Detailed CV

Name: **Dr. Mahagundappa Rachappa Maddani**

Educational Qualification:
M.Sc. (2003-Karnatak University Dharwad, Karnataka)
Ph.D. (2010-IISc., Bengaluru, Karnataka)

Designation: **Assistant Professor**

Address for Correspondence:
Department of Chemistry
Mangalore University
Mangalagangothri - 574199

E-mail: mahagundappa@mangaloreuniversity.ac.in;
mahagundappa@gmail.com

Phone: Office: +918242288628; +918242287262;
Mobile: 09964344543

Area of Specialization: **Organic Chemistry**

Research Areas: **Synthetic Methodologies and Catalysis**

Research Activities: The most fundamental expedition in the organic synthesis is to explore new synthetic methods for preparing biologically and pharmaceutically important molecules in an efficient and elegant manner. In this context, our research is mainly focused on design and exploitation of novel organic/organometallic/metal reagents and catalysts in organic synthesis. Research is also directed towards employing green reaction conditions for the synthesis of new molecules and development of Multi Component Reactions (MCR). Interested in testing the efficiency of new chiral reagents and catalysts in asymmetric transformations and examining their applications in organic synthesis. In addition, we are also involved in C-C and C-hetero bond formations through C-H activation/functionalization strategies using green chemistry principles.

Professional Teaching / Research Experience

1. **Assistant Professor** Mar 2014 – Present
   Department of Chemistry, Mangalore University, INDIA

2. **Advinus Therapeutics Ltd., Bengaluru** Oct 2011 - Feb 2014
   Designation: Principal Scientist

3. **Postdoctoral research:** June 2010 - May 2011
   Research Topic: *"Stereoselective synthesis of enantiopure compounds for biological studies"*
   Institut de Chimie Moléculaire et des Matériaux d'Orsay, University of Paris Sud-XI, France
   Advisor: Professor HENRI B. KAGAN

4. **Ph.D programme:** August 2005 - June 2010
   Research Topic: *"Chemistry of Molybdenum Xanthate ($MoO_2[Et_2NCS_2]_2$): Applications in Organic Synthesis"*
   Department of Organic Chemistry, Indian Institute of Science, Bengaluru, INDIA
   Supervisors: Dr. K. R. PRABHU and Prof. S. CHANDRASEKARAN

5. **Aurigene (Accelerating discovery) Ltd., Bengaluru** Jan 2005 – June 2005
   Designation: Science Associate

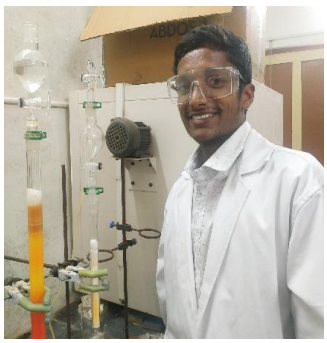
6. **CIPLA Ltd, Bangalore** June 2003 – Dec 2004
   Designation: Synthetic Organic Chemist

Research Guidance (Ph.D.s):

Research Scholars – Ongoing

Ms. Lavina G. Serrao
Thesis-Submitted (Jan 2025)

Ms. Kavyashree K. Gond
Thesis-Submitted (Mar 2025)



Mr. Naveenkumar S.

(Feb 2022 - Present)

Mr. Dundappa Mundiganal
(June 2023 - Present)

Research Scholars – Ph.D. Degree awarded

Sl. No.	Research Scholar		Title of Thesis	Year of Award
1		Dr. Ganesh S. Sorabad	Design and Development of C-X, C-S and C-Se Bonds on Electron Rich Systems via Oxidative C-H Functionalization	Feb 2020
2		Dr. Vishakha Rai P.	Design and Development of C-Heteroatom Bonds on Electron Rich Systems via Oxidative C-H Functionalization and 1,6-Addition Reactions	Mar 2022
3		Dr. Shwethambika P.	A Study on the Effectiveness of Plant Extracts as Corrosive Inhibitors on Mild Steel and Aluminium	Mar 2023

Research Group @ 2019

Research Group @ 2022

Research Group @ 2023

Research Projects: Completed

1. **UGC-BSR Startup Research Grant:** From Oct-2015 to Sep-2017
   Title of the Project: *Novel synthetic strategy for easy access to proline derivatives.*
   ***Funding Agency*:** UGC, INDIA; *Amount*: Rs. 6 Lacs.

2. **SERB-DST, Early Career Research Award. Restructured Start up Research Grant:**
   From 17-06-2016 to 16-06-2019
   ***Title of the Project*:** *Investigation of reactivities and applications of new electrophile components for Morita-Baylis-Hillman reaction.*
   ***Funding Agency*:** SERB-DST, Govt. of INDIA; *Amount*: Rs. 32.67 Lacs

3. **VGST, Government of Karnataka, INDIA - As Co PI**
   From 2020-21 to 2022-23
   ***Title of the Project*:** *Areca husk fiber as thermal insulator and acoustical absorber: Conversion of agricultural waste into useful product*.
   ***Funding Agency*:** VGST, Govt. of Karnataka, INDIA; *Amount*: Rs. 30 Lacs

Research Publications:

Book Chapter:

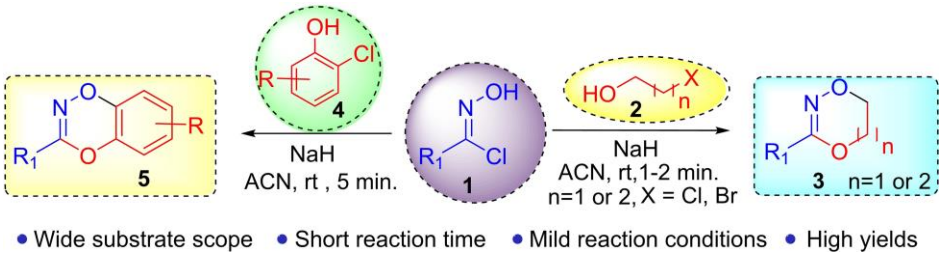
1. Separation of Enantiomers: New methods and Applications – Chapter II: Stoichiometric Kinetic Resolution reactions, Mahagundappa R. MADDANI, Jean Claude FIAUD, and Henri B. KAGAN, Wiley-VCH Publication. Published online: 2nd May 2014, Print ISBN- 9783527330454, online ISBN-9783527650880

Patents:

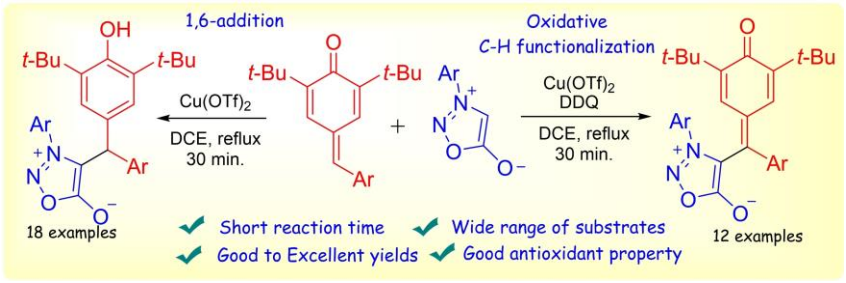
1. "Process for preparing fluoxastrobin", Rama Mohan Hindupur, Avinash Sheshrao Mane, Sankar Balakrishnan, Jivan Dhanraj Pawar, Mahagundappa Rachappa Maddani, Sandeep Wadhwa, WO2015006203 (A1), Publication date: 15/01/2015.
2. "Process for preparing fluoxastrobin", Rama Mohan Hindupur, Avinash Sheshrao Mane, Sankar Balakrishnan, Jivan Dhanraj Pawar, Mahagundappa Rachappa Maddani, Sandeep Wadhwa, Vic Prasad, US20150011753 (A1), Publication date: 08/01/2015, also published as WO2015006203 (A1).

Research Journals

24. Facile Synthesis of 1,4,2-Dioxazines Using Aromatic Chlorooximes and 2-Chloroethanol/2-Chlorophenols, Lavina Gladis Serrao and Mahagundappa Rachappa Maddani, *Asian J. Org. Chem.*, 2024, e202400475, doi.org/10.1002/ajoc.202400475



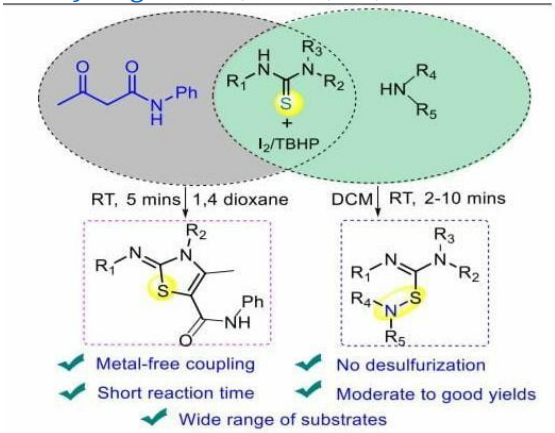
23. Addition of Sydnones to para-Quinone Methides: Selective 1,6-Additions and Oxidative C–H Functionalizations, Lavina Gladis Serrao, S. Naveenkumar, Mahagundappa R. Maddani, *Eur. J. Org. Chem.*, 2024, 27, e202400703, doi.org/10.1002/ejoc.202400703



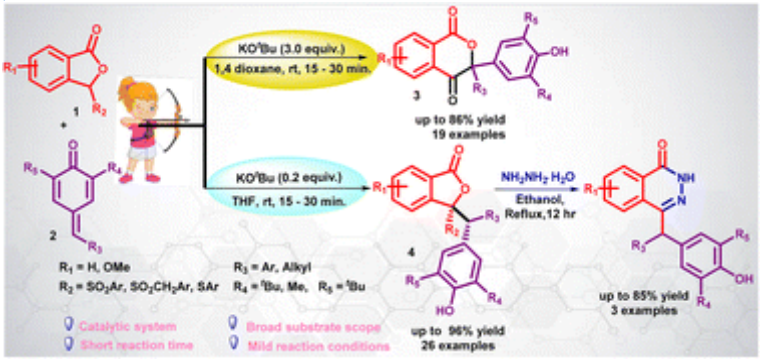
22. Convenient synthesis of spiro-pyrazolone–pyrrolidinones via *ipso*-cyclization of arylidene pyrazolones with 2-chloro-*N*-phenylacetamides, Kavyashree Kuppayya Gond and Mahagundappa Rachappa Maddani, *New J. Chem.*, 2024, *48*, 15866-15869

21. Facile synthesis of spiro-pyrazolone-tetrahydrofurans/pyrans: *ipso*-cyclization of arylidene pyrazolones with haloalcohols, Kavyashree Kuppayya Gond and Mahagundappa Rachappa Maddani, *New J. Chem.*, 2024, *48*, 8667-8671

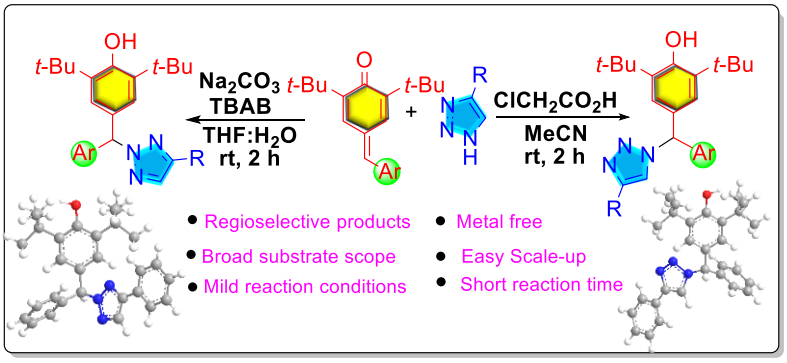
20. Iodine catalysed oxidative cross coupling of thioureas and amines without desulfurization, Lavina Gladis Serrao, Vishaka Rai, Ganga Periyasamy, Mahagundappa Rachappa Maddani, *Asian J. Org. Chem.*, 2023, *12*, e202300032.



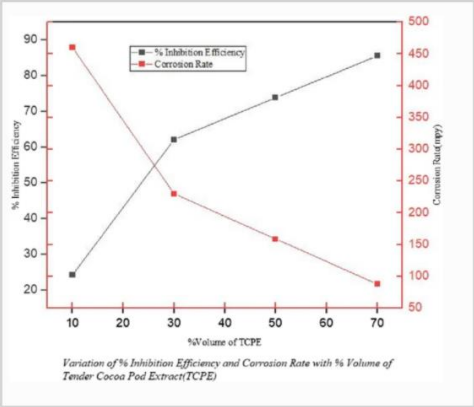
19. Addition of Sulfonylphthalides to *para*-Quinone methides: Selective 1,6 additions and Oxidative annulations, Kavyashree K. Gond, and Mahagundappa R. Maddani, *Org. Biomol. Chem.*, 2023, *21*, 2504-2508



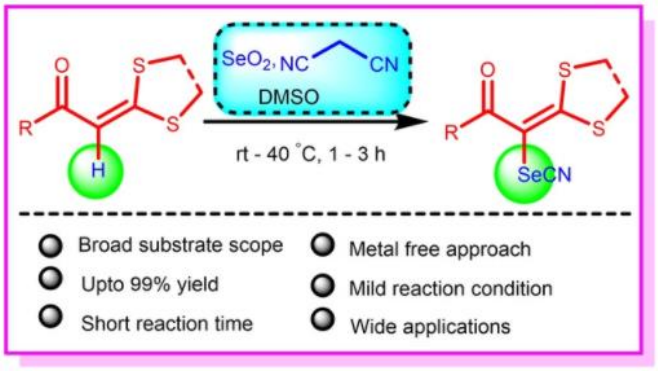
18. 1,6-Addition of 1,2,3-NH triazoles to para-quinone methides: Facile access to highly selective N^1 and N^2 substituted triazoles, Vishakha Rai, Kavyashree P., Sarvesh S. Harmalkar, Sunder N. Dhuri and Mahagundappa R. Maddani, *Org. Biomol. Chem., 2022, 20, 345-351*



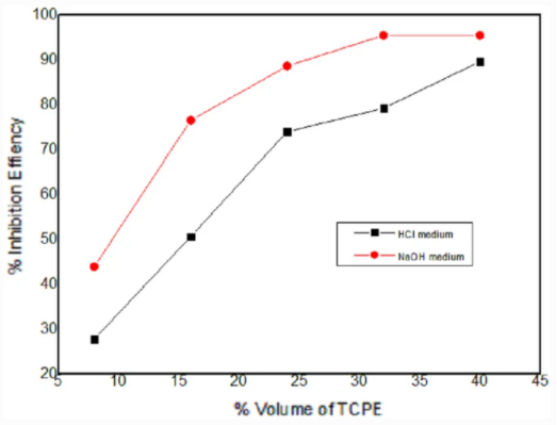
17. Spectroscopic characterization and evaluation of tender Theobroma cacao pod extract as ecofriendly inhibitor for mild steel in 1 M HCl, Shwethambika Pernaje, Ishwara J. Bhat, Mahagundappa R. Maddani, *Research on Chemical Intermediates*, 2021, *47*, 5369–5388



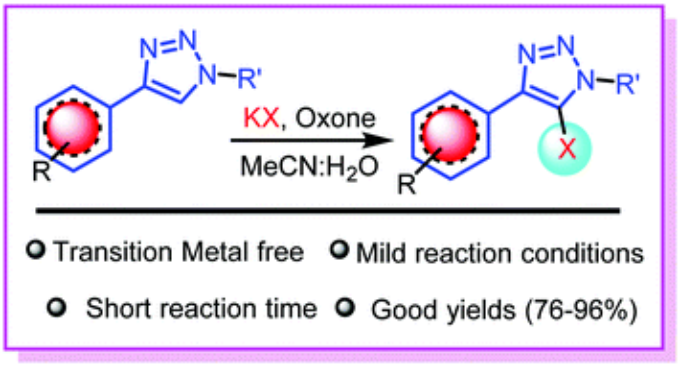
16. Efficient and Direct Selenocyanation of Ketene Dithioacetals Using Malononitrile-SeO_2 Under Transition-Metal-Free Conditions, Vishakha Rai, Ganesh Shivayogappa Sorabad and Mahagundappa Rachappa Maddani, *ChemistrySelect*, 2021, *6*, 6468-6471



15. Chemical and Electrochemical Investigation on Mitigation of Acidic and Alkaline Corrosion for Al-63400 Alloy Using Tender Cocoa Pod Extract, Shwethambika Pernaje, Ishwara J. Bhat, Mahagundappa R. Maddani, *Journal of Bio and Tribo Corrosion*, 2021, *7*(3), Article No-120

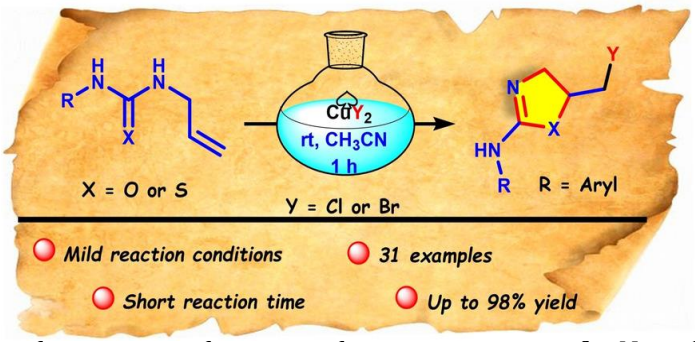


14. Facile and direct halogenation of 1,2,3-triazoles promoted by a KX–oxone system under transition metal free conditions, Vishakha Rai, Ganesh Shivayogappa Sorabad and Mahagundappa Rachappa Maddani, *New J. Chem.*, 2021, *45*, 3969-3973

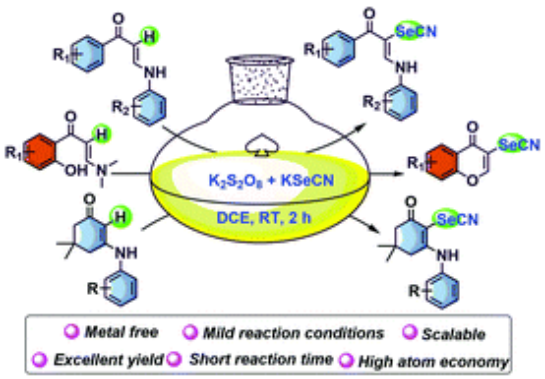


13. Transition metal free, green and facile halogenation of ketene dithioacetals using a KX–oxidant system, Vishakha Rai, Ganesh Shivayogappa Sorabad and Mahagundappa Rachappa Maddani, *New J. Chem.*, 2021, *45*, 1109-1113

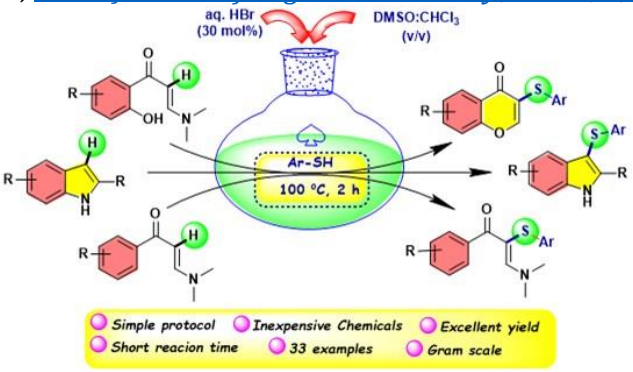
12. CuX_2 Mediated Facile Halocyclization of *N*-Allyl Thioureas, Vishakha Rai, Ganesh Shivayogappa Sorabad and Mahagundappa Rachappa Maddani, *ChemistrySelect*, **2020**, *5*, 6565-6569



11. Facile, regioselective oxidative selenocyanation of *N*-aryl enaminones under transition-metal-free conditions, Ganesh Shivayogappa Sorabad and Mahagundappa Rachappa Maddani, *New J. Chem.*, **2020**, *44*, 2222 – 2227

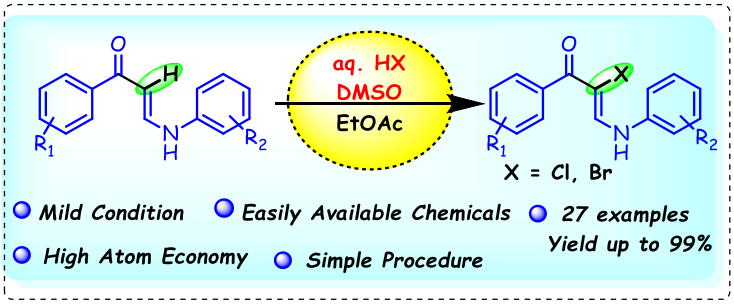


10. Metal free, facile synthesis of sulfenylated chromones and indoles promoted by an aqueous HBr–DMSO system, Ganesh Shivayogappa Sorabad and Mahagundappa Rachappa Maddani, *Asian Journal of Organic Chemistry*, **2019**, *8*, 1336-1343



9. Metal free, facile sulfenylation of ketene dithioacetals catalyzed by an HBr–DMSO system, Ganesh Shivayogappa Sorabad and Mahagundappa Rachappa Maddani, *New J. Chem.*, **2019**, *43*, 5996 – 6000

8. Metal-free, green and efficient oxidative a halogenation of enaminones by halo acid and DMSO, Ganesh Shivayogappa Sorabad and Mahagundappa Rachappa Maddani, *New J. Chem.*, **2019**, *43*, 6563 – 6568



Before joining Dept of Chemistry, Mangalore University

7. Chemistry of Macrocyclic β-Lactam: An Overview, Vijaya Bhaskar Vangala, Mahagundappa Rachappa Maddani, Rama Mohan Hindupur, and Hari Narayan Pati, The Japan Instiiute of heterocyclic Chemistry publication (Japan), *Heterocycles*, 2015, 91, 707 – 717

6. Metal free deprotection of terminal acetonides by using *tert*-butylhydroperoxide in aqueous medium, Mahagundappa R. Maddani, Kandikere R. Prabhu, Georg Thieme Verlag KG (Germany) publication, *Synlett*, 2011, 821 – 825

5. A convenient method for *the synthesis of* substituted thioureas in aqueous medium, Mahagundappa R. Maddani and Kandikere R. Prabhu, American Chemical Society (US) publication, *J. Org. Chem.* 2010, 75, 2327 – 2332
4. Dioxomolybdenum reagents in organic synthesis: utility of redox capability to design reduction and oxidation, Mahagundappa R. Maddani and Kandikere R. Prabhu, Indian Institute of Science (India) publication, *Journal of the Indian Institute of Science*, 2010, 90, 287 – 297

3. Chemoselective reduction of azides catalyzed by molybdenum xanthate by using phenylsilane as the hydride source, Mahagundappa R. Maddani, Saravan K. Moorthy and Kandikere R. Prabhu, Elsevier publication (UK), *Tetrahedron* 2009, 66, 329 – 333

2. A chemoselective aerobic oxidation of benzylic azides catalyzed by molybdenum xanthate in an aqueous medium, Mahagundappa R. Maddani and Kandikere R. Prabhu, Elsevier publication (UK), *Tetrahedron Lett.*, 2008, 49, 4526-4530

1. A convenient method for the synthesis of substituted thioureas, Mahagundappa R. Maddani and Kandikere R. Prabhu, Elsevier publication (UK), *Tetrahedron Lett.*, 2007, 48, 7151-7154

Invited / plenary talks delivered (list)

1. Delivered a lecture - "Cracking NET/SET! Is it really that easy?" organized by Department of Kannada, Mangalore University on 24-04-2025.

2. Delivered a lecture - "Cracking NET/SET! Is it really that easy?" organized by Department of Chemistry, SDM College, Ujire on 01-03-2024.

3. Delivered Vishwanath P. Shetty Endowment Lecture - "*1,6-Additions of para Quinone Methides*" organized by Department of Chemistry, Govinda Dasa College, Surathkal on 07-07-2023.

4. Delivered a lecture - "*Oxidative Halogenations: Safe and Alternative to Traditional Halogenations*" in an invited talk organized by Department of Chemistry, Central University of Karnataka, Kalaburagi on 01-03-2023.

5. Delivered a lecture - "*Oxidative Halogenations: Safe and Alternative to Traditional Halogenations*" in Two Days National Conference On NEW VISTAS IN CHEMISTRY organized by Department of Chemistry, Bangalore University, on 03-08-2022.

6. Delivered a lecture - "*Oxidative Halogenations on electron rich Systems*" during the felicitation program on the occasion of retirement of Prof. K. R. Prabhu and Prof. Tushar Chakraborthy, organized by Department of Organic Chemistry, IISc, Bangalore on 21-07-2022.

7. Delivered a lecture - "*Metal free approach for the oxidative C-H functionalization: Development of C-X and C-S bonds on electron rich systems*" in A Virtual Conference on Recent Advances in Chemical Science and Medicinal Chemistry organized by Department of Organic Chemistry, Mysore University, on 14-03-2022.

8. Delivered a lecture - "*Metal free approach for the oxidative C-H functionalization: Development of C-X, C-S and C-Se bonds on electron rich systems*" in a webinar organized by Department of Chemistry, Bangalore University, on 24-07-2020.

Impact of publications in terms of

h-index, i10 index and Citation index

Google Scholar Citations:
https://scholar.google.com/citations?user=HjAyHzUAAAAJ&hl=en

Awards / Fellowship / Recognition

1) **CSIR-UGC, NET** – December 2009
2) **The Guha Research Medal** (Best thesis award) for the year 2009 – 2010
3) **Award for Research Publications for the year 2021-22** (ARP 2021-22), VGST, Government of Karnataka

FDPs/ Professional Development programs (PDPs)/ Refresher Course/ Orientation Course/ Faculty Induction program (FIPs)/ Workshops/ Seminars/ Conferences attended:

1. Attended the *UGC-Sponsored Orientation Programme GOC-96* organized by Academic Staff College, Guru Nanak Dev University during 11-12-2014 to 07-01-2015 and obtained Grade A.
2. Attended the UGC-Sponsored Refresher Course in Chemistry organized by UGC-HRDC, Goa University during 01-12-2017 to 21-12-2017 and obtained Grade A.
3. Attended the SWAYAM ARPIT online Refresher Course in Chemistry for higher Education organized by S.G.T.B. Khalsa College, University of Delhi during 01-12-2020 to 31-03-2021 and qualified in the proctored examination held on 21/08/2021.
4. Attended the online National Faculty Development Program on 'Strengthening Academic & Research Pursuit in the 21st Century' jointly organized by Dept. of Chemistry & Biochemistry, School of Basic Sciences and Research, Sharda University, Greater Noida and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of Ministry of Education during 28-06-2021 to 04-07-2021 and obtained Grade A+.
5. Attended the online National Faculty Development Program on 'Strategies for Enhancing Mental Health in Teachers and Students' jointly organized by The IQAC and The Dept. of Psychology of Rajagiri College of Social Sciences (Autonomous) and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of Ministry of Education during 26-10-2021 to 01-11-2021 and obtained Grade A.
6. Attended the UGC-Sponsored 3rd online Refresher Course in Chemistry organized by UGC-HRDC, Gujarat University during 21-06-2022 to 04-07-2022 and obtained Grade A+.
7. Attended the UGC-Sponsored 4th online Refresher Course in Chemistry organized by UGC-HRDC, Gujarat University during 09-10-2023 to 22-10-2023 and obtained Grade A.
8. Completed NEP 2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of UGC organized by UGC-MMTTC, Goa University during 13.09.2024 to 24.09.2024.
9. Attended Faculty Enablement Program conducted by Infosys, Springboard during 13-02-2025 to 18-02-2025

Membership of Professional Bodies

Life member - Indian Council of Chemists (ICC)

Important Links

1. Interactive 3D Chemistry Animations- Chem Tube 3D
2. To draw and view 3D image of new molecules please click this link
3. Lecture Notes of "Advanced Organic Chemistry" course by Harvard University Professor David Evans
4. Lecture Notes of "Advanced Organic Chemistry" offered at Harvard University "Chem 206" by Prof. Eugen E. Kwan & Prof. Evans
5. Lectures Notes of "Chem 605 NMR Spectroscopy" course offered by Prof. Hans Reich at the University of Wisconsin
6. For many other useful organic chemistry "Lecture Notes" click this link
7. Evans Pka Table