

## Curriculum Vitae of Dr. Shivaraj Y

**Associate Professor of Chemistry**  
**Bangalore University, Jnanabharati Campus,**  
**Bengaluru – 560 056, Karnataka, INDIA**

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### Research Interest

Nanomaterials, Bioelectrochemistry, Energy harvesting devices.



### Educational qualification :

Course	Year of Passing	Institute/University	Class Obtained
Ph.D.	2007	Kuvempu University	Awarded
M.Sc.	2002	Kuvempu University	First

### Positions Held (Work experience)

- **Presently, Associate Professor**, Department of Chemistry, Bangalore University, Jnanabharathi Campus. Bengaluru, 31<sup>st</sup> Jan. 2020 to till date.
- Assistant Professor, Government. Science College, Bengaluru, 25<sup>th</sup> Sept. 2009 to 31<sup>st</sup> Jan. 2020.
- Lecturer G. F. G. College, Chickaballapura, 04<sup>th</sup> Feb. 2008 to 24<sup>th</sup> Sept.2009.

### Ph.D. work

Title of the research topic: **“Some Analytical Applications of Cyclic Voltammetry and Stripping Voltammetry”.**

**Research supervisor :** Prof. B.S. Sherigara Department of Industrial Chemistry, Kuvempu University, Shankaraghatta, India.

### Research Experience :

**Post-Doctoral Fellow;** Dept. of Chemistry, University of North Texas, Denton, Texas, USA on Raman Fellowship for Post-Doctoral Research sponsored by University Grants Commission, India. Sept. 2016 to Sept. 2017.

**Post Doctoral Fellow;** Dept. Inorganic and Physical Chemistry, Indian Institute of Science, Bengaluru with Prof. S. Sampath. From Dec. 2006 to Jan. 2008

**Visiting Scholar;** Department of Chemistry, Wichita State University, Wichita, Kansas, USA. From Aug. 2005 to Sept. 2006

**Ph.D. guided :**

- Dr. Mallappa M 2019
- Mr. Jagadish R 2020
- Mr. Nagaraja Reddy 2020 (Thesis submitted)

**Ph.D. guiding :**

- Mr. Mohammed Zabiulla

**Projects -completed (At Government Science College, Bengaluru):****1. DST-FIST Programme 2015-16**

**Programme Coordinator : 2016 – 2019 (Govt. Science College, Bengaluru)**

Funding agency : Department of Science & Technology (DST), New Delhi.

Amount : Rs. 80,00,000/-

**2. Fast track Scheme for young scientists**

Funding agency : **Science & Engineering Research Board (SERB)**, New Delhi.

Amount : Rs. 25,00,000/-, 2014 – 2016.

**3. Major Research Project**

Funding agency : **University Grants Commission (UGC)**, New Delhi.

Amount : Rs. 9,38,800/-, Feb. 2010 – Feb. 2013.

**Training Programs:**

- Participated in the Refresher Course programme organized by the Academic Staff College, Bangalore University, Bengaluru, during 08-07-2015 to 29-07-2015 sponsored by UGC, New Delhi.
- Participated in DBT sponsored short term training course for mid-career scientists and UG/PG faculty in “RNAi Technology and its Applications” from 10<sup>th</sup> – 25<sup>th</sup> February 2014 at Maharani’s Science College for Women, Bengaluru.
- Participated in the “Faculty Development Programme for Undergraduate Chemistry Teachers” organized at Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur, Bengaluru, during 1-3 March 2011.
- Participated in the Refresher Course programme organized by the Academic Staff College and Department of Chemistry, Central College Campus, Bangalore University, Bengaluru, during 07-03-2011 to 26-03-2011 sponsored by UGC, New Delhi.
- Participated in the 35<sup>th</sup> Orientation Course programme organized by the Academic Staff College, Central College Campus, Bangalore University, Bengaluru, during 03-08-2009 to 31-08-2009 sponsored by UGC New Delhi.

## LIST OF PUBLICATIONS from Dr. SHIVARAJ Y

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1. 2-Aminoaryl-3,5-diaryl pyrazines: Synthesis, Biological Evaluation against *Mycobacterium tuberculosis* and Docking studies.  
Nagaraja Reddy Gangarapu, Ranganatham A, Koti Reddy Eeda, **Shivaraj Yellappa**, Chandra sekhar Kothapalli Bannoth, *Archiv der Pharmazie*, **2020**, 1-14, DOI: 10.1002/ardp.201900368.
2. 6-Substituted benzothiazole based dispersed azo dyes having pyrazole moiety: Synthesis, characterization, electrochemical and DFT studies.  
M. R. Maliyappa, J. Keshavayya, Mallappa Mahanthappa **Y. Shivaraj**, V. Basavarajappa, *Journal of Molecular Structure*, 1199(5) **2020**, 126959.
3.  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanoparticles modified glassy carbon electrode for the sensitive detection of Folic acid"  
Y Shivaraj, R Jagadish, M Mallappa, Chandrasekhar K, *Materials Research Express*, **6(10)**, **2019**, 105070.
4. An anti-Michael route for the synthesis of indole-spiro(indene-pyrrolidine) by 1,3-cycloaddition of azomethine ylide with indole derivatised olefins.  
**Shivaraj Yellappa**, *Journal of Heterocyclic Chemistry*, **57 (3)**, **2019**, 1083-1089.
5. Design, Synthesis and Biological Evaluation of 3,5-disubstituted 2-Pyrazineamide Derivatives as Antitubercular agents.  
Koti Reddy Eeda, Nagaraja reddy, Gangarapu, Ranganatham A, Surendra H.D, Chandrasekhar K.B, Shivaraj Y. *Journal of Heterocyclic Chemistry*, **56(3)** 1117-1126, **2019**.
6. Enhanced Photocatalytic degradation of methylene blue dye using CuS-CdS nanocomposite under visible light irradiation.  
Mallappa Mahanthappa, Nagaraju Kottam, **Shivaraj Yellappa**, *Applied Surface Science*. **475**, 828–838, **2019**.
7. Therapeutic properties of extracts of *leucas aspera* and *anisomeles malabarica*.  
Rajeev Ramchandra Kolgi , Shivakumar S L, Sajeeda Niketh, **Shivaraj Y**, Chandrakant S. Karigar, *International Journal of Biological & Medical Research*, **10(1)**: 6631-6634 **2019**.
8. Electrocatalytic Performance of a Zinc sulphide Nanoparticles modified carbon paste electrode for the simultaneous determination of acetaminophen, guanine and adenine,  
Mallappa Mahanthappa, Nagaraju Kottam, **Shivaraj Yellappa**, *Analytical Methods*, **2018**, **10**, 1362 – 1371.
9. Spectroscopic and Electrochemical studies on the molecular interaction between copper sulphide nanoparticles and bovine serum albumin.  
Mallappa M, Mohammed Azharuddin Savanur, Bijesh Puthusseri, **Shivaraj Yellappa** *Journal of Materials Science*, **53(1)** **2018**, 202–214.
10.  $\beta$ -Functionalized Push-Pull *Opp*-Dibenzoporphyrins as Sensitizers for Dye-Sensitized Solar Cells.  
Yi Hu, **Shivaraj Yellappa**, Michael B. Thomas, R. G. Waruna Jinadasa, Alex Matus, Max Shulman, and Francis D'souza, Hong Wang, *Chem. Asian J.* **2017**, **12**, 2749 – 2762.
11. NMI/MSCl-Mediated Amide Bond Formation of Aminopyrazines and Aryl/Heteroaryl Carboxylic Acids: Synthesis of Biologically Relevant Pyrazine Carboxamides.  
Nagaraja Reddy Gangarapu, Eeda Koti Reddy, Ayyiliath M Sajith, **Shivaraj Yellappa**, and Kothapalli Bannoth Chandrasekhar, *ChemistrySelect*, **2017**, **2**, 7706 – 7710.

12. Phenothiazine sensitized solar cells: Effect of number of cyanocinnamic acid anchoring groups on DSSC performance, **Shivaraj Yellappa**, Whitney Webre, Habtom Gobeze, Anna Middleton and Chandra. B. KC, Francis D'Souza, *ChemPlusChem*, **2017**, 82, 896 – 903.
13. Zinc Oxide Nanoparticles Modified Glassy Carbon Electrodes as highly sensitive electrochemical sensor for detection of caffeine.  
Jagadish R, Mallappa M, **Shivaraj Y**, Chandrashekhar K. B, Surface *Journal of the Chinese Chemical Society*, **2017**, 64, 813–821
14. Calcium carbonate nanoparticles enhanced electrochemical sensing of DNA.  
K.S. Siddegowda Mallappa M, **Shivaraj Y**, *Archives of Applied Science Research*, **2017**, 9(1) 45-51.
15. Synthesis of new potential Indole-3-yl derivatives via Knoevenagel condensation.  
K.S. Siddegowda, K. Mohammed Zabiulla, **Shivaraj Yellappa**, *Org. Commun.* 9:4 (2016) 119-124.
16. Sensitive determination of caffeine by copper sulphide nanoparticles modified carbon paste electrode.  
Mallappa Mahanthappa, **Shivaraj Yellappa**, Nagaraju Kottam, Chiranjeevi Srinivasa Rao Vusa, *Sensors and Actuators A: Physical*, 248 (2016) 104–113.
17. Effect of Sm<sup>3+</sup> substitution on structural and magnetic investigation of nano sized Mn–Sm–Zn ferrites.  
V. Jagadeesha Angadi, B. Rudraswamy, E. Melagiriyyappa, **Y. Shivaraj** and S. Matteppanavar, *Indian J Phys.*, **2016**, pp 1-5.
18. Electrochemical Behavior Of Anticancer Chalcone Derivatives On Glassy Carbon Electrode.  
**Shivaraj Yellappa** and Mallappa M, *European Journal of Pharmaceutical and Medical Research*, 2(7) **2015**, 146-150.
19. Electrochemical study of caffeine using iron oxide nanoparticles modified glassy carbon electrode and its electrocatalytic activity.  
Jagadish R, **Shivaraj Y**, Chandrasekar K.B. and Mallappa M, *Int. J. of Res. in Pharm. Sci.*, 6(3) **2015**, 262-264.
20. Electrochemistry of Cytochrome c on Lead Sulphide Nanoparticle Modified Glassy Carbon Electrode and Its Electrocatalytic Activity.  
Mallappa M, **Shivaraj Yellappa**, Subramanya Hegde, Nagaraju Kottam, *Int. J. of Chem*, (2015) 36(1), 1736 -1745.
21. Preparation of 1-([1,1'-biphenyl]-4-yl)-3-[indane-1,3-dione]-2,7,9-trimethyl-2,7,9-triazaspiro-[4,5]decane-6,8,10-trione.  
Subramanyahegde, Hosamani Amar, **Yellappa Shivaraj**, Giriya pura R Vijayakumar and Bandrehalli Siddagangaiah Palakshamurthy, *Acta Crystallographica Sec. E*, (2014), **70**, 759.
22. Electrochemical Behavior of Cytochrome c on Exfoliated Graphite Electrode Modified with DNA.  
**Shivaraj Y**, Mallappa M, Jayaraj J, Subramanya, *International J. Innovative Research & Development*, Vol 3 Issue 3 (2014) 434-438.

23. A Facile One-pot Synthesis of Pyrrolo[1,2-a] Indoles by Intramolecular 1,3-Dipolar Cycloaddition under Neat-microwave Irradiation.  
Subramanya Hegde, Jayadevan Jayashankaran, Atanu Ghoshal, T.S.R Prasanna, **Y Shivaraj** and K. Mohana Raju. *Journal of Heterocyclic Chemistry*, 50, 442 (2013). 442-449.
24. Synthesis and Biological Activity Studies of Novel Quinoline Carboxamide Derivatives.  
**Shivaraj Y**, Naveen M H, Vijayakumar G. R and Aruna Kumar D B. *Korean Journal of Chemistry*, (2013), Vol. 57, No. 2, 241-245.
25. Novel electrochemical synthesis of oxadiazoles at graphite electrode.  
**Y. Shivaraj**, A. Geetha, T. R. Shashishekar, B. S. Sherigara and B. Kalluraya, *Indian Journal of Chemical Technology*, 18 (2011) 86-90.
26. Synthesis of Phthalocyanine Stabilized Rhodium Nanoparticles and their Application in Biosensing of Cytochrome c,  
K.S. Lokesh, **Y. Shivaraj**, B.P. Dayananda and Sudeshna Chandra, *Bioelectrochemistry*, 75(2) (2009) 104- 109.
27. Voltammetric determination of trace metals  $Zn^{2+}$ ,  $Cd^{2+}$ ,  $Pb^{2+}$ ,  $Cu^{2+}$ ,  $Co^{2+}$  and  $Ni^{2+}$  in some medicinally important plants from Western Ghats, Karnataka State, India,  
S. V. Lokesh; B. S. Sherigara, H. S. Bhojya Naik, **Y. Shivaraj** and A. K. Satpati, *J. Environ. Sci. and Eng.* 50(1) (2008) 69-74.
28. Phytoplankton as index of water quality with reference to industrial pollution.  
R Shashi Shekhar, B R Kiran, E T Puttaiah, **Y Shivaraj**, K M Mahadevan, *J. environmental biology / Academy of Environmental Biology, India.* (2008) 29(2) 233-236.
29. Simultaneous determination of lead, copper and cadmium onto mercury film supported on wax impregnated carbon paste electrode. Assessment of quantification procedures by Anodic stripping voltammetry.  
B. S. Sherigara, **Y. Shivaraj**, Ronald J. Mascarenhas and A.K. Satpati, *Electrochimica Acta*, 52 (2007) 3137–3142.
30. Binding, Electrochemical Activation and Cleavage of DNA by Cobalt(II)tetrakis-N-Methylpyridyl Porphyrin and its  $\beta$ -Pyrrole Brominated Derivative.  
**Shivaraj Yellappa**, Jaldappagari Seetharamappa, Lisa M. Rogers, Raghu Chitta, Ram P. Singhal, and Francis D'Souza. *Bioconjugate Chem.*, 17 (2006) 1418-1425.
31. Wax impregnated carbon paste electrode bulk modified with mercuric oxalate for the simultaneous determination of heavy metal ions in medicinal plants and ayurvedic tablet.  
Ronald J. Mascarenhas, A.K. Satpati, **Y. Shivaraj**, B.S. Sherigara and A.K. Bopiah, *Anal. Sci.*, 22(6) (2006) 871-875.
32. Electrochemical Investigations of Sydnone Derivatives at Glassy Carbon Electrode.  
**Y. Shivaraj**, Ronald J. Mascarenhas, B.S. Sherigara, B. Kalluraya and R. Sathisha, *Croatia Chimica Acta*, 79(2) (2006) 273-279.
33. Electrochemical behavior of some industrially important azonaphthol derivatives at glassy carbon electrode.  
H. Jayadevappa, **Y. Shivaraj**, K. M. Mahadevan, B.E. Kumaraswamy, A.K. Satpati and B. S. Sherigara, *Ind. J. Chem. Tech.*, 13 (2006) 269-274.
34. Carbon Nanotubes: Next generation of electronic materials.

Jaldappagari Seetharamappa, **Shivaraj Yellappa** and Francis D'Souza, *The Electrochemical Society Interface (USA), summer (2006)*, 23.

35. Trace metal levels in the organs of fish *Oreochromis mossambicus* (Peter) and relevant water of Jannapura Lake, India.  
B.R. Kiran, T.R. Shashi Shekhar, E.T. Puttaiah and **Y. Shivaraj**, *J. Environ. Sci. and Eng.*, *48(1)* (2006) 15-20.
36. Electrochemical Behavior of Mesoionic Sydnone Derivatives at Wax-impregnated Carbon Paste Electrode.  
R. J. Mascarenhas, **Y. Shivaraj**, B. S. Sherigara, K. M. Mahadevan and B. Kalluraya, *Russian J. Electrochem.*, *42(7)* (2006) 776–781.
37. Electrochemical Reduction of 3-Phenyl Sydnones – A Comparative Study at Wax Impregnated Carbon Paste and Glassy Carbon Electrodes.  
Ronald J. Mascarenhas, **Y. Shivaraj**, K. M. Mahadevan and B. S. Sherigara, *Bull. Electrochem.*, *21(10)* (2005) 461–469.
38. Determination of Cu, Cd, Pb and Zn in pulp and paper industrial effluents.  
**Y. Shivaraj**, B.S. Sherigara, T.R. Shashi Shekhar, K.M. Mahadevan, B.E. Kumaraswamy and E.T. Puttaiah, *Bull. Electrochem.*, *21(9)* (2005) 385–391.

- **Papers presented in conferences/seminars ( Jointly with Students) : 26**

- **Workshops/Conferences participated : 12**

- **Conference organized :**

**Organizing Secretary** for UGC-CPE Sponsored Two Day National Seminar on **Emerging trends in Chemical and Pharmaceutical Sciences** held on 12<sup>th</sup> & 13<sup>th</sup> November 2014.

#### **Awards :**

- **Bengaluru Youth Festival Award- 2014**, at Sri Kanteerava Indoor Stadium, Bengaluru, sponsored by Department of Youth Empowerment and sports, GOK.

#### **Membership of University authorities**

1. Member of the B O E (PG) in Chemistry, Bangalore University.
2. Member of the Faculty of Science, Bangalore University.
3. Member, BOE-PG, Bangalore Central University, Central College Campus, Bengaluru
4. Member, BOE-PG, Bangalore North University, Bengaluru.
5. Member, BOE-PG, University College of Science, Tumkur University, Tumakuru.
6. Member, BOE-PG, Government Science College, Bengaluru.
7. Served as member of the Doctoral Committee, Garden City University, Bengaluru.

#### **Membership :**

- Life Member – National Science Congress Association, Kolkata

#### **Administrative responsibilities:**

- Served as Chief Squad, MBA Examination Feb./March 2020.