

Curriculum Vitae

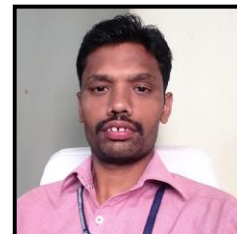
Contact Details:

Name: Dr. Shivkumar Yuvaraj Patil (M.Sc, Ph.D Chemistry)

Email ID: sypatil87@gmail.com

Tel: +91 9970029469/8600226275

Address: At/Post- Vaipur
Tehsil- Shindkheda,
District- Dhule,
424 309 (MS) India



Research Interests:

- ❖ Synthesis of organic polymer and composites nanostructure using emulsion and suspension polymerization techniques.
- ❖ Developed 1D, 2D and 3D polymer nanostructure via, oil, water, surfactant and co-surfactant based emulsion (soft templates or micelle) used as nanoreactors.
- ❖ In suspension polymerization, soft templates containing two phases i.e. oil and water, monomer dissolved in water phase with high mechanical vortex, synthesis of polymers (PEDOT, PTs, PPy and PANI) and their application in supercapacitor (for energy storage).
- ❖ Synthesis of heterogeneous nanocatalyst (Au, Pt, Ag, TiO₂ and Fe), their characterizations and used as a catalyst for the synthesis methodology of pharmaceutical drug and composite.
- ❖ Ion exchange resin based catalyst for synthesis of monomers and polymers, application in nanocatalyst.
- ❖ Possess good knowledge Delépine reaction, Friedel Crafts alkylation, Gabriel synthesis, Eschweiler-Clarke reaction for preparation of product.

Research Experience:

Research Associate, [July 2017 to present] Department of Chemistry, M. J. College Jalgaon, collaboration with SOCS, NMU, Jalgaon under the Supervision of Prof. V. S. Zope.

Project title: Synthesis of organic polymers/carbon based material like graphene and graphene oxide nanocomposites.

Skills:

- Expertise to design synthetic routes, synthesis and characterization of polymers and composites through emulsion polymerization technique.

- Characterization of polymers using a full scope of instrumentation. Acquisition and analysis using modern spectroscopic methods (TEM, FE-SEM, AFM, ATR-FTIR, UV, etc.) and Electrochemical work station (PG-STAT) for supercapacitor application.
- Handling of nonconventional techniques for reactions such as Microwave, High Pressure Autoclaves, Spin coating, Silar method, Ultrasonic bath, etc.

Fellowships/Awards:

- Awarded (INSPIRE) Fellowship Innovation in Science Pursuit for Inspired Research, DST, New Delhi, India.
- Awarded Junior research fellowship (**JRF**) (22nd Aug. 2012 to 07th Dec. 2015).
- Awarded Senior research fellowship (**SRF**) (08th Dec. 2015 to 07th Jun. 2017) **IF-120468**.
- “**Life membership**” Society of Material Chemistry, BARC, Mumbai.

Computer Skill:

- Extensive knowledge of all Microsoft Office programs (Excel, PowerPoint and Word).
- Proficient in a range of Chemistry Software packages including the ISIS suite, Chem Draw, Origin Pro, Image J, Nova Software.
- Experienced in online literature search using different tools like Sci-finder, Beilstein search, CA on CD, Discovery gate, Web of science etc.

Education/Research:

- **Ph. D. in Chemistry [Awarded Jun-2017]** School of Chemical Sciences, North Maharashtra University, Jalgaon, India. Research Supervisor: Prof. V. S. Zope and Prof. P. P. Mahulikar, School of Chemical Sciences, North Maharashtra University, Jalgaon, M.S. India.
Title of thesis: “Synthesis, Characterization and Application of Conducting Nanopolymers and Their Composites using Surfactant Assisted Nanoreactor”.
- **Master of Science in Chemistry (M. Sc)** [2011], School of Chemical Sciences, North Maharashtra University, Jalgaon - 425001, M.S. India. (74.50 % First class) Secured first rank in University.
- **Bachelor of Science in Chemistry (B. Sc)** [2009], B.S.S.P.M. College, Songir, North Maharashtra University, Jalgaon, M.S. India. (65.41 % First class).
- **Advanced Diploma in Textile Wet Processing (ADTWP)**[2009] SVKM’S, NMIMS University, Mumbai India, (CGPA 2.83)

Conferences/Posters/Workshops:

1. National conference on “Frontiers in Physical, Chemical & Biological Sciences” on the occasion of Prof. H. J. Arnikar Birth Centaury year 4-6 Oct-2013, Department of Chemistry, University of Pune.

2. DAE-BRNS Twelfth Biennial, Trombay Symposium on Radiation & Photochemistry (TSRP-2014) 6-9 Jan-2014 Radiation and Photochemistry Division, Bhabha Atomic Research Centre, Mumbai India.
3. DAE BRNS, 5th Interdisciplinary Symposium on Material Chemistry (ISMC-2014) 6-9 Dec 2014 at Bhabha Atomic Research Centre, Mumbai, India.
4. Attended one day workshop on “*Indian Patenting and Filing Procedures*” organized by RUSA, Gov. of Maharashtra, at North Maharashtra University, Jalgaon. August 23, 2016.

Publications:

1. Shivkumar Y. Patil, Pramod P. Mahulikar, Sandeep J. Pawar, Vishwanath. S. Zope. Fe₃O₄-polyaniline nanofibers synthesis in non-ionic surfactant based swollen liquid crystals. IJASTR,6(2)248-267, 2016.
2. Sandeep J. Pawar, Shivkumar Y. Patil, Pramod P. Mahulikar, Vishwanath. S. Zope Synthesis of Ibuprofen Intermediate using Alcoholic Silver Nanoparticles and its Kinetics: A Greener Approach towards Drug Synthesis. Chemical Physics Letters 671, 147-153, 2017.
3. Sandeep J. Pawar, Shivkumar Y. Patil, Pramod P. Mahulikar, Vishwanath. S. Zope Gold Nanoparticles Catalyzed Synthesis Of Ibuprofen Intermediate In Aqueous Ethanol. Bionano Frontier, volume 10, issue 1, Print ISSN 0974-0678, online ISSN 2320-9593 2017.
4. Sandeep J. Pawar, Shivkumar Y. Patil, Ajit M. Kalekar, Geeta K. Sharma, Pramod P. Mahulikar, Kiran Kumar K. Sharma. Synthesis of paracetamol from environmental pollutant by using silver nanoparticles as catalyst: A single step greener approach. Environment Observer, 13, 133-134, 2013.
5. Shivaji N. Tayade, Shivkumar Y. Patil, Kiran Kumar K. Sharma. Electrochemical investigation into the mechanism of redox shift in the oxidation of guanine and derivatives in room temperature ionic liquids. Environment Observer, 13, 131-132, 2013

Declaration:

I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

References:**Prof. P. P. Mahulikar**

Pro Vice-chancellor,
North Maharashtra University,
Jalgaon – 425 001
Email:
mahulikarpp@rediffmail.com

Prof. V. S. Zope

Department of Chemistry,
M. J. College, Jalgaon
425 001
Email: vszope2@gmail.com



(Dr. Shivkumar Y. Patil)