



Name : Dr. Prakash V. Chavan -

Qualification : M. Chem. Engg., Ph.D (Tech.)

Designation : Professor and Head

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Phone : +91- 20- 24107310

Experience (Years)

Teaching : 15

Industry : 03

Research : 18

Portfolio at college level:

1. Head, Department of Chemical Engineering
2. Member, IQAC
3. Member, Faculty of Engineering and Technology
4. Chairman, Board of Studies, Department of Chemical Engineering
5. Member, Purchase Committee

Conferences: National/ International (Participation and publication):

- (1) **P. V. Chavan**, M. A. Thombre, Flow characteristics of solid liquid circulating fluidized bed, REACT 2016: A national conference on "Recent trends in chemical engineering and technology" Laxminarayan Institute of Technology, Nagpur 26- 27 February 2016.
- (2) M. V. Khedkar, P. K. Nimbalkar, S. B. Bankar, **P. V. Chavan**, Biobutanol- The next generation biofuel, MITS 2016: : A national conference on "Modern and innovative tools for sustainability" Maharashtra Institute of Technology, Pune 25- 26 February 2016.

(3) **P. V. Chavan**, M. D. Thombre, A novel solid liquid circulating fluidized bed, Sanvargam 2016: A national conference on “Energy and Environment” Bharati Vidyapeeth University, College of Engineering, Pune 26- 27 March 2016.

(4) M. V. Khedkar, P. K. Nimbalkar, S. B. Bankar, **P. V. Chavan** “Biobutanol”, Sanvargam 2016: A national conference on “Energy and Environment” Bharati Vidyapeeth University, College of Engineering, Pune 26- 27 March 2016.

(5) S. R. Satpute, **P. V. Chavan**, S. T. Revankar, Bunsen reaction, phase separation study for SI Thermochemical cycle to produce hydrogen from non-fossil sources for sustainable development, International Conference on “Sustainable Development” Shram Sadhana Bombay Trust, College of Engineering and Technology, Bambhori, Jalgaon, 25- 26 February 2014.

Publications: National/ International Journal

2025

(1) G. D. Gawande, Y. D. Nahata, P. V. Chavan, Allura Red dye degradation using hybrid advanced oxidation methods. Chemical Papers, 79, (2025), 1879-1889.

(2) A. J. Jadhav, A. D. Goswami, D. H. Trivedi, P. V. Chavan, N. L. Jadhav, D. V. Pinjari, A comprehensive review on pure and doped titanium oxide nanoparticles for photocatalytic applications. Inorganic Chemistry Communications 181 (2025) 115206

2023

(1) A. Kumar, P. V. Chavan, D. S. Bhatkhande, V. S. Sadavarte, S. S. N. M. Santosh Mada, S. M. Pande, Migration of Energetic Plasticizer in Advanced Energetic Composite Propellant Grains. Propellants, Explosives, Pyrotechnics, 48, (2023), 88-96.

(2) G. D. Gawande, D. V. Pinjari, P. V. Chavan, Degradation of neomycin using hydrodynamic cavitation based hybrid techniques. Chemical Engineering & Processing: Process Intensification, 193, (2023), 109543.

2022

(1) G. D. Gawande, D. V. Pinjari, P. V. Chavan, Degradation of Tartrazine using Hydrodynamic Cavitation-Based Hybrid Techniques and Fenton Chemistry. Chemical Engineering and Technology, 45, (2022), 1148–1157.

(2) M. A. Khedkar, P. R. Nimbalkar, S. B. Bankar, P. V. Chavan, Adsorption of Acetic Acid on Ion Exchange Resin in Aqueous and Non-aqueous Conditions: Batch Equilibrium Study and Thermodynamic Analysis. *Indian Chemical Engineer*, 64, (2022), 348-358.

2021

(1) S. A. Survase, P. R. Nimbalkar, G. Jurgens, T. Granström, P. V. Chavan, S. B. Bankar, Efficient Strategy to Alleviate the Inhibitory Effect of Lignin-Derived Compounds for Enhanced Butanol Production. *ACS Sustainable Chemistry & Engineering*, 9, (2021), 1172–1179.

(2) M. A. Khedkar, S. R. Satpute, S. B. Bankar, P. V. Chavan, Adsorptive Removal of Unsaturated Fatty Acids Using Ion Exchange Resins. *Journal of Chemical & Engineering Data*, 66, (2021), 308–321.

(3) A. Kumar, V. S. Sadavarte, S. S. N. M. S. Mada, S. M. Pande, P. V. Chavan, Studies on the Effect of Ageing on Thermal, Ballistic and Mechanical Properties of Advanced Energetic Propellants. *Propellants Explosives Pyrotechnics*, 46, (2021), 626–635

2020

(1) M. A. Khedkar, P. R. Nimbalkar, S. G. Gaikwad, **P. V. Chavan**, S. B. Bankar, Solvent extraction of butanol from synthetic solution and fermentation broth: Batch and continuous studies. *Separation and Purification Technology*, 249, (2020), 117058.

(2) S. A. Survase, P. R. Nimbalkar, G. Jurgens, T. Granström, P. V. Chavan, S. B. Bankar, Efficient Strategy to Alleviate the Inhibitory Effect of Lignin-Derived Compounds for Enhanced Butanol Production. *ACS Sustainable Chemistry & Engineering*, (2020).

(3) M. A. Khedkar, S. R. Satpute, S. B. Bankar, **P. V. Chavan**, Adsorptive Removal of Unsaturated Fatty Acids Using Ion Exchange Resins. *Journal of Chemical & Engineering Data*, (2020).

2019

(1) P. R. Nimbalkar, M. A. Khedkar, S. P. Kamble, S. G. Gaikwad, **P. V. Chavan**, S. B. Bankar, Strategic Intensification in Butanol Production by Exogenous Amino Acid Supplementation: Fermentation Kinetics and Thermodynamic Studies. *Bioresource Technology*, 288, (2019), 121-131.

(2) R. Sangtyani, H. S. Saha, A. Kumar, A. Kumar, M. Gupta, **P. V. Chavan**, An Alternative Approach to Improve Burning Rate Characteristics and Processing Parameters of Composite Propellant. *Combustion and Flame*, 209, (2019), 357-362.

- (3) P. R. Nimbalkar, M. A. Khedkar, S. G. Gaikwad, **P. V. Chavan**, S. B. Bankar, Enhanced Biobutanol Production in Folic Acid Induced Medium by using Clostridium Acetobutylicum NRRL B-527. ACS Omega, 4, (2019), 12978-12982.
- (4) M. A. Thombare, **P. V. Chavan**, S. B. Bankar, D. V. Kalaga, Solid- Liquid Circulating Fluidized Bed: A Way Forward. Reviews in Chemical Engineering, 35, (2019), 1-44.
- (5) M. A. Thombare, S. B. Bankar, D. V. Kalaga, R. K. Kulkarni, S. R. Satpute, **P. V. Chavan**, Novel Multistage Solid-Liquid Circulating Fluidized Bed: Liquid Phase Mixing Characteristics. Particulate Science and Technology, 11, (2019) 1-12.

2018

- (1) M. A. Khedkar, P. R. Nimbalkar, S. P. Kamble, S. G. Gaikwad, **P. V. Chavan**, S. B. Bankar, Process Intensification Strategies for Enhanced Holocellulose Solubilization: Beneficiation of Pineapple Peel Waste for Cleaner Butanol Production. Journal of Cleaner Production, 99, (2018), 937-947.
- (2) **P. V. Chavan**, M. A. Thombare, S. B. Bankar, D. V. Kalaga, and V. A. Patil-Shinde. 2017. Novel multistage solid-liquid circulating fluidized bed: hydrodynamic characteristics. Particuology, 38, (2018), 134-142.
- (3) P. R. Nimbalkar, M. A. Khedkar, **P. V. Chavan**, S. B. Bankar Biobutanol Production using Peas Pod Waste as Substrate: Impact of Drying on Saccharification and Fermentation. Renewable Energy, 117, (2018), 520-529.
- (4) P. R. Nimbalkar, M. A. Khedkar, R. S. Parulekar, V. Chandgude, K. D. Sonawane, **P. V. Chavan**, S. B. Bankar, Role of Trace Elements as Cofactor: An Efficient Strategy towards Enhanced Biobutanol Production. ACS Sustainable Chemistry & Engineering, 6, (2018), 9304-9313.
- (5) K. T. Bhoy, M. M. Upkare, S. R. Satpute, **P. V. Chavan**, Adsorption Studies on Acetic Acid using Anionic Resin and Activated Charcoal from Pineapple Peels and Sweet Lemon Peels. International Journal of Research in Engineering, Science and Management, 1, (2018), 98-106.

2017

- (1) S. S. Yadav, N. A. Mali, S. S. Joshi, **P. V. Chavan**, Isobaric Vapor–Liquid Equilibrium Data for the Binary Systems of Dimethyl Carbonate with Xylene Isomers at 93.13 kPa. Journal of Chemical & Engineering Data, 62, (2017), 2436-2442.

- (2) M. A. Khedkar, P. R. Nimbalkar, **P. V. Chavan**, Y. J. Chendake, S. B. Bankar, Cauliflower Waste Utilization for Sustainable Biobutanol Production: Revelation of Drying Kinetics and Bioprocess Development. *Bioprocess & Biosystem Engineering*, 40, (2017), 1493-1506.
- (3) P. R. Nimbalkar, M. A. Khedkar, S. G. Gaikwad, **P. V. Chavan**, S. B. Bankar, New Insight into Sugarcane Industry Waste Utilization (Press Mud) for Cleaner Biobutanol Production by using *C. Acetobutylicum* NRRL B-527. *Applied Biochemistry & Biotechnology*, 183, (2017), 1008-1025.
- (4) M. A. Khedkar, P. R. Nimbalkar, S. G. Gaikwad, **P. V. Chavan**, S. B. Bankar,, Sustainable Biobutanol Production from Pineapple Waste using *Clostridium Acetobutylicum* B 527: Drying Kinetics Study. *Bioresource Technology*, 225, (2017), 359- 366.
- (5) S. S. Pawar, **P. V. Chavan**, S. B. Bankar, Production of Bio-Ethanol from Biomass (Press Mud). *International Journal of Advance Research, Ideas & Innovation in Technology*, 3, (2017), 1550-1555.

2016

- (1) Y. H. Shinde, A. S. Gudekar, **P. V. Chavan**, A. B. Pandit, J. B. Joshi, Design and Development of Energy Efficient Continuous Cooking System. *Journal of Food Engineering*, 168, (2016), 231–239.
- (2) J. A. Chougale, S. B. Bankar, **P. V. Chavan**, V. B. Patravale, R. S. Singhal, Supercritical Carbon Dioxide Extraction of Astaxanthin from *Paracoccus* NBRC 101723: Mathematical Modelling Study. *Separation Science and Technology*, 51, (2016), 2164-2173.
- (3) P. K. Mali, **P. V. Chavan**, Vapor Liquid Equilibrium Data Generation for Acetic Acid and P-Xylene at Atmospheric Pressure. *International Journal of Chemical Sciences*, 14, (2016), 1- 9.
- (4) P. K. Mali, **P. V. Chavan**, Vapor Liquid Equilibrium Data Generation for Acetic Acid and P-Xylene at Atmospheric Pressure. *International Journal of Chemical Science*, 14, (2016), 1-9.

2014

- (1) M. M. Gore, V. K. Saharan, D. V. Pinjari, **P. V. Chavan**, A. B. Pandit, Degradation of Reactive Orange 4 Dye using Hydrodynamic Cavitation Based Hybrid Techniques. *Ultrasonics Sonochemistry*, 21, (2014), 1075–1082.
- (2) C. S. Shende, **P. V. Chavan**, Esterification OF Phthalic Anhydride with N-Butanol using Homogeneous Catalysts. *Journal of Indian Chemical Society*, 91, (2014), 1355-1359.
- (3) P. Singh, S. P. Kamble, **P. V. Chavan**, Kinetics of Esterification of Citric Acid with Butanol using Sulphuric Acid. *International Journal of Chemical Sciences*, 12, (2014), 915-920.

(4) R. Bhole, **P. V. Chavan**, S. R. Satpute, Acid Value Reduction of Jatropha Oil for High Quality Biodiesel. International Journal of Engineering Research and Science and Technology, 3, (2014), 228-232.

(5) N. N. Maher, S. R. Satpute, **P. V. Chavan**, Degradation of Potassium Permanganate using Acoustic Cavitation. International Journal of Advanced Engineering Technology, 2, (2014), 15- 17.

2013

(1) S. R. Satpute, Y. H. Shinde, **P. V. Chavan**, Esterification of Phthalic Anhydride with 2- Ethylhexanol. International Journal of Research in Advent Technology, 1, (2013), 553- 568.

(2) C. S. Shende, **P. V. Chavan**, Decolorization of Phthalate Platicizer using Activated Carbon. International Journal of Advanced Engineering Technology, 4, (2013), 14- 15.

(3) M. M. Gore, **P. V. Chavan**, Hydrodynamic Cavitation using Degradation of Reactive Orange 4 Dye. International Journal of Chemical Sciences, 11, (2013), 1314-1320.

2012

(1) J. B. Joshi, A. B. Pandit, S. B. Patel, R. S. Singhal, G.K. Bhide, K. V. Mariwala, B. A. Devidayal, S. P. Danao, A. A. Ganguli, A. S. Gudekar, **P. V. Chavan**, Y. H. Shinde, Development of Efficient Designs of Cooking Systems. II. Computational Fluid Dynamics and Optimization. Industrial Engineering and Chemistry Research, 51 (2012), 1897–1922.

2010

(1) M. G. Sajilata, M. V. Bule, **P. V. Chavan**, R. S. Singhal, M. Y. Kamat, Development of Efficient Supercritical Carbon Dioxide Extraction Methodology for Zeaxanthin from Dried Biomass of Paracoccus Zeaxanthinifaciens, Separation and Purification Technology, 71, (2010), 173–177.

2009

(1) **P. V. Chavan**, D. S. Kalaga, J. B. Joshi, Multistage Circulating Solid- Liquid Fluidized Bed: Hydrodynamic Study. Industrial Engineering and Chemistry Research, 48, (2009), 4565-4578.

2008

(1) **P. V. Chavan**, J. B. Joshi, Analysis of Particle Segregation and Intermixing. Industrial Engineering and Chemistry Research, 47, (2008), 8458-8470.

2007

(1) M. V. Shrikumar, **P. V. Chavan**, J. B. Joshi, Solid Dispersion in Expanded Bed. Industrial Engineering and Chemistry Research, 46, (2007), 1836-1842.

Patents/ Copyright:

(1) R. S. Singhal, V. B. Patravale, N. A. Kadwadkar, S. B. Bankar, **P. V. Chavan**, Microbial Polyamino Acids: An Overview for Commercial Attention, Role of Materials Science in Food Bioengineering, Elsevier Ltd., (2018), 381-412.

(2) M. A. Thombre and **P. V. Chavan**, Flow Characteristics of Novel Solid Liquid Circulating Fluidized Bed. Apple Academic Press, Taylor and Francis Distribution, (2017), 75- 102.

(3) S. B. Bankar, P. R. Nimbalkar, M. A. Khedkar, **P. V. Chavan**, Biobutanol: Research Breakthrough for its Commercial Interest, Liquid Biofuel Production, Wiley and Sons Publishing, (2019), 524-552.

(4) P. R. Nimbalkar, M. A. Khedkar, P. V. Chavan, S. B. Bankar, Biobutanol from agricultural residues: Technology and economics, Advances and Developments in Biobutanol Production, Elsevier Ltd., (2022), 139-169.

Projects/ Achievements:

(I) Projects

Funding Agency	Amount,(Lakh)	Year	Title	Role	Outcome
TEQIP- II	02.20	2013- 15	Synthesis using esterification reaction.	Principal investigator	Completed Publications – 03
DST, India	28.05	2014-17	A novel solid- liquid circulating fluidized bed reactor: Hydrodynamic and mixing studies.	Principal investigator	Completed Publications- 04
TEQIP- II	02.99	2015- 17	Bio- butanol: valorization of agricultural waste to biofuel	Principal investigator	Completed Publications- 02
Aalto University, Finland	05.05	2017- 18	Research fellowship title: Enhancement in butanol by incorporating metabolic engineering aspects.	Principal investigator	Completed Publications- 02
CSIR	14.35	2018-21	Effective utilization of agricultural waste for advanced biofuel production.	Principal investigator	Completed Publications- 04

Achievements

Recognized Ph.D guide- Bharati Vidyapeeth (Deemed to be University), Pune

Level 5 Certification- Leadership Development Programme (UKIERI)

Technical Education Quality Improvement Programme- II (TEQIP-II) Coordinator

AICTE- Margadarshan Scheme Coordinator