



Dr. Patil Ujwal Dhanraj

Assistant Professor,

Department of Chemical Engineering, University Institute of Chemical Technology,
Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

B. Tech. (Chem. Engg.) with Distinction, Department of Chemical Technology, North Maharashtra University, Jalgaon, 2003.

M. Tech. (Chem. Engg.) with Distinction, Dr. Babasaheb Ambedkar Technological University, Lonere Dist. Raigad 2006.

Ph. D. (Chemical Technology), Department of Chemical Technology, North Maharashtra University, Jalgaon, 2010.

Phone: +91-257-2257444(O) +91-257-2282731(R) +91-9422773949

e-mail: udpatil@nmu.ac.in

Research Interests

Nano materials fabrication, Nanocomposites, Reaction Engineering, Reactor design, Modelling and Simulation, .

Work Experience

➤ Worked as Sr. Research Fellow under **CSIR** Major project (May 2006 – Sept 2007). Presently working as Assistant Professor, in Department of Chemical Engg, University Institute of Chemical Technology, North Maharashtra University Jalgaon from 26 Sept 2007 to till date.

Projects

- 1) Coordinator: A.I.C.T.E. New Delhi sponsored Entrepreneurship Development Cell, Total grant: 08 lakh (Completed)
- 2) Principle Investigator: UGC sponsored major research project, 'Reaction Engineering and Modeling of Thin Film Coprecipitation Reactors and Process Development of synthesis of Nanopigments', Total grant: 13.342 Lakh (Completed).
- 3) Co-Investigator: DST, New Delhi sponsored project, 'Development of Nanocontainer for anticorrosive properties of coatings'(SR/S3/CE/0060/2010 dated 30/08/2011), Total grant: 10.08 Lakhs (Completed)
- 4) Principle Investigator: TEQIP-II, MHRD sponsored project, 'Development of Surface modified bimetallic catalysts for removal of water pollutants' Total Grant: 1.5 Lakhs (completed)

Conferences

National

1. U. D. Patil, S. Mishra, R. D. Kulkarni "Synthesis of nano inorganic fillers" in National seminar on Role of Nanotechnology in Chemical and Polymer Industries, March 15th 2008, Jalgaon (**Best Poster Presentation award**)

International

2. N. G. Shimpi, S. Mishra, **U.D Patil**, "Preparation and Characterization of EPDM rubber Nanocomposites" International Conference on INCCOM-6, Dec 15-17, 2007, Indian Institute of Technology, **Kanpur**

3. **U. D. Patil**, S. Mishra, R. D. Kulkarni, N. Ghosh, “Surfactant assisted solution spray synthesis of stabilized Prussian Blue and Red Oxide for preparation of nanolatex composites” NanoMan 2008, 14-16, July 2008, **Singapore**.

4. **U. D. Patil**, R. D. Kulkarni, , N. Ghosh, S. Mishra, “Surfactant Stabilized Synthesis of Nano Prussian Blue in Falling Film Reactor”, ICCE-2009, 21-23 Jan.2010, **Thailand**.

5. **Ujwal D. Patil**^{1 a}, Virendra J. Patil^{2 b} and Ravindra D. Kulkarni “Solution spray controlled polymorph selective synthesis of lead chrome nanocrystals”, AMDP-2014, 17-21, July, 2014, **Busan, South Korea (Best Paper Presentation award)**.

Publications

1. Mishra, S., Shimpi, N. G., & Patil, U. D. (2007). Effect of nano CaCO₃ on thermal properties of styrene butadiene rubber (SBR). *Journal of Polymer Research*, 14(6), 449-459.
2. Kulkarni, R. D., Ghosh, N., Patil, U. D., & Mishra, S. (2009). Surfactant assisted solution spray synthesis of stabilized prussian blue and iron oxide for preparation of nanolatex composites. *Journal of Vacuum Science & Technology B*, 27(3), 1478-1483.
3. Mishra, S., Patil, U. D., & Shimpi, N. G. (2009). Synthesis of mineral nanofiller using solution spray method and its influence on mechanical and thermal properties of EPDM nanocomposites. *Polymer-Plastics Technology and Engineering*, 48(10), 1078-1083.
4. Kulkarni, R. D., Ghosh, N., Patil, U. D., & Mishra, S. (2013). In Situ synthesis of poly (styrene–butylacrylate–acrylic acid) latex/barium sulfate nanocomposite and evaluation of their film properties. *Polymer Composites*, 34(10), 1670-1681.
5. Kapole, S. A., Bhanvase, B. A., Pinjari, D. V., Kulkarni, R. D., Patil, U. D., Gogate, P. R., ... & Pandit, A. B. (2014). Intensification of corrosion resistance of 2 K epoxy coating by encapsulation of liquid inhibitor in nanocontainer core of sodium zinc molybdate and iron oxide. *Composite Interfaces*, 21(6), 469-486.
6. Deshpande, P. S., Patil, V. J., Mahulikar, P. P., Patil, U. D., & Kulkarni, R. D. (2015). Interfacial analysis and reaction engineering of sucrose ester mediated solution spray synthesis of lead chromate nanorods. *Chemical Engineering and Processing: Process Intensification*, 95, 390-402.
7. Patil, U. D., Patil, V. J., & Kulkarni, R. D. (2015, June). Solution Spray Controlled Polymorph Selective Synthesis of Lead Chrome Nanocrystals. In *Advanced*

Materials Research (Vol. 1110, pp. 263-266).

8. VJ Patil, U.D. Patil, YE Bhoge, RD Kulkarni, "Facile Synthesis of Calcium Carbonate Nanoparticles using Solution Spray Reactor System", *International Journal of Applied Engineering Research* 9 (10), 1261-1270.
9. Virendra J. Patil, Ujwal D. Patil, Ravindra D. Kulkarni, A Simple Solution Spray Reactor System for Directed Synthesis of Lead Chromate Nanorods, *Int. Conf. on Advances in Chemical Engineering and Technology, ICACE TKMCE, (2014)* pp.68–71.
10. Virendra J. Patil, Yogesh E. Bhoge, Ujwal D. Patil, Tushar D. Deshpande, Ravindra D. Kulkarni, 'Room temperature Solution spray synthesis of Bismuth vanadate nanopigment and its utilization in formulation of industrial OEM coatings', *Vaccum*, 127, 2016, pp. 17-21. [IF: 1.85]
11. Patil, Virendra J., Ujwal D. Patil, Ravindra D. Kulkarni, and Nippon Ghosh. "Synthesis of nano CaCO₃/acrylic co-polymer latex composites for interior decorative paints." *Polymer Composites* (2016).
12. Yogesh E. Bhoge, Virendra J. Patil, Tushar D. Deshpande, Ujwal D. Patil, Ravindra D. Kulkarni, Synthesis of Mica Doped Calcium Carbonate Filler for Partial Replacement of TiO₂ in Decorative Paint, *International Journal of Engineering Trends and Technology, Special Issue, 2016, pp. 279-282 [SJIF: 1.7]*
13. Hatkar, V. M., Patil, V. J., Bhoge, Y. E., Narkhede, J. S., **Patil, U. D.**, & Kulkarni, R. D. (2018). Solution spray synthesis and surface modification of SiO₂ nanoparticle for development of UV curable concrete coatings. *Vacuum*, 147, 158-162.
14. Mahajan, D. S., Deshpande, T., Bari, M. L., **Patil, U. D.**, & Narkhede, J. S. (2018). Self-assembled 3D zinc borate florets via surfactant assisted synthesis under moderate pressures: Process temperature dependent morphology study. *Materials Research Express*, 5(4), 045002.
1. R. D. Kulkarni, N. Ghosh, **U. D. Patil**, and S. Mishra, "Solution spray process for preparation of inorganic nanosized particles using co-precipitation technique in micellar mode", *Indian patent No.235186*, Application No. Mum/1639/2007, Date of filing 27 August, 2007, Date of Grant: 26 June, 2009.

Patent

Ph. D. Students

Sr. No.	Name of the student	Subject	Status
1.	Mr. Virendra J. Patil	Chemistry	Completed
2.	Mr. Sunil M. Badgujar	Chem. Engg. and Tech.	Ongoing
3.	Mr. Ulhe Narendra	Mechanical Engg.	Ongoing
4.	Mr. Himalay Vardikar	Chem. Engg. and Tech.	Ongoing
5.	Mr. Nitish Galande	Chem. Engg. and Tech.	Ongoing