

Research and List of Publications/Conference Presentations

Department of Chemistry

Department staff is engaged in Research Work with different areas like Organic Synthesis, Coordination Chemistry, Bioorganic/ Inorganic chemistry, Peptide Synthesis and Polymer and Nano-materials Chemistry. In last few years there are 35 papers have been published in national/international journals and have attended various national /international seminars/workshops.

VGST/DST-SERB/UGC Major research projects awarded:

1. Dr. B.N.Kirasur

Establishing Research Laboratory for the Synthesis and Characterization of Metal Complexes with Hydrazone Ligand and Study Its Biological Activities. **Allotted found: 40.00, 000/-(Ongoing)**

2. Dr. Devappa Lamani

“Bio-inspire Peptide-Based Spirochalcogenanes: Synthesis, Characterization and Antioxidant Activity” **Allotted funds: 15.68, 000/-(Completed)**

3. Dr. M.B. Patil Establishing Research Laboratory for the Nanocomposite copolymers and their application in gas Separations. **Allotted funds: 15.68, 000/-(Ongoing)**

List of Publications/Conference Presentations:

1. **S.M. Gaonkar.** Studies on Toxicity of Fluoride and Impact of Endemic Fluorosis from Groundwater Resources of Bagalkot District, Karnataka – Geospatial Information System Approach. *Journal of the Geological Society of India* volume 93, pages109–112 2019.
2. **S. M. Gaonkar.** Assessment and Toxicity Of Fluoride From Ground Water Sources In And Around Bagalkot District, Karnataka, India. *International Research Journal of Pharmacy* 4(5):246-249 May 2013.
3. **Devappa S. Lamani, S. G. Badiger, Mamata Singh.** Formation of Diaryl Sulfides and Sulfoxides: Synthesis, Characterization and Structure Activity Correlation Studies. *Phosphorus, Sulfur, and Silicon and the Related Elements*, 194 (8), 789-795, 2019.
4. **Devappa S Lamani, Venugopala Reddy KR, Bhojya Naik HS** An Efficient Base Catalyzed Three Component One Pot Synthesis of Novel 2Chloro/Marcapto-Quinoline Derivatives: A Potent Antimicrobial Agent, *Der Pharma Chemica*, 2018, 10, 53-56.

5. **Devappa S Lamani**, S.G. Badiger, Venugopala Reddy KR, Bhojya Naik HS. Macrocyclic complexes: synthesis, characterization, antitumor and DNA binding studies, ***Nucleosides, Nucleotides and Nucleic Acids (NN&NA) 6, 2018.***
6. **Devappa S Lamani** Efficient Synthesis of Tetrabenzo[*b, h, k, q*] [1, 2, 6, 10, 11, 15] hexaselenacyclooctadecine-10, 13, 23, 26-tetraone and its Antioxidant Activity. ***Int. Journal. All Res. Edu. and Scient. Methods (IJARESM), ISSN: 2455-6211 Volume 9, Issue 5, May -2021.***
7. **Devappa Lamani** "Synthesis, Characterization and Antioxidant Activity of Spirodiazaselenuranes" ***Org. Biomol. Chem. DOI: 10.1039/C2OB26156A. Vol.10, Year-2012, page 7933.***
8. **Devappa S. Lamani**, S. G. Badiger, Mamata Singh. Formation of Diaryl Sulfides and Sulfoxides: Synthesis, Characterization and Structure Activity Correlation Studies ***Phosphorus, Sulfur, and Silicon and the Related Elements, 2018.***
9. **Devappa S Lamani**, Venugopala Reddy KR, Bhojya Naik HS An Efficient Base Catalyzed Three Component One Pot Synthesis of Novel 2Chloro/Marcapto-Quinoline Derivatives: A Potent Antimicrobial Agent, ***Der Pharma Chemica, 2018, 10, 53-56.***
10. **Devappa S Lamani**, S.G. Badiger, Venugopala Reddy KR, Bhojya Naik HS. Macrocyclic complexes: synthesis, characterization, antitumor and DNA binding studies, ***Nucleosides, Nucleotides and Nucleic Acids (NN&NA) 6, 2018.***
11. **Devappa S. Lamani** and Govindasamy Mugesh. Substituent Effects on the Stability and Antioxidant Activity of Spirodiazaselenuranes. ***Molecules 2015, 20, 12959-12978; doi:10.3390/molecules200712959***
12. Synthesis, DNA binding and antimicrobial activity of base catalyzed 2-phenyl-3-pyrido [3, 2][1,3,4] thiadiazolo[3,2]quinoline derivatives" , - **Devappa Lamani *Journal of Phosphorus Sulfur and Silicon and the Related Elements. Vol.185, Year-2010 page 1-11.***
13. **Devappa S. Lamani**, K. R. Venugopala Reddy, H. S. Bhojya Naik, Prakash Naik and L. R Naik. "Synthesis and DNA Binding Behavior of Novel Fused-quinolin-3-yl)-6-phenyl-5,6-Dihydropyrimidine Derivatives in Aqueous Medium" ***Nucleosides, Nucleotides and Nucleic Acids (NN&NA) 29, 1-8, 2010***
14. **Devappa S. Lamani**, K. R. Venugopala Reddy, H. S. Bhojya Naik, H. R. Prakash Naik "Synthesis, characterization of diquinolino [1,3,7,9] tetraazacyclododecine-7, 15 (14*H*, 16*H*)-dibenzene, and DNA binding studies of macrocyclic Co(II), Cu(II) complexes: as new class of antimicrobial agent" ***Journal of Macromolecule Science:(PAC) 45(10) 857-864, 2008***
15. **Devappa Lamani** Synthesis and DNA Binding Behavior of Novel Fused-quinolin-3-yl)-6-

- phenyl-5,6-Dihydropyrimidine Derivatives in Aqueous Medium” ***Nucleosides, Nucleotides and Nucleic Acids (NN&NA) Vol.29 year 2010 8-Jan.***
16. **Devappa Lamani** Synthesis, Characterization and DNA Binding Studies of S₂N₂ Donor Bis-Mercaptoquinoline Co(II) and Ni(II) Metal Complexes: A new class of Antimicrobial Agent”. ***Journal of Phosphorus Sulfur and Silicon and the Related Elements 185 year 2010 page 550–558.***
 17. **Devappa Lamani** An efficient microwave assisted one pot synthesis of dioxolano quinoline/ benzo[h] quinolines as potent antibacterial agents” . ***Journal: Phosphorus, Sulfur, and Silicon and the Related Elements 185 year 2010 pages 355–360.***
 18. **Devappa Lamani** A Rapid and Efficient Multicomponent Synthesis of Bi-Quinolines under Solvent-Free Conditions” ***Journal: Phosphorus, Sulfur, and Silicon and the Related Elements, 185:00:00 year 2010 page 663–667.***
 19. **Devappa S. Lamani,** K. R. Venugopala Reddy H. S. Bhojya Naik, H. R. Prakash Naik “An Efficient Carbodiimide Mediated Synthesis and DNA binding studies of Novel 2 Chloro/mercapto-quinoline fused-1,3-thiazolidinones *via* One-pot Three-Component Condensation” ***Journal of Sulfur Chemistry, 1-11, 2009.***
 20. H.R. Prakash Naik, H.S. Bhojya Naik, T.R. Ravikumar Naik, T. Aravinda, P.J. Bindu, **D. S. Lamani,** and H. Raja Naik, “Nanostructured TiO₂ catalyzed microwave assisted synthesis of fused quinolines – DNA binding, molecular docking and antioxidant activity. ***Journal of Medicinal Chemistry 5, 148-157, 2009***
 21. H.R. Prakash Naik, H.S. Bhojya Naik **D.S. Lamani,** T.R. Ravikumar Naik, “Benzo[h]quinolinebased Macrocyclic Copper(II) Cobalt(II) Complexes synthesis characterization and light induced DNA Cleavage studies” ***Journal of Macromoleculare Science:(PAC) 46, 790-795, 2009.***
 22. Synthesis of a novel molecular probes inspired by harringtonolide **Vinayak Hegde,** Marc Campitelli, Ronald J. Quinn, David Camp ***Organic and Biomolecular Chemistry, 9 (12), 4570-4579 (2011)***
 23. Synthesis, spectroscopic and crystal structure analysis of 2-amino-5,5-dimethyl-7-oxo-4,5,6,7-tetrahydro-1-benzothiophene-3-carbonitrile and -3-carboxamide. Begum Noor Shahina; Vasundhara D.E.; Lamani, R. S.; **Hegde V. S.;** Khazi I. M. ***Journal of Chemical Research (2009), (3), 180-182.***
 24. Synthesis, Spectroscopic and Crystal Structure of 2-Cyclohexyl-5-formyl-6(4-bromophenyl)imidazo[2,1-*b*][1,3,4] thiadiazole-4-Carbonitrile. N. S. Begum, D. E.Vasundhara, C. R. Girija, G. D. Kolavi,**V. S. Hegde** and I. M. Khazi, ***Journal of Chemical Research, (2008), 3, 167.***
 25. “Dimethyldithioimidocarbonates mediated heterocycli sations: Synthesis of imidazolidines and benzheterocycles as potent antitubercular agents” **Vinayak S.**

Hegde, Gundurao D. Kolavi, Ravi S. Lamani and Imtiyaz M. Khazi. *Phosphorous, Sulfur and silicon and related elements, 182(4), 911-920 (2007).*

26. M.B. Patil¹, S.A. Al-Muhtaseb¹, E. Sivaniah², Nanocomposite membranes of silica and polysulfone for improved gas permeation, *Procedia Engineering 44 (2012) 1011 – 1012.*
27. C. D. madhusoodana, M B Patil, T. M Aminabhavi, Ceramic supported composite membranes of hydroxy ethyl cellulose loaded with AL-MCM-41 for CO₂ separation, *Procedia Engineering 44 (2012) 108 – 109*
28. Hybrid Nanocomposite Membranes of Poly(vinyl alcohol) and Cerium Oxide for pervaporation dehydration of Ethanol at their Azeotropic Point, Mallikarjunagouda B. Patil* and Sangamesh C. Haragabal, International *Journal of Engineering Research and Applications (accepted)*
29. Mallikarjunagouda Patil, Hybrid adsorbent membranes of Poly(vinyl alcohol) and Zeolite A for pervaporation dehydration of Ethanol at their Azeotropic Point, Journal of Materials Science and Surface Engineering, *Material Science and Surface Engineering, 2015, 101-109.*

Conference Participation and Presentations:

30. **Devappa S. Lamani, Srikant.G. Badiger** “Effect of Substituents on Stability and Antioxidant Activity of Diaryl Selenides and Spirodiazaselenuranes” *Virtual International Conference on “Molecules to Materials” (MTM –2020) 18 & 19-2020, Organized on December Applied Chemistry Department, SVNIT, Surat, Gujarat, India.*
31. **Devappa S. Lamani** Formation of Spirodiazaselenurane: Synthesis, Structure and Antioxidant Activity. *National Conference on “Frontiers in Organometallic and Catalysis” (FOMC-2021)* Organized by the Department of Chemistry, held during 20th - 22nd January 2021, Jaipur India. **Best oral presentation award received from Malaviya National Institute of Technology Jaipur (MNIT Jaipur) Rajasthan, India.**
32. **Devappa S. Lamani, B. N Kirasur, G. Mugesh** “*National Conference on Recent Trends in Chemical Sciences*” (*NCRTCS -2016*), Presented work on “*Current Research on Mimics and Models of Selenium-Containing Spirodiazaselenuranes: Synthesis and Antioxidant Activity*” Organized by Manipal Institute of Technology, Department of Chemistry, Manipal University, on Jan-11-12-2016, Karnataka, INDIA.
33. **Devappa S. Lamani, B. N Kirasur, G. Mugesh** presented work “*Synthesis,*

Characterization and Antioxidant Activity of Spirodiazaselenuranes Analogues” International Conference on Science and Technology: Future Challenges and Solution (STFCS-2016) organized by Mysore University. Karnataka, INDIA.

34. **Devappa S. Lamani**, B. N Kirasur, G. Mugesh presented work “Bio-inspire Spirochalcogenanes: Synthesis, Characterization and Antioxidant Activity” *“International Conference on Advances in Science and Engineering (ICASE-2017), 20 - 23 Jan 2017 at Bangkok, Thailand.*
35. **Devappa Lamani** UGC Sponsored two Day National Conference *“Application of Polymers on Drugs* on 21st & 22nd Aug -2015, J. T College, Gadag, Karnataka, INDIA.
36. **Devappa S Lamani**, Debasish Bhowmick and Govindasamy Mugesh, “Synthesis, Characterization and Antioxidant Activity of Spirodiazaselenuranes” *Chemical Research Society of India (CRSI) C/O: NIIST (CSIR), TRIVANDRUM. 14th CRSI National Symposium in Chemistry (NSC-14), During February 2-5, 2012, has been adjudged as the best poster in the symposium. This prize is endowed in memory of Prof. Bhaskar G. Maiya.*
37. **Devappa S. Lamani**, K. R. Venugopala Reddy, H. S. Bhojya Naik, A. Savyasachai, H. Raja Naik. Synthesis and DNA Binding Studies of Novel Heterocyclic Substituted Quinoline Schiff Bases *National Seminar on Current Trends in Chemistry* 18, 19 January-2008. Dept of Applied Chemistry Cochine University of Science and Technology Cochine 682 022, Kerala.
38. **Devappa S. Lamani**, K. R. Venugopala Reddy, H. S. Bhojya Naik, H.R. Prakash Naik, L .R. Naik. Synthesis, Characterization and DNA Binding Studies of S₂N₂ Donor Bis-Mercaptoquinoline Co(II) and Ni(II) Metal Complexes: A new class of Antimicrobial Agent”. *International Conference on Frontier in Chemical Research (ICFCR-2008).* 29-31 Dec-2008. Dept of Chemistry Mangalagangothri-574 199 Mangalore University Karnataka, India
39. **Devappa S. Lamani**, K. R. Venugopala Reddy, H. S. Bhojya Naik, Anil. B. Naik and Prakash Naik. Synthesis, DNA binding and antimicrobial activity of base catalyzed 2-phenyl-3-pyrido [3, 2] [1, 3, 4] thiadiazolo[3, 2]quinoline Derivatives_Two Day National Conference on *Chemistry and Molecular Nanotechnology for Industry and Society (NCMNIS).* 16-17th January-2009 Kuvempu University Shankarghatta- 577 451.

40. **Devappa S. Lamani**, Two Day National Conference *On Biotechnanology –Current Trends and Future Scenario 10 and 11th* March,-2008 Kuvempu University Shankarghatta-577.

UGC minor research projects completed

S.No	Name of the staff	Project	Year	Amount	Status
1	Dr. B.N.Kirasur	Minor	2010	40,000/-	Completed
2	Shri. N.M.Kugali	Minor	2010	60,000/-	Completed
3	Dr. B.N.Kirasur	Minor	2013	2,00,000/-	Completed
4	Shri. N.M.Kugali	Minor	2013	1,75.000/-	Completed
5	Shri K.T.Tirakannavar	Minor	2014	2.000.00/-	Completed
6	Shri. S.H.Watawati	Minor	2014	2.000.00/-	Completed
7	Smt. S.G.Hunasikai	Minor	2014	1.70.000/-	Completed
8	Shri.S.M.Gaonkar	Minor	2014	90.000/-	Completed
9	Smt.S.S.Karishankari	Minor	2014	1.40.000/-	Completed
10	Smt K.H.Kakaraddi	Minor	2014	1.60.000/-	Completed
11	Smt S R Kaladagi	Minor	2014	1.85.000/-	Completed

Students VGST projects ongoing

S.No	Name of the Guide	Name of tudents	Year	Amount	Status
1	Shri K.T.Tirakannavar	Ravi Indi B.Sc-II Sem	2013-14	30,000=00	Completed
2	Dr. B.N.Kirasur	Akshay B.Kirasur B.Sc-IV Sem	2013-14	30,000=00	Completed