

**Name** : Dr. B. Kirthika Rani  
**Designation** : Associate Professor  
**Department** : Chemistry  
**Date of Joining** : 06. 02.2006, (regularization 19.09.2007)  
**Phone No** : 0452 -2530070 (321)  
**Email** : kirthikarani@americancollege.edu.in



**Educational Qualification:**

Degree	Subject	College / Uuniversity & Place	Year Completed
Ph.D	Chemistry	Gandhigram Rural University, Gandhigram	2018
M.Phil	Chemistry	Madurai Kamaraj University, Madurai	2008
M.Sc	Chemistry	The American College, Madurai	2000
B.Sc	Chemistry	Lady Doak College, Madurai	1998

**Academic Credentials**

- Qualified JRF-LS in NET (UGC-CSIR) examination, Dec 1999.
- Qualified GATE examination with 90% percentile score, Feb 2000.

**Specialisation in Teaching:**

- Organic Chemistry
- Spectroscopy
- Stereochemistry

**Specialisation in Research:**

- Organic synthesis
- Fluorescent Chemosensors

**Research Interests:**

- Practical applications of chemosensors in detecting ions and organic molecules.
- Synthetic Organic Chemistry

**Any Other Work Experience:**

<b>Designation</b>	<b>Institution / Company</b>	<b>Year - From (month/year) To (month/year)</b>
Lecturer	J.J. College of Arts and Science, Pudukkottai	June 2004- May2005
Lecturer	Lady Doak College, Madurai	June 2002-April2004
Lecturer	The American College, Madurai	July2000-April2002
Project Scientist	Syngene, Biocon Group of Com, Bangalore	May 2000-June2000

**Administrative /Academic Position/s (held / currently holding):**

<b>Positions held / currently holding</b>	<b>Year - From (month/year) To month/year)</b>
President, UG Chemistry Association	June 2019
President, UG Chemistry Association	June 2018-May 2019
Student Vice-President, PG Chemistry Association	June1998-April1999
Student President, PG Chemistry Association	June1999-April2000

**Membership in Professional Bodies:**

- Board of Studies Member: Lady Doak College, Madurai
- Board of Studies Member: Yadava College, Madurai

### Articles Published in International Journals:

- ✓ **B. Kirthika Rani** and S. Abraham John, “A novel pyrene based fluorescent probe for selective detection of cysteine in presence of other bio-thiols in living cells”, **Biosensors and Bioelectronics** 83 (2016) 237–242.
- ✓ **B. Kirthika Rani** and S.A. John, “Pyrene-Antipyrine based highly selective and sensitive turn-on fluorescent sensor for Th(IV)”, **New Journal of Chemistry** 41 (2017) 12131-12138.
- ✓ **B. Kirthika Rani** and S.A. John, “Fluorogenic mercury ion sensor based on pyrene-amino mercaptothiadiazole unit”, **Journal of Hazardous Materials** 343 (2018) 98-106.
- ✓ **B. Kirthika Rani** and S.A. John, “Selective receptor for Fe (III) ion with a fluorescence- ON pyrene motif in semi-aqueous solution”, **Journal of Photochemistry and Photobiology A: Chemistry** 392 (2020) 112426.
- ✓ **B. Kirthika Rani** and S.A. John, “A highly selective turn-on fluorescent chemosensor for detecting zinc ions in living cells using symmetrical pyrene system”, **Journal of Photochemistry and Photobiology A: Chemistry** 418 (2021) 113372.

### Career Advancement Courses

- Participated in the Orientation Course held from 7<sup>th</sup> May 2010 to 3<sup>rd</sup> June 2010, organized by UGC-Academic Staff College, Bharathiar University, Coimbatore.
- Participated in the Refresher Course held from 12<sup>th</sup> July 2012 to 1<sup>st</sup> August 2012, on the theme “Current Trends in Chemistry” organized by UGC-Academic Staff College, Madurai Kamaraj University, Madurai.
- Participated in the Refresher Course held from 2<sup>nd</sup> November 2016 to 22<sup>nd</sup> November 2016, on the theme “Interdisciplinary Avenues for Advancement in Basic Sciences” organized by Human Resource Development Centre, Madurai Kamaraj University, Madurai.
- Completed 8 weeks Aug-Sep 2018, NPTEL Online Certification Course on Stereochemistry with 88 percentile score.
- Completed Two-Week Refresher Course On “Managing Online Classes & Co- creating MOOCs 15.0” from 06 - 20 June, 2022 conducted by Teaching Learning Centre, Ramanujan College, University of Delhi under the aegis of MINISTRY OF EDUCATION PANDIT MADAN MOHAN MALAVIYA NATIONAL MISSION ON TEACHERS AND TEACHING.
- Participated in the Online Refresher Course in Chemistry held from 15 July 2021 to 28 July 2021, organized by Human Resource Development Centre, Pondicherry University, Puducherry.

### Conference / Seminar Presentations:

- Presented poster at the 10<sup>th</sup> CRSI National Symposium in Chemistry (NSC-10), Indian Institute of Science, Bangalore, Feb 1-3, 2008.
- Presented poster at National Conference on Recent Trends in Organic Synthesis, School of Chemistry, Bharathidasan University, Trichy, Jan 24-26, 2011.
- Presented a paper at International Conference on Recent Advances in Materials and Chemical Sciences; (ICRAMCS-2015), Department of Chemistry, Gandhigram Rural Institute, Gandhigram, Dec 14 -15, 2015.
- Presented a poster in the International Seminar on “Materials Science and Technology” organized by the Department of Chemistry, A.P.C. Mahalaxmi College for Women, Thoothukudi on Dec 28, 2016.
- Participated in the National Level Advanced Lecture Series programme on “Organic Spectroscopy, Stereochemistry and Reaction Mechanism” organized by the Department of Chemistry, Lady Doak College, Madurai, during Feb 20 -21, 2018.
- Presented a paper in the International Conference on Frontier Areas of Chemistry organized by the Department of Chemistry, The American College, Madurai, July 17 – 19, 2018.
- Participated in “Advanced Separation and Detection Seminar” organized by Agilent Technologies India Pvt. Ltd., on 5 September 2018.
- Presented a paper in the International Conference on “Recent Trends in Chemistry and Biosciences” (ICRTCB-2019) organized by Department of Inorganic Chemistry, School of Chemistry, Madurai Kamaraj University during 16-17 May 2019.
- Participated in the International Conference on Frontier Areas of Chemistry-2019 (ICFAC-2019) organized by the Department of Chemistry, The American College, Madurai, on 5 July 2019
- Presented a paper in the International Conference on “Frontier Areas of Chemical Technologies -2019” (FACTs-2019) organized by the Department of Industrial Chemistry, School of Chemical Sciences, Alagappa University, Karaikudi during 25-26 July 2019.
- Presented a paper in the International Conference on “Expanding Frontier Areas in Chemistry (EFC-19)” organized by the Department of Chemistry, Arul Anandar College, Karumathur on 13<sup>th</sup> September 2019.
- Presented paper in the International Conference on “Recent Trends in Materials and Magnetism RTMM-22 organized by Loyola College, Chennai on 15-16<sup>th</sup> December 2022.

- Presented paper in the International Conference on “Frontiers in Chemistry and Material Science ICFCMS-22 organized by Mannar Thirumalai Naicker College, Madurai on 19-20<sup>th</sup> December 2022.
- Presented a paper in the International Conference on “Expanding Frontier Areas in Chemistry (EFC-23)” organized by the Department of Chemistry, Arul Anandar College, Karumathur on 15-16<sup>th</sup> February 2023.

**Resource person/Guest Speaker/ Lectures / Talks given:**

- Mass Spectrometry: Significance and Applications, Yadava College, Madurai.
- Stereochemistry: Blessing to chemistry, Yadava College, Madurai.
- Ultraviolet Spectroscopy: Principle and applications, Yadava Women’s College, Madurai.
- Quiz Programme-Organized and conducted, Fatima College, Madurai
- Amazing: But True (Stereochemistry and life) – CSI College for Women, Madurai
- Guest Speaker at Velammal College for Engineering and Technology, Topic: Photochemistry.
- Ozone Day- Yadava College, Madurai.
- Aromaticity, V.V.Vanniaperumal College for Women, Virudhunagar.
- Juror for Oral Presentation, International Conference on “Expanding Frontier Areas in Chemistry (EFC-19)”- Arul Anandar College, Karumathur
- NET/SET/GATE coaching classes-2019 at PSGR Krishnammal College for Women, Coimbatore.
- Aromaticity-JAM, CSIR & GATE Perspective, at The American College, Madurai.
- “Fluorescent Chemosensors” One Week Online Faculty Development Programme ‘Recent Advances and Research Avenues in Material Science’ (RRM-2020) conducted by Department of Chemistry, School of Advanced Sciences, Kalasalingam Academy of Research and Education, Krishnankoil.
- NMR Spectroscopy in CSIR/GATE Perspective, Postgraduate and Research Department of Chemistry, Vivekananda College, Madurai.
- NET/SET/GATE coaching classes-2020 at PSGR Krishnammal College for

Women,Coimbatore.

- NET/SET/GATE coaching classes (2020-2021) at ANJA College, Sivakasi.
- Principles and Applications of IR spectroscopy, Nirmala College for Women, Coimbatore.
- Chief Guest for conducting Guest Lecture Programme on the topic "Basic Concepts in Stereochemistry" at Mannar Thirumalai Naicker College, Madurai on 19<sup>th</sup> March 2021.
- Online-Coaching Programme on CSIR-UGC JRF/NET, GATE & SET Examinations for aspirants in Chemistry jointly organized by Centre for Technology Enhanced Learning (CTEL) and the Department of Chemistry, ANJA College, Sivakasi for the academic year 2021-2022.
- NET/SET/GATE coaching classes-2020 at PSGR Krishnammal College for Women,Coimbatore.
- Delivered a special lecture on "Molecules in 3D-Interesting facts" at Lakshmi College of Education, Gandhigram, Dindigul on 23<sup>rd</sup> December 2021.
- NET/SET/GATE coaching classes-2021 at PSGR Krishnammal College for Women,Coimbatore.
- Training programme for UG students on "Hacks to Crack JAM exams in Chemistry" at VVV College, Virudhunagar on 8<sup>th</sup> & 29<sup>th</sup> October 2022.
- NET/SET/GATE coaching classes-2022 at PSGR Krishnammal College for Women,Coimbatore.
- Member of Jury Panel for painting competition at K.V. Madurai on 23 January 2023.
- Online-Coaching Programme on CSIR-UGC JRF/NET, GATE & SET Examinations for aspirants in Chemistry jointly organized by Centre for Technology Enhanced Learning (CTEL) and the Department of Chemistry, ANJA College, Sivakasi for the academic year 2022-2023.
- Acted as Chief Guest for XENO SCI-FARE 2023 on National Science Day at Kalvi International Public School on 28<sup>th</sup> February 2023.

### **Awards / Fellowships:**

- Awarded with Summer Research Fellowship (Indian Academy of Sciences, Bangalore)- Project **Asymmetric synthesis** carried under the guidance of **Goverdhan Mehta** (Director, IISc), May 2009-July 2009.
- Awarded with Cash prize for the University Rank Holder during the M.Sc Chemistry Programme.
- Gold Medal Award for the best student-M.Sc Chemistry, The American

College, Madurai, April 2000.

- Silver Jubilee Gold Medal award for the best old student- M.Sc Chemistry, The American College, Madurai, April 2001.
- Various Academic awards during MSc & B.Sc programme.

**UGC Sponsored Projects:**

**Minor Project**

<b>Title</b>	<b>Funding Agency</b>	<b>Year of Award</b>	<b>Amount Awarded(Rs.)</b>	<b>Status</b>
Synthesis, characterization and antitubercular evaluation of novel heterocycles.	UGC	2011-2013	1,90,000	Completed