

# **CURRICULUM VITAE**

## **Dr. Suvarta Dattatray Kharade**

**Permanent Address** : Flat no. 201, Swapnanagari Apartment,  
Rajendranagar, Kolhapur-416004

**Birth Date** : 15<sup>th</sup> March 1987

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8805182960



### **Educational Qualifications:**

Sr. No.	Exam	Board/ University	Year of passing	Subjects	Percentage	Class Obtained
1	Ph. D.	Shivaji University, Kolhapur	Date of registration 01 <sup>st</sup> July 2010	Inorganic Chemistry	Date of Award 12 <sup>th</sup> May 2014	
2	M. Sc.	Shivaji University, Kolhapur	2009	Inorganic Chemistry	71.79	1 <sup>st</sup> Class with Distinction
3	B. Sc.	Shivaji University, Kolhapur	2007	Chemistry	74.60	1 <sup>st</sup> Class with Distinction
4	H. S. C.	Pune Board	2004	PCMB	61.50	1 <sup>st</sup> Class
5	S. S. C.	Pune Board	2002	Compulsory Subjects	64.80	1 <sup>st</sup> Class

**Academic Experience:**

<b>Designation &amp; Appointment Nature</b>	<b>Period (From-To)</b>	<b>Classes Taught</b>	<b>Name of Institute</b>	<b>Pay and Allowances</b>
DST-PURSE fellowship Fellowship/Young Scientist	9/Sep/2011 to 11/May/2014	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 8000 P.M.
CHB-LECTURER CHB	17/July/2009 to 24/April/2010	Course Level-UG Course- B. Sc. Subject- INORGANIC CHEMISTRY	K. H. COLLEGE, GARGOTI	Rs. 5000 P.M.
Assistant Prof. (Contract Basis)	1/Jul/2014 to 15/May/2015	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 15000 P.M.
Assistant Prof. (Contract Basis)	20/Jul/2015 to 16/May/2016	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 15000 P.M.
Assistant Prof. (Contract Basis)	30/Jun/2016 to 20/May/2017	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 15000 P.M.
Assistant Prof. (Contract Basis)	16/Aug/2017 to 24/May/2018	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 21600 P.M.
Assistant Prof. (Contract Basis)	21/Jul/2018 to 16/May/2019	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 21600 P.M.
Assistant Prof. (Contract Basis)	9/Sep/2019 to 14/May/2020	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 32000 P.M.
Assistant Prof. (Contract Basis)	9/Sep/2020 to 7/Dec/2020	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 32000 P.M.
Assistant Prof. (Contract Basis)	14/Dec/2020 to 13/Mar/2021	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 32000 P.M.

(Contract Basis)	14/Mar/2021 to 30/Jun/2021	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	SHIVAJI UNIVERSITY, KOLHAPUR	Rs. 32000 P.M.
Assistant Prof. Full time CHB	4 <sup>th</sup> Jan. 2023 Assistant Prof. Till date	Course Level-PG Course- M. Sc. Subject- INORGANIC CHEMISTRY	VIVEKANAND COLLEGE, KOLHAPUR	Rs. 15000 P.M.

**Research Experience:-**

Research Assistant under DST-PURSE programme by Department of Science and Technology, New Delhi from 2011-14.

**Ph. D. Thesis Title:** “Novel Synthetic Route For Monodispersed Nanocrystalline VI<sup>B</sup>-VA-IB-VI<sup>A</sup> Group Mixed Metal Chalcogenide Thin Films.”

**Guide Name:** Prof. (Dr.) P. N. Bhosale

Materials Research Laboratory,

Department of Chemistry

**University:** Shivaji University, Kolhapur-416004, Maharashtra, India.

**Year of Award:** May 2014

**Students Guided:-** PG- More than 10 students for research project work

**Publications -** i) International Journals:-21    ii) National Journals: 02

iii) Conferences:20

iv) Books: 01

**Workshops Attended: 05 Workshops**

**Technical skills:**

- Perkin Elmer IR spectrophotometer
- Hitachi UV-Vis-NIR spectrophotometer
- MS-CIT

**Personal skills:**

- Good Communication skill and leadership qualities
- Good Analytical and Logical Approach

- Good Teamwork and Time Management
- Good in Decision Making and Human Relation
- Willingness to Learn.

**My plans at organization:**

I will try to give encouraging teaching to my student. I also like to continue research and try to absorb maximum funding from various funding agency for research. If provided with an opportunity I shall try my level best in the rightful discharge of my duties.

**References:**

1. **Prof. (Dr.) P. N. Bhosale**  
**UGC-BSR Faculty Fellow**  
Department of Chemistry,  
Shivaji University, Kolhapur-416004.  
Email: [p\\_n\\_bhosale@rediffmail.com](mailto:p_n_bhosale@rediffmail.com)  
Contact No. 9420007500 (M), 0231-2609338 (O)
2. **Prof. (Dr.) S. S. Chavan**  
Department of Chemistry,  
Shivaji University, Kolhapur-416004.  
Email: [sanjaycha2@rediffmail.com](mailto:sanjaycha2@rediffmail.com)  
Contact No.9881647064 (M)
3. **Dr. Dattaprasad Marutrao Pore**  
Department of Chemistry,  
Shivaji University, Kolhapur - 416004.  
Email: [p\\_dattaprasad@gmail.com](mailto:p_dattaprasad@gmail.com)  
Contact No.8087268810

I hereby declare that the above written particulars are true to the best of my knowledge.



(Dr. Kharade Suvarta Dattatray)

### List of papers published in National and International Journals

Sr. No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	M. M. Salunkhe, R. R. Kharade, <b>S. D. Kharade</b> , S. S. Mali, P. S. Patil, P. N. Bhosale	Synthesis of fibrous reticulate nanocrystalline n-type $\text{MoBi}_2(\text{Se}_{1-x}\text{Te}_x)_5$ thin films: Thermocooling applications	Materials Research Bulletin	47	3860	2012
2.	<b>S. D. Kharade</b> , N. B. Pawar, S. S. Mali, C. K. Hong, P. S. Patil, M. G. Kang, J. H. Kim and P. N. Bhosale	Effect of Copper Content on Optostructural, Morphological and Photoelectrochemical Properties of $\text{MoBi}_{2-x}\text{Cu}_x\text{Se}_4$ Thin Films	Journal of Materials Science	48	7300	2013
3.	<b>S. D. Kharade</b> , N. B. Pawar, V. B. Ghanwat, S. S. Mali, W. R. Bae, P. S. Patil, C. K. Hong, J. H. Kim and P. N. Bhosale	Room Temperature Deposition of Nanostructured $\text{Bi}_2\text{Se}_3$ Thin Films for Photoelectrochemical Application: Effect of Chelating Agents	New Journal of Chemistry	37	2821	2013
4.	S. V. Patil, R. M. Mane, N. B. Pawar, <b>S. D. Kharade</b> , S. S. Mali, P. S. Patil, G. L. Agawane, J. H. Kim, P. N. Bhosale	Opto-structural and electrical properties of chemically grown Ga doped $\text{MoBi}_2\text{Se}_5$ thin films	Journal of Mater Science: Material Electronics	24	4669	2013
5.	N.B. Pawar, <b>S. D. Kharade</b> , S.S. Mali, R.M. Mane, C.K. Hong, P.S. Patil, P.N. Bhosale	Effect of indium (III) content on photoelectrochemical performance of $\text{MoBi}_{(2-x)}\text{In}_x\text{S}_5$ thin films	Solid State Sciences	35	10	2014

6.	N. B. Pawar, S. S. Mali, <b>S. D. Kharade</b> , M. G. Gang, P. S. Patil, J. H. Kim, C. K. Hong, P. N. Bhosale	Influence of vacuum annealing on the structural and photoelectrochemical properties of nanocrystalline MoBi <sub>2</sub> S <sub>5</sub> thin films	Current Applied Physics	14	508	2014
7.	V. B. Ghanwat, S. S. Mali, <b>S. D. Kharade</b> , N. B. Pawar, S. V. Patil, R. M. Mane, P. S. Patil, C. K. Hong and P. N. Bhosale	Microwave assisted synthesis, characterization and thermoelectric properties of nanocrystalline copper antimony selenide thin films	RSC Advances	4	51632	2014
8.	C. S. Bagade, S. S. Mali, V. B. Ghanwat, K. V. Khot, P. B. Patil, <b>S. D. Kharade</b> , R. M. Mane, N.D. Desai, C. K. Hong, P. S. Patil, and P. N. Bhosale.	A facile and low cost strategy to synthesize Cd <sub>1-x</sub> Zn <sub>x</sub> Se thin films for photoelectrochemical performance: effect of zinc content	RSC Advances	5	55658	2015
9.	<b>S. D. Kharade</b> , N. B. Pawar, K. V. Khot, P. B. Patil, S. S. Mali, C. K. Hong, P. S. Patil and P. N. Bhosale	Enhanced photoelectrochemical performance of novel p-type MoBiCuSe <sub>4</sub> thin films deposited by a simple surfactant-mediated solution route	RSC Advances	6	24985	2016
10.	N. B. Pawar, S. S. Mali, <b>S. D. Kharade</b> , V. V.	Microwave assisted novel MoBi <sub>2</sub> S <sub>5</sub> nanoflow	Solid State Sciences	61	89	2016

	Kondalkar, V. B. Ghanwat, K. V. Khot, P.S. Patil, P.N. Bhosale	ers: Synthesis, characterization, photoelectroche mical performance				
11.	C. S. Bagade, V. B. Ghanwat, <b>S. D. Kharade</b> , K.V. Khot, R. R. Kharade, N. D. Desai, P. N. Bhosale	Rapid Formation of Ternary CdZnSe <sub>2</sub> Chalcogenide Thin Film by Microwave Assisted Chemical Bath Deposition	Micromol. Sympto.	60	362	2016
12.	K. V. Khot, S. S. Mali, V. B. Ghanwat, <b>S. D. Kharade</b> , R. M. Mane, C. K. Hong, P. N. Bhosale	Photocurrent enhancement in a Cu <sub>2</sub> Cd(SSe) <sub>2</sub> photoanode synthesized via an arrested precipitation route	New Journal of Chemistr y	40	3277	2016
13.	V. S. Patil, N. D. Desai, <b>S. D. Kharade</b> , R. M. Mane and P. N. Bhosale	Room Temperature Synthesis of Nanocubic CuInSe <sub>2</sub> Thin Films	Journal of Advanced Chemical Engineeri ng	7	1	2017
14.	<b>S. D. Kharade</b> , N. B. Pawar, S. S. Mali, C. K. Hong, P. N. Bhosale	Effect of molybdenum content on the optostructural, morphological and photoelectroche mical properties of Bi <sub>2</sub> Se <sub>3</sub> Thin films	AIP Conferenc e Proceedin gs	1989	02001 8	2018
15.	N. D. Desai, K. V. Khot, V. B. Ghanwat, <b>S. D. Kharade</b> , P. N. Bhosale	Surfactant mediated synthesis of bismuth selenide thin films for photoelectroche mical solar cell	Journal of colloid and interface science	514	250- 261	2018

		applications				
16.	S. S. Patil, C. S. Bagade, M. P. Joshi, <b>S. D. Kharade</b> , K. V. Khot, S. S. Mali, C. K. Hong, P. N. Bhosale	Facile hydrothermal assisted synthesis of time dependent Cu <sub>2</sub> S thin films for efficient photoelectrochemical application	Journal of Materials Science: Materials in Electronics	29	19322 - 19335	2018
17.	S. S. Patil, N. D. Desai, <b>S. D. Kharade</b> , M. P. Joshi, K. V. Khot, R. M. Mane, P. N. Bhosale	Single step fabrication of CuS thin film via hydrothermal route for solar cell application	AIP Conference Proceedings	1989	020029	2018
18.	M. P. Joshi, K. V. Khot, V. B. Ghanwat, <b>S. D. Kharade</b> , C. S. Bagade, N. D. Desai, S. S. Patil, P. N. Bhosale	Synthesis of tin sulphide thin film by simple arrested precipitation technique for solar cell application	AIP Conference Proceedings	1989	020015	2018
19.	N. B. Pawar, <b>S. D. Kharade</b> , K. V. Khot, P. N. Bhosale	Growth mechanism & characterization of MoBiInS <sub>5</sub> thin film synthesized by arrested precipitation technique	AIP Conference Proceedings	1989	030012	2018
20.	Monika P Joshi, Suvarta D Kharade, Popatrao N Bhosale	Investigating the photovoltaic performance of surfactant-assisted MoBi <sub>2</sub> Se <sub>5</sub> thin films	Nanomaterials and Energy	9	14-20	2020
21.	Suvarta Kharade, Shubhangi Mane-Gavade, Sunil Mali, Suryakant Shirote, Sandip	Biofabrication of Silver Nanoparticles Using <i>Hibiscus cannabinus</i> Leaf Extract and Their	Macromolecular Symposia	393	1900215	2020



	Malgave, Gurunath Nikam	Antibacterial Activity				
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**Books/Reports/Chapters/General articles etc.**

<b>Sr. No.</b>	<b>Title (Book)</b>	<b>Author's Name</b>	<b>Publisher</b>	<b>Year of Publication</b>
1.	Nostructured, Multicomponent Metal Chalcogenide Thin Films: Chemical Synthesis of Nanostructured metal Chalcogenide Thin Films For Photoelectrochemical (PEC) Application	<b>S. D. Kharade</b> and P. N. Bhosale.	Scholors Press	2015

<b>Sr. No.</b>	<b>Title (Book chapter)</b>	<b>Author's Name</b>	<b>Publisher</b>	<b>Year of Publication</b>
2.	Annealing Effect on the Structural and Electrical Properties of n-type MoBi <sub>2</sub> (Se <sub>0.5</sub> Te <sub>0.5</sub> ) Thin Films.	M. M. Salunkhe, N. B. Pawar, <b>S. D. Kharade</b> , S. M. Patil, S. S. Mohite and P. N. Bhosale.	Nanomaterials Synthesis and Characterization, Bloomsbury publishing India, Pvt. Ltd.	2012
3.	Synthesis and Characterization of MoBi <sub>2</sub> S <sub>5</sub> Thin Film by Simple Colloidal Route	N. B. Pawar, S. M. Patil, M. M. Salunkhe, <b>S. D. Kharade</b> , R. M. Mane, V. B. Ghanwat and P. N. Bhosale	GRIET publications	2012

**List of paper presented in National/ International conference/  
Workshop/Symposium**

<b>Sr. No.</b>	<b>Title of the paper presented</b>	<b>Authors</b>	<b>Title of Conference/Seminar Organized by with date</b>
1.	Room Temperature Synthesis of Nanoporous Copper Doped MoBi <sub>2</sub> Se <sub>5</sub> Mixed Metal Chalcogenide Thin Films by Arrested Precipitation Technique	<b>S. D. Kharade</b> , N. B. Pawar, R. R. Kharade, M. M. Salunkhe, R. M. Mane and P. N. Bhosale*	Proc. International conference on Physics of Materials and Materials Based Fabrication (ICPM-MDF) 18-21 Jan 2012, Department of Physics, Shivaji University.
2.	Growth Mechanism and Characterization of MoBiCuSe <sub>4</sub> Thin Films Deposited by APT at Room Temperature	<b>S. D. Kharade</b> , N. B. Pawar, R. M. Mane, V. V. Kondalkar and P. N. Bhosale*	National Seminar on Recent Advances in Synthetic Chemistry and Nanomaterials (RASCN) 21-22 Jan 2012, Department of Chemistry, Shivaji University.
3.	Synthesis and Characterization of MoBi <sub>2</sub> S <sub>5</sub> Thin Film by Simple Colloidal Route	N. B. Pawar, S. M. Patil, M. M. Salunkhe, <b>S. D. Kharade</b> , R. M. Mane, V. B. Ghanwat and P. N. Bhosale	Proc. International Conference on Materials Processing and Characterization (ICPMC) Gokaraju Rangaraju Institute of Engineering and Technology 8-10 <sup>th</sup> March 2012, Bachupally, Hyderabad.
4.	Annealing Effect on the Structural and Electrical Properties of n-type MoBi <sub>2</sub> (Se <sub>0.5</sub> Te <sub>0.5</sub> ) Thin Films.	M. M. Salunkhe, N. B. pawar, <b>S. D. Kharade</b> , S. M. Patil, S. S. Mohite and P. N. Bhosale.	IUPAC Sponsored International Symposium on Macro and Supramolecular Architectures and Materials (MAM-12), organized by Center for Nano Science and Technology, K. S. Rangasamy College of Technology, Tiruchengode (Tk.), Namakkal (Dt.), Tamil Nadu, India, held on 21 <sup>st</sup> to 25 <sup>th</sup> Nov. 2012.
5.	Simple Chemical Method for Porous Network of MoBiCuSe <sub>4</sub> Nanoflakes and its Photoresponse Property.	<b>S. D. Kharade</b> , M. M. Salunkhe, R. R. Kharade, V. B. Ghanwat, S. S. Mohite, and P. N. Bhosale.	DAE-BRNS 4 <sup>th</sup> Interdisciplinary Symposium on Materials Chemistry (ISM-2012), held at Bhabha Atomic Research Center, Mumbai, during December 11-15, 2012.

6.	Room Temperature Growth of Bi <sub>2</sub> Se <sub>3</sub> Nanospheres and Nanopetels by Arrested Precipitation Technique.	<b>S. D. Kharade</b> , N. B. Pawar, V. B. Ghanwat, V. V. Kondalkar, S. P. Patil, P. N. Bhosale.	National Conference on Recent Trends in Nanotechnology, organized by Vivekanand College, Kolhapur, India, held on 14 <sup>th</sup> and 15 <sup>th</sup> Dec. 2012.
7.	Synthesis and Characterization of MoBiCuSe <sub>4</sub> Nanoflakes-assembled Microflowers via a Simple Chemical Method.	<b>S. D. Kharade</b> , N. B. Pawar, R. M. Mane, S. S. Mohite, P. N. Bhosale.	National Conference on Chemistry of Chalcogens (NC3-2013) organized by Department of Applied Chemistry, at Defence Institute of Advanced Technology (DIAT) Pune on 14 <sup>th</sup> and 15 <sup>th</sup> January 2013.
8.	Influence of Surfactants on Optostructural, Morphological and Photoelectrochemical properties of MoBiInSe <sub>5</sub>	N. B. Pawar, <b>S. D. Kharade</b> , R. M. Mane, P. B. Patil, P. N. Bhosale.	National Conference on Frontiers in Chemical and Biological Sciences, 23 <sup>rd</sup> -24 <sup>th</sup> Sept. 2013, PDVP Mahavidyalaya, Tasgaon, Sangali.
9.	Room Temperature Synthesis of Nanoporous Network of Copper Doped MoBi <sub>2</sub> Se <sub>5</sub> Mixed Metal Chalcogenide Thin Films	<b>S D Kharade</b> , N B Pawar, R R Kharade, M M Salunkhe, R M Mane, P N Bhosale	2 <sup>nd</sup> International Conference on "Physics of Materials Based Device Fabrication (ICPM-2014)", organized by Department of Physics, Shivaji University, Kolhapur on Jan. 13-15 2014
10.	Effect of Copper Content on Optostructural, Morphological and Photoelectrochemical Properties of MoBi <sub>2-x</sub> Cu <sub>x</sub> Se <sub>4</sub> Thin Films	<b>S. D. Kharade</b> , V. B. Ghanwat, S. V. Patil, C. S. Bagade and P. N. Bhosale	National symposium on Current Trends in Chemical and Nanosciences, Department of Chemistry, Shivaji University, Kolhapur, on 17 <sup>th</sup> and 18 <sup>th</sup> Jan. 2014.
11.	Synthesis of nanocrystalline Bi <sub>2</sub> Se <sub>3</sub> thin films by arrested precipitation technique	N. D. Desai, <b>S. D. Kharade</b> , C. S. Bagade, P. N. Bhosale	National Conference on 'Frontiers in Chemistry and Materials Science' at Department of Chemistry, Shivaji University, Kolhapur on 16 <sup>th</sup> , 17 <sup>th</sup> Jan. 2015.
12.	Green Approach to Synthesize Nanostructured Bi <sub>2</sub> Se <sub>3</sub> Thin Films: Chelating Effect	<b>Suvartha D. Kharade</b> , Nita B. Pawar, Monika P. Joshi and Popatrao N. Bhosale	International Conference ON "GO GREEN" held at CHANDMAL TARACHAND BORA COLLEGE, SHIRUR, DIST- PUNE, PIN- 412210. MAHARASHTRA on 12 <sup>th</sup> and 13 <sup>th</sup> Jan 2017

13.	Effect of molybdenum content on the optostructural, morphological and photoelectrochemical properties of Bi <sub>2</sub> Se <sub>3</sub> Thin films	<b>S. D. Kharade</b> , N. B. Pawar, S. S. Mali, C. K. Hong, P. N. Bhosale	3 <sup>rd</sup> International Conference on Emerging Technologies: Micro to Nano, 6 <sup>th</sup> and 7 <sup>th</sup> October 2017, Jointly organized by, Solapur University, Solapur, Jaipur, CSIR-CEERI, Pilani.
14.	Reduced Grapheme Oxide Incorporated Hydrothermally Synthesized TiO <sub>2</sub> Thin Films for Photoelectrochemical Application	<b>Suvartha D. Kharade</b> , Neha D. Desai, Prajkta A. Kadam, Ashiya A. Sayyad, Vishakha V. Sardesai and Popatrao N. Bhosale	National Conference on Innovative Research in Chemical Sciences held on 1-2, February 2017 at Department of Chemistry, Shivaji University, Kolhapur.
15.	Biofabrication of Silver Nanoparticles Using <i>Hibiscus cannabinus</i> Leaf Extract and Their Antibacterial Activity	Suvartha Kharade, Gurunath Nikam	One Day International Conference On Advanced Materials and Applications” (ICAMA-2023) (Online) held on 1 <sup>st</sup> July 2023at Dnyansadhana Shikshan Prasarak Mandal, Nivade Sanchalit, M. H. Shinde Mahavidyalaya, Tisangi Tal. Gaganbavda, Dist. Kolhapur 416206.

**List of National/ International conference/ Workshop/Symposium attended**

1. International Conference on Nanomaterials and Applications-2008, Jointly organised by Department of Chemistry and Department of Physics, Shivaji University, Kolhapur. December 9-11, 2008.
2. National Symposium on Advances in Synthetic Methodologies and New Materials, organised by Department of Chemistry, Shivaji University, Kolhapur. 21<sup>st</sup> -22<sup>nd</sup> January 2011.
3. International Conference on Supramolecular Chemistry and Nanomaterials, organised by Department of chemistry in association with Centre for Nanosciences and Nonotechnology, Mumbai University, Mumbai. February 14-16, 2011.

4. Two-Day Workshop on “Research Writings, Ethics, Plagiarism and Publishability”  
Organised by Internal Quality Assurance Cell (IQAC), Shivaji University, Kolhapur on  
26<sup>th</sup> and 27<sup>th</sup> July, 2012.
5. Workshop on Solutions from Synthesis to Characterization, organised by Shivaji  
University, Kolhapur on 26<sup>th</sup> – 27<sup>th</sup> March 2018.