



## Dr. Shivaji Nemchand Tayade

**Present Designation:** Assistant Professor  
Department of Chemistry, Shivaji University, Kolhapur

**Contact Detail:**  
E-mail: [snt\\_chem@unishivaji.ac.in](mailto:snt_chem@unishivaji.ac.in)

### Personal Details

**Date of birth:** 24<sup>th</sup> May 1985

**Nationality:** Indian

**Language Known:** Hindi, English, Marathi

**Gender:** Male,

**Marital status:** Married

**Blood Group:** O<sup>+</sup>

### Academics

2009	M.Sc., Physical Chemistry	North Maharashtra University, Jalgaon, India.
2007	B.Sc., Chemistry	North Maharashtra University, Jalgaon,
2018	Ph. D. Chemistry	North Maharashtra University, Jalgaon, India.
2009	GATE (Chemistry)	
2011	SET (Chemistry)	

### Previous Employment

**Oct-2009 to June-2011: Department of Chemistry, University of Pune**

Worked as project associate under the guidance of Prof. Santosh Haram for the project entitled “Conjugation of Engineered Cytochrome P450 Enzyme onto Functionalized Carbon Nanotubes for Bioelectrochemical Degradation of Pesticides and other Pollutants”.

**July-2011 to April-2013 : North Maharashtra University Jalgaon.**

Worked as Contract basic Lecturer in Department of Physical Chemistry, School of Chemical Sciences North Maharashtra University Jalgaon (India).

**May-2013 to till date: Shivaji University Kolhapur.**

### Experience

- Synthesis of of Multiwall Carbon Nanotubes (MWCNT's) by Chemical Vapour Deposition Method.
- Development of different conducting metal substrates for Scanning Electrochemical Microscopy (SECM).
- Electrode modification by CNT's and enzymes.
- Handling experience in Brookfield Rheometer to Study rheology of polymers.
- Handling experience of Scanning Electrochemical Microscopy (SECM), Quartz Crystal Microbalance (QCM).

Publications	
1	In situ soft templated synthesis of polyfluorene-molybdenum oxide (PF-MoO <sub>3</sub> ) nanocomposite: A nanostructure glucose sensor, Bhagyashri Bajirao Kamble, Purnima Talele, Anita Kundlik Tawade, Kirankumar Kakchingtabam Sharma, Sawanta Subhash Mali, Chang Kook Hong, <b>Shivaji Nemchand Tayade*</b> , Korean Journal of Chemical Engineering 2022 xxxx
2	Structure-engineering of core-shell ZnCo <sub>2</sub> O <sub>4</sub> @NiO composites for high-performance asymmetric supercapacitors, Gokul P Kamble, Akash S Rasal, Jia-Yaw Chang, Sanjay S Kolekar, <b>Shivaji N Tayade</b> , Anil V Ghule, Nanoscale Advances, Gokul P. Kamble, Akash S. Rasal , Jia-Yaw Chang , Sanjay S. Kolekar , <b>Shivaji N. Tayade</b> and Anil V. Ghule, <b>Nanoscale Adv.</b> , 2022, 814-823
3	Determination of 4-nitrophenol using MoO <sub>3</sub> loaded glassy carbon electrode via electrochemical sensing approach, Bhagyashri Kamble, Kalyanrao M Garadkar, Kirankumar K Sharma, Pravin Kamble, <b>Shivaji Tayade</b> , Balu D Ajalkar, <b>Journal of Electrochemical Science and Engineering</b> , 2021, 11, 143-159
4	Forming-free and multilevel resistive switching properties of hydrothermally synthesized hexagonal molybdenum oxide microrods, Patil Swapnil, Mullani Navaj, Kamble Bhagyashri, <b>Tayade Shivaji</b> , Kamat Rajanish, Tae Joo Park, Deok-kee Kim, Dongale Tukaram, <b>Journal of Materials Science: Materials in Electronics</b> , 2021, 32, 12490–12502
5	Ionic liquid assisted synthesis of h-MoO <sub>3</sub> hollow microrods and their application for electrochemical sensing of Imidacloprid pesticide in vegetables, Bhagyashri B Kamble, Balu D Ajalkar, Anita K Tawade, Kirankumar K Sharma, Sawanta S Mali, Chang Kook Hong, Chinna D Bathula, Abhijit N Kadam, <b>Shivaji N Tayade*</b> , <b>Journal of Molecular Liquids</b> , 2021, 324, 115119
6	Structural refinement and electrochemical properties of one dimensional (ZnO NRs) 1– x (CNs) x functional hybrids for serotonin sensing studies, Sajid B Mullani, Ananta G Dhodamani, Annadanesh Shellikeri, Navaj B Mullani, Anita K Tawade, <b>Shivaji N Tayade</b> , Julien Biscay, Lynn Dennany, Sagar D Delekar, <b>Scientific reports</b> , 2020, 10, 1-18
7	Hydrothermal Assisted Synthesis of Micro-Bricks Shaped WO <sub>3</sub> for Electrochemical Oxidation of Paracetamol: A Microstructured Paracetamol Sensor Bhagyashri B Kamble, Anita K Tawade, Pravin Kamble, Mukesh N Padavi, Kiran Kumar K Sharma, Balu D Ajalkar, <b>Shivaji N Tayade*</b> , <b>Russian Journal of Electrochemistry</b> , 2020, 569,7, 766-774.
8	Simultaneous electrochemical investigations of dopamine and uric acid by in situ amino functionalized reduced graphene oxide Anita K Tawade, Bhagyashri B Kamble, Kiran Kumar K Sharma, <b>Shivaji N Tayade*</b> <b>SN Applied Sciences</b> 2, 1082 2020.
9	NaFeTiO <sub>4</sub> : A novel visible light active photocatalyst for water splitting and environmental remediation DS Shinde, PD Bhange, SS Arbuji, JY Kim, JH Bae, KW Nam, <b>SN Tayade</b> , Deu S Bhange <b>International Journal of Hydrogen Energy</b> 45 (15), 8605-8617 2020.

10	Synthesis of Ni <sup>2+</sup> ion doped ZnO–MWCNTs nanocomposites using an in situ sol–gel method: an ultra sensitive non-enzymatic uric acid sensing electrode material, Sajid B Mullani, Anita K Tawade, <b>Shivaji N Tayade</b> , Kiran Kumar K Sharma, Shamkumar P Deshmukh, Navaj B Mullani, Sawanta S Mali, Chang Kook Hong, BE Kumara Swamy, Sagar D Delekar, <b>RSC Advances</b> , 2020, 10, 61, 36949-36961.
11	Swollen liquid crystalline mesophase assisted synthesis of GO-PANI nanocomposite as a fluorescent probe for purines, <b>Shivaji N Tayade</b> , Anita K Tawade, Purnima Talele, Sanjay S Chavhan, Kiran Kumar K Sharma, <b>Methods and applications in fluorescence</b> , 7, 4, 045002.
12	Flower-Like ZnO-Decorated Polyaniline–Graphene Oxide Nanocomposite for Electrochemical Oxidation of Imidacloprid: A Hybrid Nanocomposite Sensor, Anita K Tawade, D Mohan Kumar, Purnima Talele, Kiran Kumar K Sharma, <b>Shivaji N Tayade*</b> , <b>Journal of Electronic Materials</b> , 2019, 48, 7747–7755
13	Electrochemical investigations of thymine and thymidine in 1-butyl-3-methyl imidazolium tetrafluoroborate ionic liquids at room temperature <b>Tayade, S.</b> , Patil, K., Sharma, Geeta K Sharma, Mahulikar, P., Sharma, K.K.K. <b>Chemical Papers</b> , 73(9), pp. 2275-2282 2019.
14	Ionic liquid assisted synthesis of chromium oxide (Cr <sub>2</sub> O <sub>3</sub> ) nanoparticles and their application in glucose sensing, Bhagyashri B Kamble, Mahesh Naikwade, KM Garadkar, Rahul B Mane, Kiran Kumar K Sharma, Balu D Ajalkar, <b>Shivaji N Tayade*</b> , <b>Journal of Materials Science: Materials in Electronics</b> , 30, 15, 13984-13993
15	Column chromatographic separation of uranium (vi) and other elements using Poly (dibenzo-18-crown-6) and glycine medium PN Kamble, NS Harale, ND Nikam, PS Patil, <b>S. N. Tayade</b> , BS Mohite, Proceedings of the fourteenth biennial DAE-BRNS symposium on nuclear
16	Fluorescent and Chromogenic Receptor Bearing Amine and Hydroxyl Functionality for Iron (III) Detection in Aqueous Solution. Umesh Fegade <b>Shivaji Tayade</b> G. Krishna Chaitanya, Sanjay Attarde and Anil Kuwar. <b>J Fluoresc</b> 2014, 24, 675–681
17	Column chromatographic separation of uranium (vi) and other elements using Poly (dibenzo-18-crown-6) and glycine medium, PN Kamble, NS Harale, ND Nikam, PS Patil, <b>SN Tayade</b> , BS Mohite, SB Zanje, <b>Proceedings of the fourteenth biennial DAE-BRNS symposium on nuclear and radiochemistry</b> : book of abstracts,2019 RN:50045924
18	Electrochemical investigation into the mechanism of redox shift in the oxidation of guanine and derivatives in room temperature ionic liquids. <b>J. Environ. Observer</b> . Vol.12, 2013, page 59 <b>S. N. Tayade</b> S. Y. Patil and K. K. K. Sharma*.

## Projects

Sr No	Project Title	Amount (Lakhs)	PI
1	Electrochemical investigations into the oxidation reduction mechanism of DNA bases and organic com..	0.75	Shivaji Tayade (Completed)
2	Spectro electrochemical investigations into the oxidation reduction mechanism of DNA bases and organic com	2.5	Shivaji Tayade (completed)

## Papers and posters presented at symposia and conferences

1.	Scanning electrochemical investigations (SECM) on Cytochrome C immobilized on SWCNTs modified gold electrode. <b>Shivaji Tayade</b> Moumita Ray, Sanjay Mhaske and Santosh K. Haram. <b>IYC-2011</b> University of Pune ( <b>Best Poster Award</b> ).
2.	Rheological studies of Silver Nanoparticles (AgNPs) based composite of polyethylene glycol at room temperature. <b>Shivaji Tayade</b> and Kiran Kumar Sharma, NIPEC-2012, NMU, Jalgaon
3.	Electrochemical investigation into the mechanism of redox shift in Guanine (G) and its derivatives in room temperature ILs. Shivaji Tayade and Kiran Kumar K. Sharma, FPCBS-2013, University of Pune. ( <b>Best Oral Paper Presentation Award</b> ).
4.	Cyclic voltammetric investigation of deoxyguanosine in room temperature ionic liquid at 298 K. Shivaji Tayade and Kiran Kumar K. Sharma, GOLD-CT-2014, NMU Jalgaon. ( <b>Best Oral Paper presentation Award</b> ).