Dr. Vaishali Anandrao Sawant

M.Sc. B.Ed. Ph.D.

Post Doc-NUS, Singapore

Associate Professor,
School of Engineering and Technology
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Present position: Associate Professor, School of Engineering and Technology, Shivaji University, Kolhapur

Research fields: Coordination Chemistry, Metal Organic Frameworks, Coordination Polymers, Wastewater Remediation, Energy Storage.

Academic Details:

2006- 2010	**Ph.D.** (Chemistry) **Thesis title**, "Synthesis and physico-chemical studies of some mixed-ligand 3d-transition metal complexes." Shivaji University Kolhapur, India Research Guide: Prof. S.S. Chavan
2005-2006	**B.Ed.** with first class, Shivaji University Kolhapur, India.
2002-2004	**M.Sc.** in Chemistry (Inorganic Chemistry), with first class, Shivaji University Kolhapur, India.
1999-2002	**B.Sc.** in Chemistry, with first class, Shivaji University, Kolhapur, India.

Fellowships/Awards:

2017- 2018 (1 Year)	**SERB's Overseas Postdoctoral Fellowship** Host Institute: National University of Singapore, Singapore
2016 (2 Months)	**Science Academie's Summer Research Fellowship for teachers** Host Institute: Jadavpur University, Kolkata, India
2009-2011 (2 Years)	**Senior Research Fellowship** from Council of Scientific and Industrial Research (**CSIR**), New Delhi, India.

Work Experience:

02/2024 to till date	**Associate Professor**, Department of Technology, Shivaji University, Kolhapur, Maharashtra, India
05-2011-02/2024	**Assistant Professor,** Department of Technology, Shivaji University, Kolhapur, Maharashtra, India
08/2008-03/2009	Teaching Assistant, Department of Chemistry, Shivaji University, Kolhapur
07/2007-03/2008	Lecturer (C.H.B.), The New College, Kolhapur

Other Responsibilities/Member on committee/Judge/Resource Person:

- **Reviewer** - Peer reviewed journals like ACS Sustainable Chemistry & Engineering,Journal of Energy Chemistry, Journal of Energy Storage, Applied Energy, Journal of Electroanalytical Chemistry, Journal of Molecular Structure, Journal of material Science, etc
- **Rector**, Girls Hostel, Department of Technology, Shivaji University, Kolhapur, 2011-2016, 2021, 2023-till date
- **NAAC Coordinator**, Department of Technology, Shivaji University, Kolhapur, 2013-2016, 2018-2023
- **ISO Internal Auditor,** Shivaji University, Kolhapur
- **Member**, Shivaji University Meritorious Scholarship Scrutiny committee, 2014-2016
- **Coordinator**, Inspire Science Camp sponsored by DST, Govt. of India organized at Department of Technology, Shivaji University, Kolhapur during 29th May to 2nd June 2012
- **Organizing Committee Member**, National/International Conferencesand various curricular and Extracurricular activities

Research Guidance:

Ph. D. Awarded: 01	**Ph. D. Thesis submitted:01**
Ph. D. Scholars working: 03	

Details of Funds received:

1. Research Project: Funded by Shivaji University, Kolhapur 2023, (Funds, Rs. 2,05,000)
2. Research Project: Funded by Shivaji University, Kolhapur 2019, (Funds, Rs. 2,20,000)
3. Research Project Funded by University Grant Commission, New Delhi, India 2015, (Funds Sanctioned:, Rs. 6,00,000)
4. Science Camp under INSPIRE Internship component of INSPIRE program, 29 May-2 June 2012 Funding Agency: DST, Govt. of India (Funds received, Rs. 9,75,000/-)

Patent Filed: 01

TITLE OF THE INVENTION: A Method For The Synthesis Of Cadmium-Based Metal Organic Framework (Cd-MOF) For Adsorption Of Industrial Dyes.

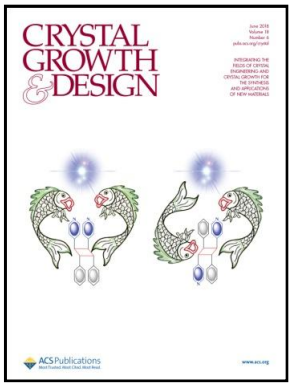
Names of the Inventors: Miss. Ankita Nitin Dalvi, Dr.VaishaliAnandraoSawant, Dr.ShivajiBabasoSadale

Patent application No. IN202521131669

Patent application filed on 24/12/2025

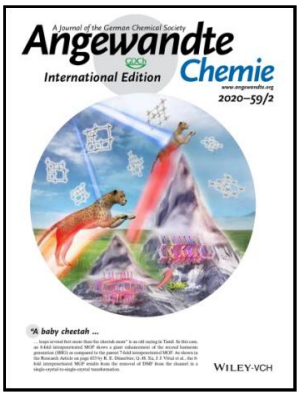
Research papers published in International journals:

Cover Page Citations



Cover page Citation

Crystal Growth and Design 18, 2018



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AngewandteChemie International Edition 59(2), 2020

Research Articles Published:

1.	Solvothermal synthesis of porous MOF-derived $NiCo_2O_4$ ultrathin nanosheets for enhanced supercapacitor performanceAA Bhoite, VA Sawant, NL Tarwal, **Journal of Energy Storage**, **(2026)** 166, 122242(Impact Factor **9.8**)
2.	Zn (II)/Cd (II) MOFs as multifunctional fluorescent sensors for sensitive detection of Al^{3+}, $Cr_2O_7^{2-}$ and glucoseV Hubale, A Dalvi, O Nille, G Kolekar, V Sawant, **Journal of Molecular Structure**, **(2025)** 145089 (Impact Factor **4.7**)
3.	Multifunctional Zn (II)/Cd (II) coordination polymers for the selective fluorescence detection of Fe3+, Cr2O72-, and folic acidVB Hubale, AN Dalvi, OS Nille, GB Kolekar, VA Sawant, **Journal of Solid State Chemistry**, **(2025)** 125735 (Impact Factor **3.5**)
4.	Impact of synthesis temperatures on photocatalytic activity of graphitic carbon nitride, PD Donolikar, VA Sawant, K Noda, SB Sadale, **Journal of Materials Science: Materials in Electronics, (2025)** 36 (19), 1162 (Impact Factor **2.8**)
5.	A brief review of Nickel cobaltite nanostructures and its composites for supercapacitor

	applicationAA Bhoite, VA Sawant, NL Tarwal, **Journal of Alloys and Compounds, (2025)** 1010, 177657 (Impact Factor **6.3**)
6.	Zn(II)CD(II) MOFs based on 2,5-thiophenedicarboxylic acid and bis(Imidazole) linkers for highly selective and sensitive detection of FE3+and Cr2072-, VaishnaviHubale, Ankita Dalvi, OmkarNille, ShivajiSadale, GovindKolekar, VaishaliSawant, **Journal of Molecular Structure, (2025),** 139408 (Impact Factor **4.7**)
7.	Two dimensional Co-based metal organic framework for selective adsorption of Congo red from wastewater, A Dalvi, V Hubale, V Sawant, **Separation and Purification Technology, (2024)**, 348, 127712 (Impact Factor **9.0**)
8.	Solvothermal synthesis of Ni/Co-based metal-organic framework with nanosheets-like structure for high-performance supercapacitor, AA Bhoite, VA Sawant, NL Tarwal, **Colloids and Surfaces A: Physicochemical and Engineering Aspects**, **(2024),** 134814 (Impact Factor **5.4**)
9.	Metal-organic framework derived porous nanosheets-like Co3O4 electrodes on stainless steel with high-performance for supercapacitors A.A.Bhoite, V.A.Sawant, N.L.Tarwal, **ElectrochimicaActa**(**2024**) 507, 145126(Impact Factor **5.6**)
10.	Electrochemical energy storage application of MOF-derived porous NiO thin films synthesized by solvothermal route, AlakaBhoite, NileshTarwal, VaishaliSawant, **ElectrochimicaActa,2024,** 482,143973(Impact Factor **5.6**)
11.	Cobalt-based Metal-Organic Framework (Co-MOF) thin films with high capacitance for supercapacitor electrode, A. A. Bhoite, V. B. Hubale, N. L. Tarwal, V. A. Sawant, **Journal of Materials Science (2024),** 59, 6807–6819 (Impact Factor **3.9**)
12.	Recent advances in Metal-Organic Framework (MOF) derived metal oxides and their composites with carbon for energy storage applications, AA Bhoite, KV Patil, RS Redekar, JH Jang, VA Sawant, NL Tarwal, **Journal of Energy Storage, (2023),** 72 108557 (Impact Factor **9.8**)
13.	Solvothermal Synthesis of binder free Ni-MOF thin films for supercapacitor electrodes, AA Bhoite, KV Patil, RS Redekar, PS Patil, VA Sawant, NL Tarwal, **Journal of Solid State Chemistry, (2023),** 326, 124192 (Impact Factor **3.5**)
14.	Machine learning techniques for prediction of capacitance and remaining useful life of supercapacitors: A comprehensive review, VaishaliSawant, Rashmi Deshmukh, Chetan Awati, **Journal of Energy Chemistry**, 77 **(2023)** 438-451 (Impact Factor: **14.9**)

15.	Thermoacoustic investigations on nanofluids, SP Rajmane, PD Donolikar, VA Sawant, SB Sadale, **AIP Conference Proceedings(2020)**, 22698(1), 030075
16.	Giant Enhancement of Second Harmonic Generation Accompanied by the Structural Transformation of 7-fold to 8-fold interpenetrated MOF, Zhihui J Chen, Gianpiero Gallo, Vaishali A Sawant, Tianxiang J Zhang, Menglong J Zhu, Liangliang J Liang, Anjana J Chanthapally, Geetha J Bolla, Hong Sheng Quah, Xiaogang J Liu, Kian Ping Loh, Robert E Dinnebier, Qing-Hua J Xu, Jagadese J Vittal, **AngewandteChemie International Edition,** 59(2), **(2020)**, 833-838 (Impact Factor: **17**) ***Inside Back Cover page Citation***
17.	Competition Between Head-to-Head and Head-to-Tail Photocycloaddition Reaction in Solid State: A Case Study, Vaishali A. Sawant, Jien Wu, and Jagdese J. Vittal, **Crystal Growth and Design** 18 **(2018)** 3661-3667(Impact Factor: **3.4**) **Cover page Citation**
18.	Copper(II) complexes of N-(2-{[(2E)-2-(2-Hydroxy-(5-substituted)-benzylidine)-hydrazino] carbonyl}phenyl)benzamide ligands and heterocyclic coligandsS.S. Chavan, V.A. Sawant, A.N. Jadhav,**SpectrochimicaActa Part A**117**(2014)**360–365(Impact Factor: **4.3**)
19.	Synthesis, spectral characterization, thermal and photo luminescence property of Zn(II) and Cd(II)-azido/thiocyanato complexes with thiazolylazo dye and 1,2-bis(diphenylphoshino)ethane; B.A. Yamgar, V.A. Sawant, S.S. Chavan**, SpectrochimicaActa Part A,** 78 (**2011**) 102–106 (Impact Factor: **4.6**)
20.	Synthesis, characterization and luminescence properties of copper(I) complexes containing 2-phenyl-3-(benzylamino)-1,2-dihydroquinazolin-4(3H)-one and triphenylphosphine as ligands, S.S. Chavan, G.A. Gaikwad, V.A. Sawant, G.K. Lahiri, ***Polyhedron*** 30(**2011**) 1171-1175 (Impact Factor: **2.6**)
21.	Mixed-ligand complexes of copper(I) with Schiff base and triphenylphosphine: Effective catalysts for the amination of aryl halide, S.S. Chavan, S.K. Sawant, V.A. Sawant, G.K. Lahiri, ***Inorg. Chem. Commun,*** 14(9)(**2011**)1373-1376 (Impact Factor: **5.4**)
22.	Synthesis, structural characterization, thermal and electrochemical studies of Mn(II), Co(II), Ni(II) and Cu(II) complexes containing thiazolylazo ligands,S.S. Chavan, V.A. Sawant, ***J. Mol. Structure,***965 (**2010**) 1-6. (Impact Factor: **4.7**)
23.	Manganese(II), Cobalt(II) and Nickel(II) complexes with 2-phenyl-3-(benzyl amino)-1,2-dihydroquinazolin-4(3H)-one, pseudohalides and some bidentate N-donor ligands: Synthesis, structure, thermal and electrochemical studies, V.A. Sawant, B.A. Yamgar, S.S. Chavan, ***Transition Met. Chem.***35 **(2010)** 357–361. (Impact Factor: **1.7**)

23.	Synthesis, characterization and Photoluminescence properties of copper(II)–azido/thiocynato complexes of thiazolylazo dye and 1,2-bis(diphenyl-phosphino)ethane,B.A. Yamgar, V.A. Sawant, A.N. Jadhav, S.S. Chavan, ***Inorg. Chem. Commun.,*** 13 (**2010**) 1207-1209 (Impact Factor: **5.4**)
24.	Synthesis, characterization, thermal and electrochemical studies of Cobalt(II) and Copper(II) pseudohalide complexes with 2-mercapto-3-phenylquinazo-lin-4(3H)-one and 1,10-phenanthroline or ethylenediamine as ligands. V.A. Sawant, S.S. Chavan and V.B. Helavi, ***Synth. React. Inorg. Met.-Org. Chem.*** 40 (**2010**) 592-600. (Impact Factor: **1.4**)
25.	Copper(I) complexes with Schiff base and 1,2-bis(diphenylphosphino) ethane as ligands: Synthesis, structure and catalytic properties for the amination of aryl halide, S.S. Chavan, S.K. Sawant, V.A. Sawant, G.K. Lahiri, ***Inorganic ChimicaActa***363 (**2010**) 3359-3364. (Impact Factor: **3.2**)
26.	Synthesis, characterization and catalytic study of Schiff base copper (I) complexes for the amination of aryl halide, SK Sawant, GA Gaikwad, VA Sawant, BA Yamgar, SS Chavan, **Inorganic Chemistry Communications (2009)**12 (7), 632-635
27.	Characterization and electrochemical studies of Mn(II), Co(II), Ni(II) and Cu(II) complexes with 2-mercapto-3-substituted-quinazolin-4-one and 1,10-phenanthroline or ethylenediamine as ligands. V.A. Sawant, S.N. Gotpagar, B.A. Yamgar, S.K. Sawant, R.D. Kankariya, S.S. Chavan, ***Spectrochimica Acta,*** 72*A* **(2009)** 663-669. (Impact Factor: **4.6**)
28.	Synthesis, structural characterization, thermal and electrochemical studies of mixed ligand Cu(II) complexes containing 2-phenyl-3-(benzylamino)-1,2-dihydroquinazoline-4(3H)-one and bidentate N-donor ligands, V.A. Sawant, B.A. Yamgar, S.K. Sawant, S.S. Chavan, ***Spectrochimica Acta,***74*A* (**2009**) 1100-1106. (Impact Factor: **4.6**)
29.	Synthesis, characterization and catalytic study of Schiff base copper(I) complexes for the amination of aryl halide. S.K. Sawant, G.A. Gaikwad, V.A. Sawant, B.A. Yamgar, S.S. Chavan, ***Inorg. Chem. Commun.,*** 12, (**2009**) 632-635. (Impact Factor: **5.4**)
30	Copper(II) complexes of thiazolylazo dye with triphenylphosphine and N_3^- or NCS^- as coligands: Synthesis, spectral characterization, electrochemistry and luminescence properties,B.A. Yamgar, V.A. Sawant, S.K. Sawant, S.S. Chavan, ***J. Coord. Chem.***62(14), (**2009**) 2367-2374. (Impact Factor: 2.1)

Presentations at National/International Conferences:

1. International conference on 'Advances in science and Technology (ICAST-2022) at

RajarshiChhatrapatiShahu College, Kolhapur during 9th and 10th March 2022.

3. The 13th Conference of the Asian Crystallographic Association during 5th to 8th December, 2015 Science City, Kolkatta
4. National Conference on 'Chemistry of Chalcogens' during 14th& 15th Jan. 2013 organized by Department of Applied Chemistry, at Defence Institute of Advanced Technology (DIAT), Pune.
5. National Conference on 'Emerging Technologies for Sustainable Developments' during 27th& 28th Dec. 2012 organized by Department of Technology, Shivaji University, Kolhapur
6. International Conference on Recent Research trends in Chemical Sciences, Dec. 2-6, 2009; VIT University, Vellore, Tamil Nadu.
7. UGC-SAP National Seminar on Advanced Synthetic Methodologies for Functional Materials, Dec. 23-24, 2009; Shivaji University, Kolhapur.
8. International Conference on Nanomaterial and Applications, Dec. 9-11 2008; Shivaji University, Kolhapur.
9. UGC-SAP National Seminar on "Synthesis of New Material for Industrial Application." on Feb. 1st and 2nd 2008, Dept. of Chemistry, Shivaji University, Kolhapur.

Membership of Professional Bodies

- Life membership of Society for Materials Chemistry
- Life membership of Indian Crystallographic Association
- Life membership of Indian Society for Technical Education