

## Profile of the Faculty



### 1. General Information:

Name of the Faculty	:	Prof. (Dr.) Bhagwan Vitthal Jadhav
Name of the Department	:	Chemistry
Educational Qualifications	:	M.Sc., B.Ed., Ph.D., SET
Present Position	:	Professor of Chemistry
Address for Correspondence	:	Department of Chemistry, Changu Kana Thakur Arts, Commerce and Science College, New Panvel (Autonomous), Plot-No.01, Sector-11, Khanda Colony, New Panvel (W), Dist. Raigad, Maharashtra, India-410206
E-mail	:	bvjadhav02@yahoo.com
Contact Number	:	9869653944
Specialization	:	Inorganic Chemistry
Total teaching experience	:	33 Years
Courses taught	:	UG- Inorganic Chemistry PG- Inorganic Chemistry
Research experience	:	16 years
Number of students registered for Ph.D. degree	:	05
Number of students awarded Ph.D. degree	:	01
Number of students registered for P.G degree by research	:	01
Number of students awarded P.G degree by research	:	---

### 2. Publication of Research Papers:

Peer reviewed journals	:	40
Non-peer reviewed journals	:	02
Conference proceedings	:	01

### List of Publication of Research Papers:

1. P.P.Hankare, **B.V.Jadhav**, P.A.Chate. Structural &Optoelectrical Properties of Molybdenum Diselenide thin films deposited by Chemical bath method, Journal of Crystal Growth 291 (2006) 40-44
2. P.P. Hankare, **B.V. Jadhav**, P.A. Chate, D.J. Sathe, M.R. Asabe, Comparative study of zinc selenide photoelectrode annealed at different temperatures, Solid State Sciences 10(2008)1970-1975
3. P.P. Hankare, P.A. Chate, **B.V. Jadhav**, D.J. Sathe, M.R. Asabe, Photoelectrochemical studies of CdSe thin films deposited by dip method, Journal of Alloys and Compounds, 474(2009) 347–350
4. P.P. Hankare, P.A. Chate, **B.V. Jadhav**, D.J. Sathe, Effect of temperature on various properties of Photoelectrochemical cell, Journal of Alloys and Compounds 490(2010)350–352
5. S.D. Delekar, M.K. Patil, **B.V. Jadhav**, K.R. Sanadi, P.P. Hankare , Synthesis and characterization of Cd<sub>0.7</sub>Pb<sub>0.3</sub>Se thin films for photoelectrochemical solar cell, Solar Energy 84(2010)394-400
6. P.P. Hankare, **B.V. Jadhav**, P.A. Chate, D.J. Sathe, X-ray and optical properties of chemically deposited nanocrystalline CdSe thin films, Journal of Alloys and Compounds 503 (2010) 220–223
7. P.P. Hankare, **B.V. Jadhav**, P.A. Chate, D.J. Sathe, I.S. Mulla, Synthesis and characterization of chemically deposited nickel substituted CdSe thin film, Journal of Alloys and Compounds 509 (2011) 2948–2951
8. **B.V.Jadhav**, P.P.Hankare, S.D.Delekar, Investigation of structural, electrical and optical properties of nickel substituted CdSe thin films , Journal of Materials Science: Materials in Electronics 22 (2011)1433-1442
9. R.P. Patil, **B.V. Jadhav**, P.P. Hankare, Electrical and thermoelectric properties of nanocrystalline Mn-substituted lithium ferrites, Results in Physics, 3 (2013) 214-228
10. **B.V. Jadhav**, Analysis of Water Quality Parameters of Different regions of Panvel Tahasil , Dist-Raigad, ANUGOONJ, 3(2013-2014)7-11
11. **B.V. Jadhav**, Antimony- Doped Cd<sub>0.7</sub>Ni<sub>0.3</sub>Se Thin Films: Synthesis and Characterization Aarhat Multidisciplinary International Education Research Journal (AMIERJ) 5(2014) 208-224
12. **B. V. Jadhav**, R. P. Patil, P.C.Patil, V.D.Patil, Synthesis, Characterization and

Catalytic Application of Magnetically Separable Zn–Cr Ferrite, Journal of Nanoengineering and Nanomanufacturing 6(2016)10-136

13. R. P. Patil, **B. V. Jadhav**, M. R. Kadam, D. R. Patil, P. P.Hankare, LPG Gas Sensing Application of Lithium Ferrite, American Scientific Publishers-Mater.Focus 2016, 5(2016)1-5
14. R.P.Patil, **B. V. Jadhav**, S.B.Patil , S.D.Delekar, P.P.Hankare, Structural and magnetic properties of Co substituted  $\text{Li}_{0.5}\text{Fe}_{2.5}\text{O}_4$ , Journal of Magnetism and Magnetic Materials,401(2016) 870-874
15. **B.V. Jadhav**, R. P. Patil, Structural, Electrical and Thermoelectric Power Measurement Studies of Polyol Route Synthesized  $\text{Li}_{0.5}\text{Fe}_{2.5}\text{O}_4$  ,Aarhat Multidisciplinary International Education Research Journal (AMIERJ) 5(2016)96-107, A Peer Reviewed UGC Journal 48178, 48818
16. S. F.Shaikh, **B. V. Jadhav**, R. P. Patil, Photocatalytic Activity of Zn-Co-Ferrite Nanoparticle Synthesized Using Lemon as Green Binding Agent by Sol-Gel Method , Indo American Journal of Pharmaceutical Sciences 05 (01),2018,
17. **B.V. Jadhav**, Photoelectrochemical applications of NiSe thin films prepared by Chemical Bath Deposition Method, Aarhat Multidisciplinary International Education Research Journal (AMIERJ), 9(2018)159-164, A Peer Reviewed UGC Journal 48178, 48818
18. **B.V. Jadhav**, S.F.Shaikh, R.P.Patil, Manganese Doped Co-Zn Ferrite Nanoparticle Synthesis and Characterization; Effects of Annealing Temperature on the Size of nanoparticles.,Aarhat Multidisciplinary International Education Research Journal (AMIERJ) , 9(2018)301-305 A Peer Reviewed UGC Journal 48178, 48818
19. S. F. Shaikh, **B.V. Jadhav**, Aditi Narvankar,Marvika Kamble ,Quality Assessment of Kharamboli Dam Water by Studying Physico-Chemical Characteristics, Murud, Dist-Raigad (M. S.), An International, Peer Reviewed & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies, V-7(39) (2018)10-15 (UGC 49366)
20. S. F. Shaikh, **B.V. Jadhav**, Juhee Nandgaonkar, Hrishikesh Vadka, Estimation of water quality physico-chemical parameters of drinking water sources of Usroli Village of Murud Tehsil, District- Raigad, Maharashtra, India, An International, Peer Reviewed & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies, V-7(39)(2018)21-27, (UGC 49366)
21. S. F. Shaikh, **B.V. Jadhav** Anamika Virkud, Tasnim Malbari, Review on application of aloe vera in medicinal field and its Chemical composition, An International, Peer Reviewed & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies, V-7(40) (2018) 7-13, (UGC 49366)

22. S. F. Shaikh, **B.V. Jadhav**, Rushda Hasware, Shubhangi Chavan, Does the drinking water sources available satisfies minimum required standards in Nandgaon Village of Murud Tehsil District- Raigad, Maharashtra, India, An International, Peer Reviewed & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies, V-7(40) (2018)17-23 (UGC 49366)
23. S. F. Shaikh, **B.V. Jadhav**, Anamika Virkud, Abhishek Nakti, Role of aloe vera extract in dirty water purification and in heavy metal removal, An International, Peer Reviewed & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies V-7(41) (2018)15-19
24. S. F. Shaikh, **B.V. Jadhav**, Tasnim Malbari, Aditya Wadkar, Determination of physico-chemical parameters of drinking water Sources of Majgaon Village of Murud Tehsil District- Raigad, Maharashtra, India, An International, Peer Reviewed & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies V-7(41) (2018) 25-32 (UGC 49366)
25. S. F. Shaikh, **B.V. Jadhav**, Madiha Dakhni, Shifa Ulde, Analysis of water quality using physico-chemical parameters of drinking water sources of Murud Nagarparishad Area District Raigad, Maharashtra, India, An International, Peer Reviewed & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies V-7(42) (2018) 8-15 (UGC 49366)
26. S. F. Shaikh, **B.V. Jadhav**, R. P. Patil, Synthesis and characterizations of zinc cobalt ferrite ( $Zn_{0.5}Co_{0.5}Fe_2O_4$ ) nanoparticle using green and organic chelating agents via sol-gel auto combustion technique: - it's comparative study, An International, Peer Reviewed & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies, V-7(42) (2018) 21-26 (UGC 49366)
27. S. F. Shaikh, **B.V. Jadhav**, Sonali Jayswal, Sanket Divekar , Physico-chemical parameters analysis of water quality of drinking water sources of Shighre Village of Murud Tehsil District- Raigad, Maharashtra, India. An International, Peer Reviewed & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies V-7(43) (2018) 11-17 (UGC 49366)
28. S. F. Shaikh, **B.V. Jadhav**, Zainab Jamadar, Ankita Gharat, Assesment of physico-chemical characteristics of Garambi Dam Water In Murud, Dist-Raigad (M.S.) An International, Peer Reviewed, & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies, V-7(44) (2018) 1-6
29. S.F.Shaikh, **B.V. Jadhav**, Nawal Pangarkar, Hasham Chogale, Studies on physico-chemical characteristics of drinking water sources of Vihour Village of Murud Tehsil District Raigad, Maharashtra, India, An International, Peer Reviewed, & Referred Quarterly Scholarly Research Journal for Interdisciplinary Studies V-7(44)(2018)23-29

30. R.P.Patil, **B.V. Jadhav**, A.D.Pinjarkar, S.L.Pawar, M.R.Aasbe ,B.B.Patil, Substitution effects of  $\text{Cr}^{3+}$  on magneto structural and semiconducting properties of the Lithium ferrites, International Journal of Research and Analytical Reviews (IJRAR) Peer Reviewed, Referred Journal, V-5 (4) (2018)167-177, (UGC 43602)
- 31 Mane C.B., Pawar R.P., Tapase A.S., More H.S., **Jadhav B.V.**, Patil R.P., Gas Sensing Application of Ceria, Cassiterite and Ceria-Cassiterite Nanocomposite, Research Journal of Chemistry and Environment, Vol.25(4) April (2021) 129-134
- 32 Shaikh S.F., **Jadhav B.V.\***, Patil R. P., Patil J. S, Study of Application of  $\text{Zn}_{0.5}\text{Mn}_{0.5}\text{Fe}_2\text{O}_4$  NP's prepared via Sol-gel Method for Dyestuff Industry Waste Water Purification, Research Journal of Chemistry and Environment, Vol.25(6) June (2021) 113-117
- 33 Birmule P.R., Chavan A. S., **Jadhav B. V.**, Burungale A. S., Helavi-Reddy V.B., Patil R.P. Effect of Nickel Substitution on Structural and Magnetic Properties of Novel Polyol route Synthesized Cobalt Ferrite, Research Journal of Chemistry and Environment, Vol.25(8) August (2021) 17-22
- 34 Arjun S. Chavan, **Bhagwan V. Jadhav**, Mohan R. Kadam, Akush V. Mali, C. B. Mane, and Rajendra P. Patil\* Photodegradation of Dye Pollutants on Nanocrystalline Co Doped  $\text{Li}_{0.5}\text{Fe}_{2.5}\text{O}_4$  under UV-Visible Light Irradiation, Macromolecular Symposia, Dec(2021) 1-4, *Macromol. Symp. 2021, 400, 2100201400*
- 35 Sajid F. Shaikh, **Bhagwan V. Jadhav**, R. P. Patil, Effects of Annealing Temperature on the Size of Zinc Doped Cobalt Ferrite Nanoparticles Synthesized using Green Binder, International Journal of Advanced Research in Science, Communication and Technology (IJARSCT), Volume 2, Issue 3, March (2022) 86-92
- 36 **B.V. Jadhav**, R.P. Patil, and A.D. Pinjarkar\* , Sol-gel Assisted Nano Structured Spinel Ferrite  $\text{Co}_{0.5}\text{Ni}_{0.5}\text{Fe}_{1.0}\text{Cr}_{1.0}\text{O}_4$  and its Catalytic Application for the Reduction of P-Nitrophenol to P-Aminophenol, Indian Journal of Natural Sciences, Vol.14 / Issue 78 / June (2023) 55922-55927.
- 37 Sajid F. Shaikh, Ayesha Zameer Takey, Tasmeena Shaukat Chougale, **Bhagwan V. Jadhav**, Jayashri S. Patil, Hrushikesh B. Jadhav, The Review Study on Health Issues Due to Chemically Adulterated Food, International Journal of Emerging Technologies and Innovative Research (IJETIR) Volume 3, Issue 3, March 2023 ‘Copyright to IJETIR 131 www.iciset.in, Impact Factor: 5.731
- 38 **Bhagwan V. Jadhav**, Hrushikesh B. Jadhav, Rajendra P. Patil, Jawed Mustafa, Hasan M. H. Muhaisen, and Ayeda Y. A. Mohamme, Photoelectrochemical Properties of Chemical Bath Deposited  $\text{CdNiSe}$  Thin Films, Journal of Nanoelectronics and Optoelectronics, Vol. 19, pp. 517–523, 2024

39. B. V. Jadhav<sup>1</sup>, R. P. Patil<sup>2</sup>, A. D. Pinjarkar, Synthesis, Characterization and Photocatalytic Application of Co<sub>0.5</sub>Ni<sub>0.5</sub>Fe<sub>1.0</sub>Cr<sub>1.0</sub>O<sub>4</sub> Journal of Technology, volume-13-issue-6-2025-Special-issue-2, pp. 17–30, 2024
40. B.V. Jadhav<sup>1</sup>, R.P. Patil, A.D. Pinjarkar, Synthesis and Characterization of Nanocrystalline Spinel Ferrite Co<sub>0.5</sub>Ni<sub>0.5</sub>Fe<sub>1.0</sub>Cr<sub>1.0</sub>O<sub>4</sub>, International Journal of Scientific Research in Science and Technology Volume 12, Issue 8 March-April-2025, Page Number: 670-676
41. B.V. Jadhav<sup>1</sup>, R.P. Patil, A.D. Pinjarkar, Impact of Sintering on Photocatalytic Methylene Blue Degradation Using Nanocrystalline Co<sub>0.5</sub>Ni<sub>0.5</sub>Fe<sub>1.0</sub>Cr<sub>1.0</sub>O<sub>4</sub> International Journal of Scientific Research in Science and Technology Volume 12, Issue 8 March-April-2025, Page Number: 44-49.

### 3. Minor Research Project Completed: 06

Title of the project	Date of sanction	Duration	Grant received	Funding agency
“Synthesis and Characterization of Transition Metal Chalcogenide thin films”	07/02/2009	1 Year	45,000/-	University of Mumbai
“Synthesis and Characterization of CdNiSe thin films deposited at room temperature by Solution growth”	26/11/ 2010	1 Year	20,000/-	University of Mumbai
“Synthesis and Characterization of Chemically Deposited Transition Metal Chalcogenide Thin Films”	23/02/ 2012	2 Year	1, 60,000/-	University Grant Commission (U.G.C.)
Synthesis and characterization of CdNiSe thin films for photoelectrochemical Solar Cells	10/12/2020	1 Year	100000/-	Rashtriya Uchchar Shiksha Abhiyan (RUSA)
Synthesis and Characterization of Nanosized mixed metal oxides by Sol-Gel method: Application as Catalyst	24/12/2022	1 Year	100000/-	Rashtriya Uchchar Shiksha Abhiyan (RUSA)
Study of Photocatalytic activities of Green Synthesized metal oxide nanoparticles	02/02/2023	1 Year	100000/-	Rashtriya Uchchar Shiksha Abhiyan (RUSA)

#### 4. Patents Published: 05

Sr. No.	Date of patent granted / Published	Name of Patent	Patent Number	Name of the awarding agency
1	2 <sup>nd</sup> April 2025	Smart Trash Bin for Bifurcating Different Waste	202521032699	Patent office Government of India
2	2 <sup>nd</sup> April 2025	Multipurpose A.I. Gadget for Analysis of Various Parameters	202521032702	Patent office Government of India
3	2 <sup>nd</sup> April 2025	Safe Lab Armour Tray for Laboratory	202521032701	Patent office Government of India
4	17 <sup>th</sup> October 2025	Novel Eco-friendly green catalyst Amberlyst A21 for synthesis of Octyl Methoxycinnamate	202521091457	Patent office Government of India
5	23 <sup>rd</sup> May 2025	AI based antiglobal warming windows in the concrete structures of cities	202521040979	Patent office Government of India

#### 5. Membership:

- Life Member, Indian Science Congress Association (ISCA)

#### 6. Academic Staff College Orientation/Refresher courses attended: 06

Name of the Course	Place	Duration	Sponsoring Agency
Orientation Course on National Service Scheme (N.S.S.)	Tata Institute of Social Sciences and N. S. S. Unit	Dec. 5-14, 2002	Ministry of Youth Affairs & Sports, Govt. of India
Orientation Programme	UGC Academic Staff College, University of Mumbai, at Gogate Jogalkar College, Ratnagiri.	May 03-29, 2004	University Grants Commission (UGC)
Refresher Course	UGC Academic Staff College, University of Mumbai.	Sept. 25-Oct. 14, 2006	University Grants Commission (UGC)

Refresher Course	UGC Academic Staff College, University of Mumbai. (at Mithibai College, Vileparle)	Oct. 6- Oct.25, 2008	University Grants Commission (UGC)
Refresher Course	University of Kerala, Kariavattom, Kerala	28/11/2009 to 18/12/2009	University Grants Commission (UGC)
Short Term Course	University of Mumbai	16/10/2014 to 21/10/2014	University Grants Commission (UGC)
<b>Faculty Development Programmes attended: 04</b>			
<b>Name of the Course</b>	<b>Place</b>	<b>Duration</b>	<b>Sponsoring Agency</b>
FDP on Advanced Concepts for Developing MOOCs 2.0	Ramanujan College, University of Delhi	July 02 - July 17, 2020	Ministry of Human Resource Development PMMMNMTT
FDP on Managing online classes and co-creating MOOCs 3.0	Ramanujan College, University of Delhi	July 25 - August 17, 2020	Ministry of Human Resource Development PMMMNMTT
NPTEL Online Course- Basics in Inorganic Chemistry	IIT Bombay	Jan-Feb 2020	University Grants Commission (UGC)
FDP on 'e-Content and MOOCS Creations: Hands on Training'	C.K.Thakur A.C.S.College, New Panvel (Autonomous)	18-09-2022 to 23-09-2022	Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

**Participation in conferences, symposia, seminars and workshops:**

<b>Level</b>	<b>Presented paper</b>	<b>Only attended</b>
International	09	10
National	18	37
State	--	19
University	--	10

**7. Conferences, symposia, seminars and workshops organized as convener/co-convener:**

<b>Level</b>	<b>Convener</b>	<b>Co-convener</b>
National	<b>01</b>	02
College	--	----

**8. Experience on the various committees at the college**

- Head, Department of chemistry,
- Chairman, board of studies in chemistry (2021-22 onwards)
- Chairman, competitive examination cell (2024-25 onwards)
- Member, Library Committee (2022-23 to till date)
- N.S.S. Programme Officer- 05 Years (Chief Programme Officer- 02 years & as a Member- 03 Years)
- Member, Examination Committee— 07 years
- In-charge, Students' Council & Students' Welfare – 02 years
- Member, Unfair Means Inquiry Committee- 04 year
- Member, Avishkar Research Association (2021-22 to till date)
- Chairman, Gymkhana committee (2009-10 to 2018-19)
- Chairman, Discipline committee
- Chairman, Staff academy
- Chairman, Placement cell (2019-20 to 2021-22)

**9. Experience on the NAAC/ IQAC of the college**

- Member, IQAC (2018-19)
- Member, Criterion III-Research, Innovation and Extension (2013-2019)
- Member, Criterion I-Curricular Aspects (2021-22 to till date)

**10. Experience on the Various Committees at the University of Mumbai / Government**

- Appointed as Vice-Chancellor's nominee on screening cum Evaluation committee for promotion of Teacher under CAS on Monday 4<sup>th</sup> July 2022.for stage 1 to 2 of MTE Society Goregaon Cooperative Urban Bank Science College, Goregaon, Tal- Mangaon, Dist-Raigad.
- Worked as a 'Judge for 17<sup>th</sup> Avishkar Research Convention (Zonal Round) for Zone 4 (Thane), organized by University of Mumbai on Friday, December 16, 2022 at KBP

college, Vashi, Navi Mumbai.

- Nomination as subject expert (Chemistry) management nominee for promotion under stage 3 to 4 by Gogate Joglekar College, Ratanagiri at ACS college, Lanja on 25/03/2023.
- Nominated as subject expert (Chemistry) , University nominee for promotion under CAS stage 3 to 4 for faculty of KBP college, Vashi -24/04/2023.
- Nominated as subject expert on panel construed for selection of candidates for Ph.D in Chemistry at KMC College, Khopoli on 28<sup>th</sup> February-2023 at 3.00 pm.
- Worked as a Judge of poster presentation session in international conference on advanced material for physical, Chemical & Biological Applications organized by KBP College, Vashi, on March 3<sup>rd</sup> & 4<sup>th</sup> 2023, at Navi Mumbai.

#### 11. Awards/recognitions received:

Level	Title	Year	Awarding agency
University	Recognized as Post Graduate Teacher of University of Mumbai for M.Sc. Degree (By Paper) in Chemistry	May 10,2004	University of Mumbai
	Recognized as Post Graduate Teacher of University of Mumbai for M.Sc. Degree (By Research) in Inorganic Chemistry	May 02,2012	University of Mumbai
	Recognized as Teacher of University of Mumbai for the Ph.D. Degree in Chemistry	August 16,2012	University of Mumbai