

Curriculum vitae

Name: Anusaya Shriram Chavan

Position: Assistant Professor, Department of chemistry

Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar,
431004, Maharashtra, India



Email: aschavan.chemistry@bamu.ac.in/ aschavan333@gmail.com

Educational Qualification:

Degree /course earned	Board/University attended	Dates received	Subjects	%
Ph. D.	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	30 th January, 2020	Organic Chemistry (Isolation, Purification and characterisation of the products obtained from biocatalysed organic transformations')	
NET	Council of Scientific & Industrial Research	June, 2010 & Dec. 2011	Chemical Sciences	
SET	University of Pune	Aug. 2006	Chemical Sciences	
M.Sc.	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	3 rd July, 2000	Organic Chemistry	58.58
B.Ed.	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	27 th May, 1999	Science & Maths	73.1
B.Sc.	Dr. Babasaheb Ambedkar Marathwada University, Aurangabad	7 th June, 1997	Analytical Chemistry, Zoology, Chemistry	78.08

H. S. C.	Aurangabad Board	4 th June, 1994	English, Marathi, Chemistry, Physics, Biology, Sociology	61.17
S.S.C.	Aurangabad Board	24 th June, 1992	English, Marathi, Hindi, Science, Mathematics, Social studies	80.71

Teaching experience: 24 Years

Professional position held:

- Assistant Professor, Department of chemistry, Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar, 2009 - Present
- Lecturer, Department of chemistry, Dr. Babasaheb Ambedkar Marathwada University, sub-campus, Osmanbad, 2007 - 2009
- Lecturer (CHB), Department of chemistry, Deogiri College, Aurangabad, 2006 - 2007
- Lecturer (CHB), Department of chemistry, Balbhim College, Beed, 2000 - 2006
- Lecturer (CHB), Department of chemistry, Swa. Savarkar Mahavidhyalaya, Beed, 2000-2005

Research Areas:

- Synthetic Organic Chemistry
- Development of new methodology for value-added organics.
- Chemistry- biology interface

Fellowship/Awards/Invited Talks:

- INSA visiting scientist fellowship, at CSIR-National Chemical Laboratory, Pune, Maharashtra, India, during 21st November, **2023** to 20th January, **2024**.
- Delivered a series of lectures related to Organic Chemistry at the Department of Pharmacy, University of Santiago de Compostela, Spain, under the Erasmus+ International Credit Mobility KA 107 Programme, May 15-23, **2023**.
- Delivered a talk in workshop on 'Advances in Chemical Analysis - Application of Gas Chromatography in Chemical Analysis' at Shivchhatrapati College N-3 Cidco, Aurangabad, Maharashtra, India.

Technical Skill and Competencies:

- Planning and execution of the different organic transformations at inert atmosphere, inert reactions, online monitoring, controlled reaction conditions. Exposure of Flow chemistry.
- Development of synthetic methodologies
- Enzyme - catalysed organic transformations
- Proficient in chemical experiments and data interpretation including the chromatograms and spectra.
- Strong understanding of organic reactions, mechanisms, spectroscopy of organic compounds and retrosynthetic analysis of targeted compounds.

Published Papers: (Total citation: 56, h-index: 4, i-10 index-3)

- "Co-existence of Extended Spectrum β -Lactamase and carbapenemase-producing genes from Diarrheagenic Enteric pathogens isolated in a tertiary care hospital: AMR in pediatric samples." *Acta Biochimica Polonica*, Vol. 70, No 1/**2023**, 69–76, Impact Factor: 2.149
- "Novel CAL-B catalyzed Synthetic Protocols for Pyridodipyrimidines and Mercapto Oxadiazoles." *Journal of Chemical Sciences*, **2022**, 134:120, Impact Factor: 2.150, citation - 1
- "Subtype diversity and emergence of drug resistance in HIV-1 in Solapur district of Maharashtra, India." *Iranian Journal of Microbiology*, Volume 14 Number 5 (October **2022**) 730-739, Impact Factor: 1.221
- "CAL-B Accelerated Novel Synthetic Protocols for 3,3'-Arylidenebis-4-hydroxycoumarins and Dimethyl ((Substituted Phenyl) (Phenylamino) Methyl) Phosphonates." *Research on Chemical Intermediates*, **2021**, 47, 4497-4512, Impact Factor: 3.134, citation - 5
- "Water-mediated and Baker's yeast accelerated novel synthetic protocols for tetrahydrobenzo[a]xanthene-11-ones and pyrazolo[3,4-b]quinolines." *Synthetic Communications*, **2021**, VOL. 51, NO. 13, 1963–1973, Impact Factor: 1.937, citation – 10.
- "Baker's yeast catalyzed one-pot synthesis of bioactive 2-[benzylidene(or pyrazol-4-ylmethylene)hydrazono]-1,3-thiazolidin-4-one-5-yl-acetic acids." *Heterocyclic Communications*, **2018**, 24, 2, 103–107, Impact Factor: 2.000, citation – 13.

- A convenient Baker yeast accelerated, one-pot synthesis of pentasubstituted thiopyridines." Synthetic Communications, **2017**, VOL. 47, NO. 19, 1777–1782, Impact Factor: 1.937, citation – 22.

Papers Presented:

- 108th Indian National Sciences on 'Science and Technology for Sustainable Development with Women's Empowerment' at R.T.M. Nagpur University, Nagpur, Maharashtra, India, January 3-7, **2023**
- 107th Indian National Sciences on 'Science and Technology: Rural Development' at University of Agricultural Sciences, GKVK Campus, Bangalore, Karnataka, India, January 3-7, **2020**
- International Conference on 'Exploring New Horizons in Chemical Sciences' Deogiri College, Aurangabad, January 10-12, **2019**
- International Conference on 'Frontier Research in Chemistry & Biology Interface' Indian Society of Chemists and Biologists, Lucknow, and Manipal University, Jaipur, January 11-13, **2018**
- National Conference on 'Technology foresight in life sciences' at Dr. Rafiq Zakaria Campus, Maulana Azad College of Arts, Science and Commerce, Aurangabad, February 20-21, **2010**
- National Conference on 'Biodiversity: Emerging challenges & opportunities' at Majalgaon Arts, Science & Commerce College, Majalgaon, Maharashtra, India, August 29-30, **2009**

Research Projects (Ongoing):

Funding Agency	Title of the project	Amount sanctioned (in Lakhs)	PI/Co-PI
Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhajinagar	Green synthesis of organic compounds: Explore eco-friendly methods for synthesizing value-added organics.	2.7	PI

Research Projects (Completed):

Funding agency	Title of the project	Amount sanctioned (in Lakhs)	PI/Co-PI
Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhajinagar	Molecular docking synthesis and biological screening of different moieties containing quinolone scaffolds along with the triazole, tetrazole, isoxazole, benzothiazole ring framework	0.5	PI

Orientation / Refresher / Short term Course attended:

- Workshop on "Scientific Project Management," Indian Institute of Science Education and Research (IISER) Pune, January 10-14, 2022
- Short-term faculty development program on nanomaterial characterization techniques and result analysis methodology: Idea, Innovation and Initiatives (chemical sciences), MHRD's Faculty Development Centre (PMMMNMTH) UGC-HRDC, Savitribai Phule Pune University, Pune, July 27-31, 2020
- Short-term course in Environment Conservation (earth and environmental responses during Covid - 19), MHRD's Faculty Development Centre (PMMMNMTH) UGC-HRDC, Savitribai Phule Pune University, Pune, July 11-17, 2020
- 3rd Refresher course, Teaching Learning Centre, Ramanujan College, University of Delhi, MHRD- Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, July 25 - August 10, 2020
- Faculty Development Program (Global Business Foundation Skills), Infosys BPM Ltd, Pune, August 20-28, 2019
- STEM Teacher Training Workshop on Research-Based Pedagogical Tools (Level 2), DBT, Govt. of India, British Council, MHRD, January 17-19, 2019
- STEM Teacher Training Workshop on Research-Based Pedagogical Tools (Level 1), DBT, British Council, MHRD, Government of India, September 23-26, 2018
- 2nd Refresher course, UGC-Human Resource Development Centre (HRDC), Panjab University, Chandigarh, Punjab, August 30 - September 19, 2018
- 1st Refresher course, UGC Academic Staff College, Dr. B.A.M.U., Aurangabad, Maharashtra, December 9-29, 2011

- Orientation course, UGC Academic Staff College, Dr. B.A.M.U., Aurangabad, Maharashtra, December 2-29, 2010

Organizing Member for Conferences, Seminars, workshop and others:

- Science Academies Lecture Workshop on Fundamental Concepts in Chemical Sciences (March 2014): Department of Chemistry, Dr. BAMU, Aurangabad
- National Seminar on Advances in Material Chemistry (January 2011): Department of Chemistry, Dr. BAMU, Aurangabad
- Science Academies Lecture Workshop on Probing Electronic States in Molecules and Molecular Materials (October 2010): Department of Chemistry, Dr. BAMU, Aurangabad
- National seminar on 'Recent advance in nanoscience' (February 2008) Department of Chemistry, Dr. B. A. Marathwada University Sub-centre, Osmanabad.

Contribution to the Department/University:

- Working as coordinator of Analytical chemistry and Examination section at Department of Chemistry, Dr. B. A. Marathwada University, Aurangabad since 2015.
- Active participation in syllabus designing of Organic, Drug (2007-2009) at Department of Chemistry, Dr. B. A. Marathwada University, subcentre Osmanabad and Analytical Chemistry (2013 onwards till present) at Department of Chemistry, Dr. B. A. Marathwada University, Aurangabad.
- Designed experiments for PG students and has been guiding for projects.
- Worked as CAS officer of University PG CAS April/May 2009-10 held at Rajashri Shahu Maharaj Pariksha Bhavan, Dr. B. A. Marathwada University Aurangabad.
- Worked as NSS officer at Department of Chemistry, Dr. B. A. Marathwada University, sub-centre, Osmanabad since 2007-09.
- Delivered lectures at SET/NET Coaching-Centre.

Subject taught: UG Level: Organic, Inorganic & Agro Chemistry

PG Level: Organic, Inorganic, Drug & Analytical Chemistry

Details of sub-topics taught: Organic chemistry:

- Nature of Bonding in Organic Molecules; Reaction Mechanism: Structure and Reactivity; Generation, Structure, Stability, and Reactivity of Reaction Intermediates; Stereochemistry; Aliphatic Nucleophilic Substitutions; Aromatic Electrophilic and Nucleophilic Substitutions; Addition to Carbon-Carbon Multiple Bond; Addition to Carbon-Hetero Multiple Bond; Elimination Reactions; Rearrangements.
- Ultraviolet-Visible Spectroscopy; Infrared Spectroscopy; Nuclear Magnetic Resonance Spectroscopy (^1H NMR); ^{13}C Nuclear Magnetic Resonance Spectroscopy; Mass Spectroscopy; Problems based on joint applications of UV, IR, ^1H NMR, ^{13}C NMR, and Mass Spectroscopy.
- Oxidation, Reductions; Organic Reagents; Formation of Carbon-Carbon Bonds via Organometallic Reagents
- Pericyclic Reactions; Photochemistry.
- Free Radical Reactions; Enzyme Chemistry; Name Reactions; Organic synthesis: Retrosynthetic approach.
- Terpenoids & Carotenoids; Alkaloids.
- Drugs and different types of drug; Drug action and development; Drug synthesis.

Details of sub-topic: Analytical chemistry:

- Basic concepts of analytical chemistry; Statistical treatment of analytical data.
- Basic separation techniques; Distillation and solvent and solid-phase extraction
- Chromatography techniques (TLC, column chromatography, size exclusion chromatography, partition chromatography, HPLC, GC, LC-MS, GC-MS, Tandem MS, supercritical extraction, and chromatography)
- General introduction of spectral methods of analysis; Elemental methods of analysis (Atomic Absorption Spectroscopy & Flame Emission Spectroscopy)
- Electron Spectroscopy (XPS/ESCA, Auger Electron Spectroscopy, UPS)
- Advanced Analytical Techniques – Chromatographic (TLC, Column, Size-Exclusion, Ion-exchange, Liquid-liquid partition, HPLC, GC, LC-MS, GC-MS, ICP-MS, MS-MS), Molecular Luminescence Spectrometry, Surface Characterization by Spectroscopy and Microscopy (SEM, STM, Atomic Force Microscopy)
- Quality Assurance and Accreditation; Analytical Method Development and Validation
- Pharmaceutical and Forensic Analysis

- Analysis of food, pesticides, Oils, Fats, paints, pigments, Soap, and Detergents
- Qualitative and quantitative Organic Analysis
- Preparations, analysis of different components using Instrumental and Non-Instrumental methods

Other services provided to students and the home institution:

- Guided more than 100 students (approximately 15-20 students per year) for their M. Sc. Research Project.
- Guided more than 100 students for their review of literature on different topic.
- Motivated the students for higher study such as competitive examination, doctoral degree, SET & NET.
- Coordinated more than 80 students for the '1 to 2 months hands-on training programme in Food & Drug Administration (FDA) laboratory', for the students since year 2019 (Approximately 20-24 students per year)
- Coordinated the study visits for the students regularly to different institution and laboratories.
- Arranged on regular basis the student's seminars, group discussion, role play, etc.
- Worked as coordinator for different students' competition such as science day celebration, essay, quiz, etc.

Community Service:

- Actively involved in the teaching and demonstrations of science topic at the school for students and teachers, on occasion of science day celebration on 5th March, 2023 at S. B. E.S. Centenary School, Aurangabad.
- Delivered a talk on 'Role of women for sustainable future' on occasion of women's day on 8th March, 2022 at Pratishthan College, Paithan, Aurangabad.
- Worked as National Service Scheme officer, through which actively involved in the rural development such as plantation, health and educational awareness, cleanness, etc
- Actively participated as evaluator/ judge in the different competition in the society such as quiz, debate, essay writing, etc.

Conference/seminar/workshops attended:

Name	Level	Duration
5 th NCL-RF Annual Students Conference 2023	National	30-11 to 01-12-2023
Workshop on Scientific Project Management	National	10 to 14- 01-2022
One Day Workshop on NAAC Revised Accreditation Framework	University	07-03-2020
National Science Day Celebration	University	27 to 28- 02-2020
Awareness Training Program of Web of Science	University	19-09-2019
FDP on Global Business Foundation Skills	National	20 to 28- 08-2019
International Conference on Quality Assurance in Higher Education in Asia and European Universities	International	02 to 04- 03-2019
One Day Author Workshop on Scientific Writing & Publishing Scholarly Articles	University	30-01-2019
National Seminar on Hindu Succession Act and Women	National	30-11-2018
One Day Author Workshop on Scientific Writing & Publishing Scholarly Articles	University	07-11-2017
Training Program on Awareness of Scopus & Indian Citation Index	University	22-12-2016
National Conference on Newest Developments in Chemical Sciences for Civilized Society	National	09 to 10 - 12-2016
One Day Seminar On Recent Trends In Therapeutics By Professor Jaykumar Rajada From Standrod University, USA	International	05-07-2016
Workshop on LATEX For Project Seminar, Thesis Typesetting	University	05-03-2016
Workshop on "Scientific Writing & Publishing Scholarly Articles"	National	04-11-2015
University-Industry Interaction Summit 2015	University	29 to 30 -10-2015
Four Day Workshop on Analytical Testing and Characterization	National	31-08 to 03-09-2015
Conference on Science and Technology for Human Development	National	30 to 31-12-2014
Training Programme on Awareness of Scifinder Database	University	22-07-2014
Training Programme on Sexual Harassment of Women at Workplace (prevention, Prohibition and Redressal) Act 2013	State	01-03-2013
National Conference on Pharmaceutical Analysis (NCPA-2013)	National	18 to 19-10-2013
Workshop on Women Protection at Work Place	University	16-01-2013
National Workshop on Nanotechnology and Intellectual Property Rights and Patents in Science and Technology from Nanotechnology Perspectives	National	16 to 17- 02-2012
National Conference on Advanced Tools In Chemical Analysis	National	26 to 27- 08-2011
National Level Workshop on Women Awareness, Water & Environment	National	29 to 30-10-2010

National Seminar on 'Biocatalysis and Biomimetic Catalysis in Organic Synthesis'	National	20 to 21-03-2009
A Two-day State Level Conference on Retrosynthesis	State	22 to 23-08-2008
Regional Workshop on Intellectual Property Right and Patenting	University	23-10-2007
International Conference on Advances in Drug Discovery Research (11th ISCBC-2007)	International	24 to 26 -02-2007
Workshop on High Performance Liquid Chromatography	University	07-01-2007
43 rd Annual Convention of Chemists 2006	National	23 to 27-12-2006
Regional Workshop on Revised Syllabus of Chemistry at Under-graduate Level	University	01-10-2004
One Day Workshop on Assessment and Accreditation of College	University	16-02-2002