# NAME: Dr. Gowrishankar B.S.

Affiliation (Professor, Dept. of Biotechnology, SIT) Contact: 98444 61940/0816-2214000 Extn. 4039

Email: bsgowri@sit.ac.in

Vidwan ID: 90753

Scopus ID: 56966634300 OrcID: 0000-0002-9167-5788

Faculty ID: SIT0027



Edu	Education						
	Degree	Year	Institute	Specialization			
1	Ph.D.	2006	IIT Madras	Biochemical			
				Engineering			
2	M.E.	1994	Siddaganga Institute of	Chemical			
			Technology	Engineering			
3	B.E.	1992	Siddaganga Institute of	Chemical			
			Technology	Engineering			

Profe	Professional Experience						
	Date (from-to)	Designation	Organization				
1	07-12-2007 to till date	Professor	Department of Biotechnology Siddaganga Institute of Technology				
2	11.03.2005 - 06.12.2007	Assistant Professor	Department Chemical Engineering Siddaganga Institute of Technology				
3	01.12.1997- 10.03.2005	Lecturer	Department Chemical Engineering Siddaganga Institute of Technology				

# Positions held

- Institutional Academic Council Member
- Institutional Governing Council Member
- Institutional Deputy Warden for Boys Hostel
- Institutional Anti Ragging Committee Member
- Head of the Department
- Co-Ordinator for BT Finishing School (BTFS)
- Biotechnology Skill Enhancement Program BiSEP Coordinator
- Board of Examiner member for VTU, Belagavi
- Board of Studies member for Department of Biotechnology, MSRIT, Bengaluru
- Board of Studies member for Department of Biotechnology, RVCE, Bengaluru

# Affiliations of Professional organizations

- Indian Society of Technical Education (ISTE) Life Member
- Indian Institute of Engineers (IIE) Life Member

- All India Chemical Engineering Association (AICHE) Life member
- Association of Biotechnology Led Enterprises (ABLE) Member

# **Courses Taught**

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# **Undergraduate Courses**

- 1. Bioreaction Engineering
- 2. Chemical Equipment Design
- 3. Bioprocess Equipment Design
- 4. Chemical Reaction Engineering
- 5. Chemical Process Technology
- 6. Material of Construction

### Postgraduate Courses

- 1. Biochemical Engineering
- 2. Bioreaction Engineering
- 3. Enzyme Technology

# Research Guidance

SI. no	Name of the Scholar	Title	Year of completion
1	Sridhar Bagali (1SI13PGN09)	Studies on Adsorptive Removal of lead and Chromium Compounds using Banana Pseudostem and Corn Cob	2021 (awarded)
2	T.P. Krishna Murthy (ISI15PGJ04)	Studies on application of Coffee husk derived activated Biomass and Nanometal oxides in Environmental Remediation	2020 (awarded)
3	Harish Patthepur (1SI12PGN03)	Synthesis and Characterization of Nanostructured Titanium dioxide Photocatalytic particles, films and Membranes for Environmental Applications.	2018 (awarded)
4	Manjunath Dammalli (1SI15PGJ05)  Proteomic analysis of human olfactory bulb olfactory tract using high-resolution mass spectrometry		2018 (awarded)
5	Vivek C (1SI12PGN04)	Identification and Evalution of Potential Lead Compound for Parkinsons disease by In Silico and Proteomics Approach.	2024 (awarded)
6	Varsha D Savanth (1SI15PGJ06)	Production, Purification and Characterization of 1,4 β Endoxylanase 2024from Bacillus pumilus using Agroindustrial residues	2024 (awarded)
7	Ravikumar C (1SI20PBT02)	Characterization and Toxicological end points of Plant based Liposome Nano particles	Pursuing

8	Mrs. Akshata V	Studies on Biological activity of	Pursuing
	(1SV13PGN01)	endophytic coumarin	
9	Mr. Naveen Kumar	Juvenile toxicity study of	Pursuing
	(25SIT038):	Carbamazepine admistred orally by	
		gavage in Wistear rats	

#### Research Areas

- 1. Environmental Biotechnology
- 2. Enzyme Technology
- 3. Downstream Process
- 4. Omics

#### **Sponsored Projects**

#### **Ongoing Projects:**

1. Title: National Network project on metabolomics

Funding Agency: Department of Biotechnology (DBT)

Amount: 45 Lakhs

Duration: 2024- ongoing Role: Principal Investigator

#### **Completed Projects:**

1. Title: Production and purification of esterases from s.cerevisieae

Funding Agency: AICTE

Amount: 10 Lakhs Duration: 2006-2008

Role: Principal Investigator

#### **Publications**

#### **Journals**

- Anitha K.N.; Mutahir M.; Dhadde S.B.; Gowrishankar B.S.; Chandramohan V. Neuroprotective Potential of Chromium-D-Phenylalanine: Insights from Molecular Docking, Dynamics and Rotenone-Induced Parkinsonism in Rats, Biological Trace Element Research, Year 2025, DOI:10.1007/s12011-025-04671-5
- Prakash M.;Prakash D.;Raju R.;Gowrishankar B.S;Dinesh V. A study on Ochromonas sp. as an alternate microalgal biomass for the synthesis of proteins and carotenoids Journal of Applied and Natural Science, Volume 17, Year 2025, Pages 293-301 DOI:10.31018/jans.v17i1.6258
- 3. Varsha D. Savanth;B.S. **Gowrishankar;K.B**. Roopa;Seema J. Patel. Effect of Agro-industrial Residue Composition on the Production of Endo-1, 4-β-Xylanase by *Bacillus pumilus*. Indian Journal of Agricultural Research, Volume 59, Year 2025, Pages 535-542. DOI:10.18805/IJARe.A-6076

- 4. Channabasavaiah Naveenaradhya , Veeresh, Prabhakar Veerapur , Ranganatha Puttaraju , Kodigenahalli, Balarajagupta Ajaykumar , DeviReddy Prashanthi , Vars ha D. Savanth, Mathud Shivamurthaiah Chaithanya, Bychapur Siddaiah Gowrishankar. Validated green and white RP-HPLC method for the estimation of Zolmitriptan in marketed dosage form. Annales Pharmaceutiques Francaises, Year 2024. DOI:10.1016/j.pharma.2024.08.010
- G. Vamshi ., Prasanth D. S. N. B. K. ., A. Sampath ., Manjunath Dammalli ., Pankaj Kumar ., Gowrishankar B.S. Possible cerebroprotective effect of citronellal: molecular docking, MD simulation and in vivo investigations. Journal of Biomolecular Structure and Dynamics, Volume 42, Year 2024, Pages 1208-1219 DOI:10.1080/07391102.2023.2220025
- 6. Pawar S.;Bagali S.;K U.;**Gowrishankar B.S**. Column study using modified banana pseudo stem as adsorbent for removal of Pb (II)
- 7. Mamtha R.;Kiran T.;Chandramohan V.;**Gowrishankar B.S**.;Manjulakumari D.. Genome-wide identification and expression analysis of the mating-responsive genes in the male accessory glands of Spodoptera litura (Lepidoptera: Noctuidae) Journal of Genetic Engineering and Biotechnology, Volume 21, Year 2023 DOI:10.1186/s43141-023-00466-0
- Savanth V.D.; Gowrishankar B.S.; Roopa K.B. Fermentation medium optimization for the 1,4-β-Endoxylanase production from Bacillus pumilus using agro-industrial waste. Journal of Applied Biology and Biotechnology, Volume 11, Year 2023, Pages 129-138 DOI:10.7324/JABB.2023.110212
- 9. Roopa K.B.;Surabhi S.R.;**Gowrishankar B.S.,** Screening, identification and optimization of Bacillus species isolated from textile effluents in malachite green degradation, Bioremediation Journal, Year 2023, DOI:10.1080/10889868.2023.2223646
- 10. Phattepur H.; Gowrishankar B.S.; Shekhar S.M.; Hiremath P.G.; Rajashekhara S. Facile Cellulose Acetate Membrane Fabrication Using Mesoporous Tio<sub>2</sub> Nanoparticles: Synthesis, Characterisation And Its Photocatalytic Application Journal of Chemical Technology and Metallurgy, Volume 57, Year 2022, Pages 953-961
- 11. Murthy T.P.K.; Joshi T.; Gunnan S.; Kulkarni N.; V P.; Kumar S.B.; **Gowrishankar B.S**, In silico analysis of Phyllanthus amarus phytochemicals as potent drugs against SARS-CoV-2 main protease
- 12. Phattepur H.; **Gowrishankar B.S.**, Non-linear regression analysis of the kinetics of photocatalytic degradation of phenol using immobilised mesoporous TiO<sub>2</sub> nanoparticles on glass beads, Indian Chemical

- 13. Murthy T.P.K.; **Gowrishankar B.S.**; Chandraprabha M.N.; Krishna R.H., Solution combustion synthesis of calcium aluminate nanocomposite using coffee husk extract as green fuel and its application in adsorptive amputation of anionic dyes Materials Research Express, Volume 7, Year 2020, DOI:10.1088/2053-1591/ab6b65
- 14. Krishna Murthy T.P.; **Gowrishankar B.S.**, Process optimisation of methylene blue sequestration onto physical and chemical treated coffee husk based adsorbent SN Applied Sciences, Volume 2, Year 2020, DOI:10.1007/s42452-020-2603-9
- 15. Patil S.B.; Patil S.B.; Phattepur H.; Nagaraju G.; **Gowrishankar B.S.**; Gowrishankar B.S., Highly distorted mesoporous S/C/Ti<sup>3+</sup> doped black TiO2 for simultaneous visible light degradation of multiple dyes, New Journal of Chemistry, Volume 44, Year 2020, Pages 9830-9836, DOI:10.1039/D0NJ01540G
- 16. Krishna Murthy T.P.; **Gowrishankar B.S.**; Krishna R.H.; Chandraprabha M.N.; Sreenivasa Rao R., Influence of fuel nature on dye adsorption efficiency of solution combustion derived zinc oxide nanoparticles: A comparative study Materials Research Express, Volume 6, Year 2019, DOI:10.1088/2053-1591/aafe3f
- 17. Krishna Murthy, T. P.; **Gowrishankar, B. S.**; Chandra Prabha, M. N.; Kruthi, M.; Hari Krishna, R., Studies on batch adsorptive removal of malachite green from synthetic wastewater using acid treated coffee husk: Equilibrium, kinetics and thermodynamic studies, Microchemical Journal, Volume 146, Year 2019, Pages 192-201
- 18. Phattepur, Harish; Siddaiah, Gowrishankar Bychapur; Ganganagappa, Nagaraju, Synthesis and characterisation of mesoporous TiO<sub>2</sub> nanoparticles by novel surfactant assisted sol-gel method for the degradation of organic compounds
  Periodica Polytechnica Chemical Engineering, Volume 63, Year 2019, Pages 85-95, DOI:10.3311/PPch.11789
- 19. Phattepur, Harish; **Gowrishankar, B. S.**; Nagaraju, G., Synthesis of gadolinium-doped TiO<sub>2</sub> thin films by sol—gel spin coating technique and its application in degradation of rhodamine-B, Indian Chemical Engineer, Volume 61, Year 2019, Pages 167-181, DOI:10.1080/00194506.2018.1529632
- 20. Dammalli M.; Dey G.; Kumar M.; Madugundu A.K.; Gopalakrishnan L.; **Gowrishankar B.S**.; Mahadevan A.; Shankar, Proteomics of the human

- olfactory tract, OMICS A Journal of Integrative Biology, Volume 22, Year 2018, Pages 77-87, DOI:10.1089/omi.2017.0155
- 21. Bagali, Shridhar S.; **Gowrishankar, Bychapur S**.; Roy, Aashis S., Optimization, Kinetics, and Equilibrium Studies on the Removal of Lead(II) from an Aqueous Solution Using Banana Pseudostem as an Adsorbent Engineering, Volume 3, Year 2017, Pages 409-415, DOI:10.1016/J.ENG.2017.03.024
- 22. Bharath Yoganarasimha, Vivek Chandramohan, Thirupathihalli P Krishna Murthy, Bhavya S Gangadharappa, **Gowrishankar B Siddaiah**, Makari Hanumanthappa, Prediction of deleterious single nucleotide polymorphisms and their effect on the sequence and structure of the human CCND1 gene Journal of Taibah University Medical Sciences, Volume 12, Year 2017, Pages 221-228
- 23. Dammalli M.; Dey G.; Madugundu A.K.; Kumar M.; Rodrigues B.; Gowda H.; **Siddaiah B.G.**; Mahadevan A.; Shankar, Proteomic Analysis of the Human Olfactory Bulb OMICS A Journal of Integrative Biology, Volume 21, Year 2017, Pages 440-453 DOI:10.1089/omi.2017.0084
- 24. Chandramohan V.; Kaphle A.; Chekuri M.; Gangarudraiah S.; **Bychapur Siddaiah G**., Evaluating Andrographolide as a Potent Inhibitor of NS3-4A Protease and Its Drug-Resistant Mutants UsingIn Silico Approaches, Advances in Virology, Volume 2015, Year 2015
- 25. S.; **Gowrishankar**, Nanofluids—a new promising fluid for cooling Transactions of the Indian Ceramic Society, Volume 68, Year 2009, Pages 1-17 DOI:10.1080/0371750X.2009.11082156
- 26. Panda, T.; **Gowrishankar, B. S.**, Critical analysis of application of generalized distance function for optimization of important variables for esterase synthesis by Saccharomyces cerevisiae, Bioresource Technology, Volume 99, Year 2008, Pages 5545-5555 DOI:10.1016/j.biortech.2007.10.057
- 27. Panda, T.; **Gowrishankar, B. S.,** Production and applications of esterases Applied Microbiology and Biotechnology, Volume 67, Year 2005, Pages 160-169 DOI:10.1007/s00253-004-1840-y

#### Invited Lectures, talks and workshops

- 1. Delivered a lecture in workshop on Modelling and Scale up of Bioreactors (MSB-2017), at Department of Chemical Engineering, Surathkal, Mangalore, 24-25th March 2017.
- 2. Delivered a lecture on Biotechnology and its application at Department of Biotechnology, Tumkur University, Tumkur on 1st Sep 2017
- 3. Guest talk on Fermentation Technology to BISEP students, Department of Biotechnology, KLE Technological University, Hubli-21st July 2018
- 4. Guest talk on "Fermentation Technology and its Applications" on 15th Feb 2020 at Post Graduation Centre, SDM College, Department of PG Studies in Biotechnology, Ujre, Mangalore
- 5. Guest talk on "Latest Trends in Bio technology" on 1st February 2021 for final year Mechanical Engineering students, Siddaganga Polytehnic, Tumakuru
- 6. Guest talk on "Latest Trends in Bio technology" on 7th March 2022 for final year Mechanical Engineering students, Siddaganga Polytechnic, Tumakuru

#### Workshops

- Organising International Conference on Green and Clean Technologies in Chemical Engineering and Biotechnology 14th and 15th February 2014 at SIT, Tumkur
- International Technical Seminar on Contemporary Advances in Biotechnology and Allied Sciences on 20th May 2015.
- Workshop on Design and optimization of experiments 4th -7th August 2014 at MSRIT, Bangalore.
- MISSION 10X Training Programme from 20 23 Jan 2015, at Wipro Technologies, Bangalore
- Attended Industrial Flow Measurements All India Level Seminar from 10th & 11th Mar 2017 organised by SIT, Tumkur & IEI, Karnataka Chapter, Bangalore.
- National level workshop on "Fermentation Process and Liquid Chromatography" at Department of Biotechnology, Post Graduate studies, JSS College of Arts, Commerce and Science, Mysore from 14th to 16th March, 2019
- Workshop on "Bioprocess Equipment Design and CAED" on 29th and 30th March 2019-12-19 at Dept of Biotechnology, GMIT, Davanagere
- National Conference on Recent Advances in Engineering, Technology and Science – 2K19 (NCRAET-2K19) in dept of Biotechnology, SIET, Tumkur on 26th and 27th April 2019

- National workshop on "Fermentation Process, Chromatography & DNA Amplification" at Department of Biotechnology, Post Graduate studies, JSS College of Arts, Commerce and Science, Mysore from 18th & 19th Feb, 2020
- AICTE training and learning Academy on "Recent development in Food Processing FDP by online", organized by Department of Biotechnology, RVCE, Bangalore from 25th to 29th October 2021.
- E-faculty development programme on "Recent Advances and Opportunities in Industrial Biotechnology" organised by MSRIT, Bangalore from 4th to 9th October 2021