SREE NARAYANA COLLEGE, NATTIKA

FACULTY PROFILE



DR. ANABHA E. R.

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Academic Qualifications

B. Sc. Chemistry (1993-1996): First Class University of Calicut Sree Narayana College, Nattika

M. Sc. Chemistry (Polymer Science specialization) (1996-1998): First Class with Third Rank Mahatma Gandhi University, Kottayam

School of Chemical Sciences

M. Sc. Project (1998): Vikram Sarabhai Space Centre, Thumba, Thiruvananthapuram

Research Guide: Dr. S. Venkitachalam Area of Research: Conductive Polymers

GATE 98: Score 81.81

Ph. D in Chemistry (2000-2004): Awarded in 2005

Mahatma Gandhi University School of Chemical Sciences

Research Guide: Dr. C. V. Asokan (late)

Area of Research: Synthetic Organic Chemistry

Title of the thesis: Chloromethyleneiminium salt mediated synthesis of functionalized

pyridines

Qualified CSIR in 2000 & 2001, SRF in 2003

CSIR-RA (2007-2010)

National Institute for Interdisciplinary Science and Technology (CSIR-NIIST), TVM

Research Guide: Dr. G. Vijay Nair

Area of Research: Organic Synthesis, Organo-catalysis and cycloaddition reactions

Teaching Experiences:

Worked as Guest Lecturer under FIP, Department of Chemistry, Sree Narayana College, Nattika (2004-2006)

Temporary Lecturer at School of Chemical Sciences, Mahatma Gandhi University, Kottayam (2009-2010)

Guest lecturer in St. Aloysius College, Elthuruthu (2010)

Assistant Professor at Sree Narayana College, Alathur (2011-2013)

Assistant Professor at Sree Narayana College, Nattika (2013 – 2022)

Assistant Professor and HOD at Sree Narayana College, Nattika (2012 onwards) (In the meanwhile the department was upgraded to Research department of Chemistry)

Positions held and Duties taken inside the College

- ➤ RUSA coordinator 2020 onwards
- > Space utilization and Time Table committee coordinator 2022-23 onwards
- ➤ FIST Coordinator in 2022-23
- Additional Superintendent of Examinations in 2014 2017
- ➤ IQAC assistant coordinator 2014 17
- NAAC-Criteria 3 Coordinator 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24
- Research & Publication Committee Coordinator 2017-18
- Coordinator for yearly multidisciplinary seminar series "PARAMPARA 2019, PARAMPARA 2020, and PARAMPARA 2022
- ➤ Member in admission committee, Research & Publication committee, Extension committee and Science club 2020-21
- ➤ Coordinator for UGC Remedial Coaching Centre in 2013-14
- ➤ ASAP Coordinator in 2014-16
- ➤ Coordinator for UGC sponsored national Seminar ATC 2015
- ➤ Energy &Conservation club coordinator 2011-12, Sree Narayana College, Alathur
- ➤ Acted as HOD during the period 1/1/2011-14/6/2013 and so a college council member at Sree Narayana College, Alathur.
- ➤ Acted as Science club coordinator in the academic year 2012-2013, at Sree Narayana College, Alathur
- ➤ Acted as CCSS-UG coordinator in the academic year 2012-2013, at Sree Narayana College, Alathur

Positions held and Duties taken Outside the College

- ➤ Chairperson of M. Sc. Chemistry centralized valuation camps conducted by the University of Calicut in the year 2022 onwards
- Member Board of studies, M.Sc. Polymer Chemistry, University of Calicut

- ➤ Member –Board of studies UG & PG Biochemistry, University of Calicut 2019-22
- ➤ Chairman of question paper setters for various Universities and question paper setter for autonomous colleges.
- ➤ Member in the syllabus development committee of Calicut University
- ➤ Member Board of Examinations UG, Environment & Water Management, University of Calicut 2011 onwards
- Member Board of Examinations PG, Polymer Chemistry, University of Calicut
- ➤ Member –Board of Examinations PG Environmental Chemistry, University of Kannur
- ➤ Member Board of Examinations UG & PG Chemistry, University of Calicut
- ➤ Acted as external expert for the evaluation of start up project in Mahatama Gandhi University

Research Experience:

Research guide under the University of Calicut

Centre: Sree Narayana College, Nattika

Area of Research: Organic Synthesis, Multi component reactions involving Vilsmeier-Haack

reagents

Research Students: 1

Research guide under Mahatma Gandhi University in 2009-2010 Guided M. Phil students

Project:

An B.Sc. project entitled "An investigation on the reactions of aniline with oxidizing agents in view to develop a novel method for the estimation of aniline" by Anjali K.P, Anushka Jayan, Athira C.S, Chinjo Jose, Fathima Fiza.M, Induja P.C was funded (Rs.9000/-) by Kerala State Council for Science, Technology & Environment in 2019.

Collaboration with other Institutions

School of Pure & applied Physics, MGU, Kottayam

Papers published: 21

- 1. 'A Novel multicomponent reaction involving Isoquinoline, allenoate and cyanoacrylates' Vijay Nair, Beneesh Pattoorpadi Babu, Vimal Varghese, C. R. Sinu, Rony Rajan Paul, <u>E. R. Anabha</u> and E. Suresh *Tetrahedron Letters* **2009**, *50*, 3716.
- **2.** 'NHC catalyzed Annulation of Enals to Chalcones in Methanol: A stereoselective Synthesis of Highly Functionalized cyclopentanes' Vijay Nair, P. B. Beneesh, Vimal Varghese, Sreekumar Vallalath, <u>E. R. Anabha</u> and E. Suresh *Organic Letters* **2009**, *11*, 2507.
- **3.** 'Nitrone cycloaddition to Quinones: Novel strategy for the synthesis of benzisoxazolidenes' Rony Rajan Paul, Vimal Varghese, P. B. Beneesh, C. R. Sinu, E. Suresh and <u>E. R. Anabha</u> *J. Heterocyclic Chemistry* 01/2010; 41(35).

- 4. 'Nucleophilic Heterocyclic Carbene as a Novel Catalyst for Cyclopropanation of Cyano Acrylates. Nair, V.; Anabha, E. R., Paul, R. R., Suresh, E. *Org. Bio. Chem.*, 2010, 901
- 5. 'A Convenient preparation of 2-aroyl-3,3-bis(alkylsulfanyl)acrylaldehydes and their application in the synthesis of 5-aroyl-2-oxo-1,2-dihydro-2-pyridinecarbonitriles' <u>E. R. Anabha</u>, C. V. Asokan *Synthesis*, **2006**, 151-155.
- 6. 'Synthesis of 3-aroylnicotinonitriles from aroylketene dithioacetals' <u>E. R. Anabha</u>, K. N. Nirmala, Abraham Thomas, C. V. Asokan *Synthesis*, **2007**, 428-432
- 7. 'A facile method for the synthesis of nicotinonitriles from ketones via a one-pot chloromethyleneiminium salt mediated three-component reaction' C. V. Asokan, <u>E. R. Anabha</u>,* Ajith Dain Thomas, Ann Maria Jose, K. C. Lethesh, M. Prasanth and K. U. Krishnaraj *Tetrahedron Lett.* **2007**, *48*, 5641-5643.
- 8. 'A facile method for the synthesis of substituted 2-ylidene-1,3-oxathioles from acetophenones' R. Samuel, C. V. Asokan, S. Suma, P. Chandran, S. Retnamma and <u>E. R. Anabha</u>* *Tetrahedron Lett.* **2007**, *48*, 8376-8378.
- 9. 'Alkylation of aryl 3-oxopropanedithioate and 3-amino-1-aryl-3-thioxo-1-propanones as an effective tool for the construction of thiophenes and annulated thiophenes' Reichel Samuel, Prakash Chandran, S. Retnamma, K. A. Sasikala, N. K. Sreedevi, <u>E. R. Anabha</u>* and C. V. Asokan, *Tetrahedron* **2008**, *64*, 0000.
- 10. 'Simple methods to synthesis 2-pyridones: Reactions of 2-aroyl-3,3-bis(alkylsulfanyl)acrylaldehydes and cyanoacetamide' Annie Mathews,* <u>E. R. Anabha</u>, K. A. Sasikala, K. C. Lethesh, K. U. Krishnaraj, K. N. Sreedevi, M. Prasanth, K. S. Devaky, C. V. Asokan *Tetrahedron* **2008**, *64*, 1671-1675.
- 11. 'Synthesis of thiophenes and annulated thiophenes via alkylation of 3-oxopropanedithioates' Reichel Samuel, Prakash Chandran, S. Retnamma, K. A. Sasikala, N. K. Sreedevi, E. R. Anabha* and C. V. Asokan *Synfacts* **2008**, 8, 806-806.
- 12. '2-[2-(4-Methylbenzoyl)-3,3-bis(methylsulfanyl)prop-2-enylidene]malononitrile' J. Nirmala, N. V. Unnikrishnana, C. V. Asokan, E. R. Anabha, C. Sudharsanakumar *Acta Crystallographica* **2008**, *E64*, o592.
- 13. '2-[2-Benzoyl-3,3-bis(methylsulfanyl)-prop-2-enylidene]malononitrile' J. Nirmala, N. V. Unnikrishnana, <u>E. R. Anabha</u>, C. Sudharsanakumar *Acta Crystallographica* **2008**, *E65* o1727
- 14. 'The reaction of 2-Aroyl-3,3-bis(alkylsulfanyl)acrylaldehydes and hydroxylamine hydrochloride: Facile synthesis of differently substituted Isoxazoles' Annie Mathews, K. A. Sasikala, Sholly C. George, K. U. Krishnaraj, N. K. Sreedevi, M. Prasanth, <u>E. R. Anabha</u>, K. S. Devaky, C. V. Asokan *J. Heterocyclic Chemistry* **2009**, *45*, 1583.
- 15. Sasikala, K. A.; Kalesh, K. A.; Anabha, E. R.; Madhavan Pillai, P.; Asokan. C. V.; Devaky, K. S. *Tet Lett.*, 2011, 52, 1667.
- 16. A Facile Method for the Synthesis of Aroyl Pyrazoles from Functionalized Ketene dithioacetals Sreedevi N.K, Annie Mathews, K. S. Devaky*, E. R. Anabha* J. Heterocyclic Chemistry 22/11/**2013**, DOI: 10.1002/jhet.1954

- 17. A Facile One-pot Synthesis of Chloropyridines from Chalcones Prasanth K. Menon, K. U. Krishnaraj, Sholly C. George, K. S. Devaky,* and E. R. Anabha J. Heterocyclic Chemistry 25th March **2014**, DOI: 10.1002/jhet.1790
- 18. 1,4-Dipolar cycloadditions and related reactions Vijay Nair a,*, Ani Deepthi, Devipriya Ashok, Anabha E. Raveendran, Rony Rajan Paul Tetrahedron 70, **2014**, 3085-3105.
- 19. Probing mechanism of a-formylketene dithioacetal towards the facile formation of functionalized pyrimidines: A structural approach Monu Joy*, Adebayo A. Adeniyi, Annie Mathews, Bijo Mathew, S. Prasanth, Mohmoud E.S. Soliman, Jalaja J. Malayan, E.R. Anabha Journal of Molecular Structure 1127 (**2017**) 498-510
- 20. Monu Joy, E. R. Anabha, Subash Gopi, Bijo Mathew, Ajeesh Kumar S and, Annie Mathews, Structural and optical profile of a multifunctionalized2-pyridone derivative in a crystal engineering perspective, Acta Cryst. C74 2018, 807–815
- 21. Prasanth Menon^{ac}K.U.Krishnaraj^aE.R.Anabha^{ad}K.S.Devaky^aSajesh P.Thomas, Synthesis, crystal structure and electron density analysis of a sulfanyl 2-pyridone analogue: Tautomeric preference and conformation locking by S···O chalcogen bonding, Journal of Molecular Structure, 2020, 128798

Papers presented in Seminars/Conferences

1. A poster presentation in the national seminar entitled "Recent advances in Chemical Sciences (RACS-2002)" conducted by School of Chemical Sciences, Mahatama Gandhi University, Kottayam on 16-19, December 2002.

Title: "Reactions of β-oxodithiocarboxylates with α-haloketones: Synthesis of substituted 2-Ylidene-1,3-oxathioles and substituted thiophenes" <u>E. R. Anabha</u>, S. Retnamma, Reichel Samuel, S. Suma and C. V. Asokan*.

2. A poster presentation in the international seminar entitled "International Symposium on Advances in Organic Chemistry (INSOC-2006)" conducted by School of Chemical Sciences, Mahatama Gandhi University, Kottayam on 9-12, January 2006.

Title: "Chloromethyleneiminium Salt Mediated Three Component Reactions for the Synthesis of Pyridine Derivatives" <u>E. R. Anabha</u>, C. V. Asokan*.

- 3. Delivered a talk on "An account on Vilsmeier-Haack reaction" in Dr. C. V. Asokan Memorial Lecture Series-2014 on 11/3/2014 conducted at School of Chemical Sciences, Mahatma Gandhi University, Kottayam.
- 4. Delivered an invited talk on the topic "Nobel Prize in Chemistry 2014 at S. N. College, Alathur on 19/01/2015

- 5. A paper presentation in a national seminar entitled "Advanced trends in Chemistry-Atric 2012 "conducted by Post Graduate Department of Chemistry, St. Aloysius College, Elthuruth on 30/11/12 to 1/12/12.
- 6. Presented a paper entitled "An investigation on the reactions of aniline with oxidizing agents in view to develop a novel method for the estimation of aniline" in 32nd Kerala Science Congress in 2020

Faculty as Resource person

Participated as faculty and successfully coordinated classes in an online programme for students titled "Learn in Lockdown with AKPCTA" conducted by the All Kerala Private College, Teachers Association in May 2020.

Seminars organized :

- Act as a coordinator for national seminar entitled "Save Green, Save Earth" organized by the department of EWM and the department of Chemistry at Sree Narayana College, Alathur on 4th January 2013.
- 2. Organized a UGC sponsored two day seminar on the topic "Advanced topics in Chemistry ATC 2015 at S. N. College, Nattika on 19-20 August 2015
- 3. Organized

Seminars attended

- Participated in the national seminar entitled" Advances in Molecular spectroscopy "conducted by IISER, TVM & Post Graduate Department of Chemistry, Sree Sankara College, Pattambi in the year 2011.
- 2. Participated in the national seminar entitled "Emerging trends in Biopharmaceuticals" conducted by St. Mary's College, Thrissur on 26-27 August 2011
- Participated in the seminar entitled "Human Rights Violations by the Police The Kerala Experience" conducted by Institute of Parliamentary Affairs & SrNarayan ee a College, Alathur on 6-7 January 2012
- 4. Participated in the UGC sponsored national seminar on "Current Trends in Chemistry" organized by the PG & Research department of Chemistry, Christ College, Irinjalakuda on 14 & 15 October 2014
- 5. Participated UGC sponsored National Seminar on Gender issues and empowerment of Women on 5-6 February 2014 at S. N. College, Nattika
- 6. Participated in International Conference on Chemistry & Physics of Materials (ICCPM 2018) organized by St. Thomas College, Thrissur on 19/12/2018-20/12/2018.
- 7. Participated in the State level seminar sponsored by KSCSTE on the topic Interdisciplinary Chemical Research on 15 & 16th January 2018.

Workshop attended

- 1. Participated in the Science leadership workshop organised by the Central University of Panjab, Bathinda, India from June 22 to June 28,2020
- 2. Successfully completed the Twoday hands on workshop on "Molecular Biology Techniques and Bioinformatics" held at Sree Narayana College, Nattika on 17 & 18 January 2018.

Refresher/Orientation Attended: Nil

Participated 77th orientation programme conducted by the Academic staff college, University of Calicut during the period January 16, 2013 to February 12, 2013.

Participated in the UGC sponsored refresher course in Nano Sciences UGC- Academic staff college, University of Kerala, Kariavattom during the period 22/10/2013-11/11/2013.

Successfully completed ARPIT course for CAS promotion - Online refresher course in Chemistry for Higher education with A grade in the proctored examination held on 16/2/2020 by Sri Guru Tegh Bahadur Khalsa College, University of Delhi.

Successfully completed two weeks Faculty development Programme on "Managing online classes and cocreating MOOCs" sponsored by MHRD Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching fromMay18-June 03,2020.

Successfully completed one week short term programme on "Leadership Development in Academics" sponsored by University of Hyderabad from 3rd to 8th August 2020.

Successfully completed one weeks Faculty development Programme on "Moodle based Learning Management System and Course design (Advanced Course)" sponsored by The Kerala State Higher education Council from 3-9 May 2023.