, 587-602 <https://www.doi.org/10.22034/abec.2023.706511>
- Amutha Soosairaj, Durga Prasad Pabba, Ahalya Gunasekaran, Sambandam Anandan, Joseph Selvaraj & Leo Rajesh Asirvatham, Synergetic impact of natural light harvesting materials to reduce the recombination rate and improve the device performance of dye sensitized solar cells *Journal of Material Science, Materials in Electronics* 34:1748, 1-13,(2023)
- Dr. Paliakkara Lona Deena & Dr. Savariraj Joseph Selvaraj, Electrochemical conversion of benzene sulphonyl azide into sulphonamide assisted by sodium ascorbate *Indian Journal of Chemistry*, 62,980-985,(2023)

- Susila G Savari, S. Joseph Selvaraj, The highly effective electrochemical oxidation of substituted benzyl alcohols in biphasic medium is mediated by bromate on platinum electrode *Analytical and Bioanalytical electro Chemistry*, 15(7),587-602, (2023)
- Savari Susila G, S. Joseph Selvaraj, The efficient method for the electrochemical oxidation of benzyl alcohol to benzaldehyde using potassium iodate in a biphasic medium *Materials Today: Proceedings* 68,470-477 (2022)
- Savari Susila G, S. Joseph Selvaraj, Novel electrocatalytic oxidation of benzyl alcohol on various electrodes in a biphasic medium using potassium periodate as a mediator *International Journal Of Chemical and Biochemical Sciences*, 22, 244-256, (2022)
- Savari Susila G, S. Joseph Selvaraj, Biphasic Inspired electrocatalytic oxidation of substituted alcohols to aldehydes or ketones with platinum electrode using potassium iodate as a mediator *Journal Of Emerging Technologies and Innovative Research(JETIR)*, 9(7), 2349-5162, (2022)
- Y. Jerlin Jose, S. Joseph Selvaraj, Synthesis and Photocatalytic Applications of Eu-ZnO-Ag Nano Particles using Light Emitting Diode (LED) Illuminations *Asian Journal of Chemistry*,31, 0975-7077, (2019)
- Thyagarajan Shanmugam, Joseph Selvaraj, Uvaraj Mani, AN improved Ion chromatographic Method for Fast and Sensitive Determination of Hexavalent Chromium and Total Chromium Using Conductivity Detectors *Journal of Chromatographic Science* 1-5, (2019)
- E.K. Joice, M. Balaganesh, Anitha Varghese and S. Joseph Selvaraj Plkylaniline decorated with nanocatus platinum on carbon fiber paper and its electrochemical behaviour toward toluene oxidations *Journal of the Electrochemical Society* , 165(7) H399-H406 , (2018)
- E.K. Joice, M. Balaganesh, Anitha Varghese and S. Joseph Selvaraj, Selewctive Electrocatalytic oxidation of toluene mediated by sodium nitrite in biphasic medium *Journal of emerging technology and innovative research*, 5, 121-128 (2018)
- Thyagarajan Shanmugam, Joseph Selvaraj, Surendiran A, Separation of Arsenic in Ground Water Samples by Ion exchange Chromatography with improved sample preparation Technique *Journal of Chromatographic Science*, 1-5, (2018)
- Biju Joy , M Balaganesh, S. Joseph Selvaraj , Electrochemical oxidation of Benzaldehyde oxime using Potassium percholate in Biphasic medium *Materials Today*, 4, 12426-436, (2017)
- Yesuvadimai Jerlin Jose, Munisamy Manjunathan, Savariraj Joseph Selvaraj, Highly Photocatalyst Efficient in LED/Solaractive and reusable: Sm-ZnO-Ag Nanoparticle for

Methylene Blue Degradation Journal of nanostructure in Chemistry, 7 , 250-271, (2017)

- Y. Jerlin Jose, M. Manjunathan, S. Joseph Selvaraj, Sm-Zno-Ag: An efficient Photodegradation of Congo Red Dye with light emitting diodes illumination International Journal of Chem Tech Research, 10, 74-78, (2017)
- Y Jerlin Jose, M Manjunathan and S Joseph selvaraj, Photocatalytic applications of Ag Doped ZnO Nanoparticles Driven by Light emitting Diode Illumination International Journal of Chem Tech Research,2, 224-238 ,(2016)
- Joseph Selvaraj,, Synthesis and Characterization of Metal complexes of 2-(5-Phenyl(1,3,4-oxadiazole-2-yl)thio)-N`-(1E)-(4-methyl-(1,3-thiazole-5-yl)methylene) actohydrazide. International Journal of Research in Chemistry and Environment,5, 38-43,(2015)
- Joseph Selvaraj, Alphones & John Britto, Isolation Characterization of novel Esters fro Aerial parts of Tiliacora acuminata Indian Journal of chemistry ,Section B, 48B, 1038-1040, (2009)
- Joseph Selvaraj, Alphones & John Britto, A new Lactone from the Aerial parts of Tiliacora acuminata Indian Journal of chemistry ,Section B, 47, 942-944,(2008)
- Joseph Selvaraj ., S.John BrittoI. Alphonse, V.A. Ramani, Isolation of an Oil Acuminatide from the seeds of Tiliacora acuminata Asian journal of Microbiology ,Biotechnology and Environmental Sciences, 11(3-4), 623-624, (2005)
- S.Joseph Selvaraj and T.V.AntonJoseph Selvaraj, Effect of Solvents on the Rearrangement of Aromatic Actals by Iodobenzene Dichloride Indian Journal of Chemistry, Section B, 37B, 943-944,(1998)

#### **National**

- Biju Joy, Joseph Selvaraj, Deoimination of p-Substituted Benzaldoximes in Biphasic medium Using Platinum Electrode International Journal of Medicobiological; Research , 1(8), 437-439, (2016)
- Biju Joy, J. Jenifer Angel and S. Joseph Selvaraj, A Novel Benign Electrochemical Reaction of Benzaldoximes with Perchlorate Salts World Journal of Pharmacy and Pharmaceutical sciences 5, 0849-853, (2016)

**Research projects from National (N) / International (IN), funding agencies and  
Total grants received.**

<b>Title of the Project</b>	<b>Type</b>	<b>Status</b>	<b>Finding Agency</b>	<b>Duration</b>	<b>Amount in Rupees</b>	<b>Year</b>
Electrochemical oxidation and reduction of Oximes in Biphasic Medium	MI	O	UGC	2016-2017	190000	2016

**Achievements**

**Ph. D Awarded to**

<b>Scholar Code</b>	<b>Scholar Name</b>	<b>Date of ViVa</b>	<b>Title</b>
44300/ph.D/chemistry/fulltime/	Biju Joy	2017	Electrochemical deoxygenation of Aromatic oximes using potassium perchlorate in Biphasic medium
28428	Fr.E.K.Joice	2019	Electrocatalytic Oxidation of Alkylaromatics using Platinum and Carbon supported Platinum Electrodes
Ref.NO.45161/Ph.D.K2/Chemistry	Y. JERLINE JOSE	2021	synthesis, characterization, photocatalytic activities and antimicrobial activity of La-ZnO-Ag Nano
46570/PhD/K2/Chemistry	S.Thyagarajan	2021	Development of Novel methods for the trace level Speciation of Arsenic and Chromium and for the determination of perfluorooctanoic acid and perfluorooctanesulphonic acid in Water samples using ion chromatography with conductivity detection in less water samples
44758/Ph.D1/Chemistry/FT/Janua	J.AKILANDESWARI	2022	Synthesis And Characterisation Of

		Transition Metal Complexes Of Mercapto Acetohydrazide Derivatives Of Tetrazole, Thiazole And Oxadiazole
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**M.Phil Awarded to**

Scholar Code	Scholar Name	Date of ViVa	Title
07MCH111	T.PROMITHA	2008	Preparation and Characterization of Metal complexes of Cyclohexanone Oxime
08MCH111	T.DAVID	2009	Paired Electrochemical Synthesis of L-Cysteic Acid and L-Cystein
09MCH110	R.SARANYA	2010	Preparation and Characterisation of Metal Complexes
13MCH103	NIGITHA JACOB	2014	Surface Coating of Hydrophobic Polymer Membranes Using Selected Polyelectrolytes
14MCH103	P.Prathima	2015	Systematic Chemical Analysis of Sugar from Sugarcane
14MCH108	Priyadarshini	2015	Analysis of phosphates, calcium, reducing sugars and sulphated ash in sugarcane
15MCH106	Jenifer Angel	2016	Electrochemical Oxidation of Benzaldehyde oxime using Lithium, Sodium, Potassium, and Ammonium perc

**Academic Member**

BodyName	Position	Period
Board of Studies, St.Xavier's College	Member	2011-2013
Board of Studies	Member	2017-19
Board of Studies St. Mary's College, Tuticorin	Member	2017-2020,
Board of Studies	External Member	2023-20202