



# SHRIMATI INDIRA GANDHI COLLEGE

(Affiliated to Bharathidasan University)

Nationally Accredited at 'A' Grade (4<sup>th</sup> Cycle) by NAAC | An ISO 9001 : 2015 Certified Institution  
Tiruchirappalli - 620 002

**Name** : Dr. S. Philomina Mary  
**Designation** : Assistant Professor  
**Department** : Chemistry  
**Qualification** : MSc., Ph.D.  
**Experience** : Teaching: 5 Research: 5  
**Area of Specialization(s)** : Inorganic Chemistry, Nano chemistry,  
Phyto chemistry  
**Email (Official ID)** : philominamary@sigc.edu

## Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
Ph.D	CHEMISTRY	St. Joseph's College (Autonomous)	2022
M.Sc	CHEMISTRY	St. Joseph's College (Autonomous)	2015
B.Sc	CHEMISTRY	Holy Cross College (Autonomous)	2013

## Additional Qualifications

Diploma / Vocational / Certification	Area of Specialization	Institution / University / Agency Name	Year
Certification	Ms Office	Jan Shikshan Sansthan	2010
Certification	DTP	Jan Shikshan Sansthan	2010
Certification	Tally9.0	Jan Shikshan Sansthan	2011
Certification	Medicinal Herbs & Mass Cultivation	Holy Cross College,	2013

## Research Guidance

Programme	No. of Scholars	
	Completed	Pursuing
UG PROJECT	28	-
PG PROJECT	4	-

## Research Publications (Indexed)

### International

- S.Arivuselvan, Mari Elanchezian, Raji Atchudan, Deivasigamani Ranjith Kumar, E. Sivasurya, S. Philomina Mary, Pandi Muthirulan, Keehoon Won, Devaraj Manoj, CoFe-MOF nanoarray as flexible microelectrode for electrochemical detection of catechol in water samples, *Heliyon*, 10 (2024) e39241.
- Deivasigamani Ranjith Kumar, Devaraj Manoj, Andreas Rosenkranz, Abdullah Al Mahmud, Jae-Jin Shim, S. Philomina Mary, Subramanian Nellaiappan, Micro-structured growth of 1,2,4-triazole by electro-polymerization for highly selective detection of gallic acid and uric acid, *Microchemical Journal*, 195 (2023) 109375, <https://doi.org/10.1016/j.microc.2023.109375>.
- M. Kavitha, Shenbagam, R. Kanmani and S. Philomina Mary, Biogenic Synthesis of Copper oxide and Zinc oxide Nanoparticles using Catharanthus roseus L. flower extract and Evaluation of Its Antioxidant and Antibacterial Properties, *Oriental Journal of Chemistry*, Vol. 38(5), (2022), 1320-1327.
- S Philomina Mary, A Peter Pascal Regis, Kinetic And Mechanistic Investigation On The Oxidation Of Pentoxifylline Drug By Amine  $\mu$ -Peroxo Cobalt(III)Complex In Aqueous Medium, *Journal of Natural Remedies*, Vol. 21, No.9(1), (2021) ISSN-: 2320-3358.
- S Philomina Mary, A Peter Pascal Regis, Oxidation Kinetics And Mechanistic Study On L-Leucine By Amine  $\mu$ -Peroxocobalt(III)Complex In Aqueous Medium, *Journal of Natural Remedies*, Vol. 21, No.9(1), (2021) ISSN-: 2320-3358
- S Philomina Mary, A Peter Pascal Regis, Kinetic Investigation On The Oxidation Of Calcium Lactate Drug By Amine  $\mu$ -Peroxocobalt(III)Complex In Aqueous Medium, *Proteus Journal*, VOLUME 11 ISSUE 12 2020, ISSN/eISSN: 0889-6348.
- S Philomina Mary, A Peter Pascal Regis, Kinetic Study On The Oxidation Of L-Phenylalanine By Amine  $\mu$ -Peroxo Cobalt(III) Complex In Aqueous Medium, *High*

*Technology Letters*, Volume 26, Issue 12, 2020, ISSN NO : 1006-6748.

- Philomina Mary S, Peter Pascal Regis A, Biological Oxidation Of Paracetamol By Amine $\mu$ -Peroxo Complex In Aqueous Medium – A Kinetical Approach, *International Journal of Research and Analytical Reviews*, Volume 6 Issue 2 May 2019, ISSN 2348-1269.
- Philomina Mary S, Peter Pascal Regis A, A Kinetic approach on the oxidation of L-Proline by amine  $\mu$ -peroxo complex in aqueous medium, *Journal of Emerging Technologies and Innovative Research*, August 2018, Volume 5, Issue 8, ISSN 2349-5162.
- Philomina Mary S<sup>\*</sup>, Peter Pascal Regis A, A Potentiometric study on lysine using amine  $\mu$ -peroxo Co(III) complex in aqueous medium, *International Journal of Scientific Research and Review*, Volume 7, Issue 10, (2018), ISSN 2279-543X

## **National**

- R. Epshiba, A. P. Pascal Regis, R. Betsy Clarebel, S. Philomina Mary and J. K. Alphonsa, Influence of Aloe vera Extract on Corrosion Inhibition of Mild Steel in Well Water, *RETELL (Research Teaching Learning Letters, An inter-disciplinary Research Journal)*, Vol. 15, December 2016.
- R Epshiba, A Peter Pascal Regis, C Rajarathinam, R Betsy Clarebel, S Philomina Mary, JK Alphonsa Juliet Helina, Inhibitive Properties of Sodium Molybdate-Zn 2 System and its Synergism with Garlic Extract, *RETELL (Research Teaching Learning Letters, An inter-disciplinary Research Journal)*, Vol. 15, December 2015.

## **Book Publications**

- Food Adulteration, Home Care Products and Herbal Cosmetics, published by Holy Cross Publishing House, Publication division, Holy cross college (autonomous), Tiruchirappalli-620002. ISBN: 978-81-953014-7-8

## **Presentations in Conference**

- Presented a Paper on “Oxidation Kinetics of Gabapentin by amine in the International conference on Recent Trends in Mathematical Chemistry and Material Science conducted by PG Department of Chemistry, Jairams Arts and Science College, Karur from 7–8<sup>th</sup> February 2025.
- Presented a Poster on “A Synthetic approach on MXene preparation as Super capacitor” in the International conference on Advances in Functional Materials organized by the PG & Research Department of Chemistry, St Joseph’s College (Autonomous), Trichy from 13–14<sup>th</sup> February 2025.

- Presented a paper in the International virtual conference on Futuristic aspects of Sensors and Biosensors, Holy Cross College (Autonomous), Trichy.
- Awarded Second prize for presenting poster in the International Conference on Frontiers in Advanced Materials and their Applications, 2017, Bishop Heber College (Autonomous), Trichy.
- Presented a paper in the 4<sup>th</sup> International Conference on Chemical and Environmental Research, 2018, Jamal Mohammed College (Autonomous), Trichy.
- Presented a paper in the National Conference on NCETBP-2014, Holy Cross College (Autonomous), Trichy.
- Presented a paper in the National Conference on Advanced Materials in Chemistry, 2018, St. Joseph's College (Autonomous), Trichy.

### **Participation in Conference**

- Participated in the International conference on Advances in Functional Materials organized by the PG & Research Department of Chemistry, St Joseph's College (Autonomous), Trichy from 13–14<sup>th</sup> February 2025.
- Participated in the International conference on Recent Trends in Mathematical Chemistry and Material Science conducted by PG Department of Chemistry, Jairams Arts and Science College, Karur from 7–8<sup>th</sup> February 2025.
- Participated in the International Conference on “Recent Advances in Physical Sciences” organized by Holy Cross College (Autonomous), Trichy.
- Participated in the International Conference on Frontiers in Advanced Materials and their Applications, 2017, Bishop Heber College (Autonomous), Trichy.
- Participated in the 4<sup>th</sup> International Conference on Chemical and Environmental Research, 2018, Jamal Mohammed College (Autonomous), Trichy.
- Participated in the National Conference on NCETBP-2014, Holy Cross College (Autonomous), Trichy.
- Participated in the National Conference on Advanced Materials in Chemistry, 2018, St. Joseph's College (Autonomous), Trichy.

### **Participation in Faculty Development Programme**

- Participated in 7 Day Virtual International Faculty Development Program on Recent Developments and Applications in Advanced Materials organized by Department of Physics and Chemistry, St Joseph College of Engineering, Chennai from 3<sup>rd</sup> March to 9<sup>th</sup> March 2025.

- Participated in 6 Day Faculty Development Programme on “Sustainability & Green Chemistry in EV Sector” by Naan Mudhalvan - A Massive Upskilling Programme Phase II conducted by Tamil Nadu Skill Development Corporation at Bharathidasan University, Tiruchirappalli from 06.01.2025 to 11.01.2025.
- Participated in 3 Day Faculty Development Program on “Idea Generation Methods” conducted by ICT Academy on 12.12.2024 to 14.12.2024.
- Completed 8 Weeks Faculty Development Programme on “Metals in Biology” from July to September 2024.
- Participated on Online Two day Faculty Development Programme on Recent Developments in Materials Science (23.09.2021) and (24.09.2021) Organized by PG and Research Department of Physics, SAASC, Trichy.
- Participated on Online Five days National level online Faculty development program on Recent Advances in Analytical Research Techniques organized by Holy Cross College (Autonomous) on 27<sup>th</sup> September to 1<sup>st</sup> October, 2021.
- Participated in One week online International Faculty Development Program (FDP) on “Artificial Intelligence and IoT- Heuristic Transdisciplinary perspectives” organized by CICRSD Holy Cross College (Autonomous) held during 4<sup>th</sup> – 10<sup>th</sup> July 2020.
- Online Faculty Development Programme on GChemPaint and LibreOffice Suite Writer organized by D.K.M. College for Women, Vellore, Tamil Nadu from 04.05.2020 to 10.05.2020.

### **Participation in Workshop**

- Participated in the “One day workshop on Entrepreneurship” in commemoration of World Entrepreneurs Day, organized by PG & Research Department of Chemistry and Institution’s Innovation Council (IIC), Holy Cross College (Autonomous), Tiruchirappalli held on 24 August 2021.

### **Conference / Seminar / Workshop Organized**

- Organized Seminar on Physical Fitness at Holy Cross College (Autonomous), Trichy.
- Organized International Conference on Mastering Stress: Unlocking Mental Wellness at Shrimati Indira Gandhi College, Trichy.
- Organized an Awareness Program on Solid Waste Management at Shrimati Indira Gandhi College, Trichy.
- Organized a Webinar on Concepts series “Nature's Serenity in Chemistry” at Shrimati Indira

### Editorial / Review Board Member

- Editor for the book series “Futuristic Trends in Chemical Material Sciences & Nano Technology”

### Membership in Professional Bodies

Name of the Professional Body	Nature of membership	Duration
InSc International Publishers	Life member	
ARAI Association of Researchers and Academicians in India	Life member	

### Awards / Honors

Awards / Honors	Agency / Institute	Year of Award
Young Researcher Award	InSc International Publishers	2022
A P J Abdul Kalam Award	ARAI Association of Researchers and Academicians in India	2024
Award of Recognition for Research	Holy Cross College (Autonomous)	2024

### Recognition National / International

Nature of Recognition	Organization / Institution	Year
SEED Grant	Holy Cross College (Autonomous)	2020-2021