

Dr. B. S. Shirke
 Department of Chemistry
 Yashwantrao Chavan Warana
 Mahavidyalaya, Warananagar



Bio-data

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1. **Name of the applicant:** Dr. Bajirao Satappa Shirke.
 2. **Address: Office-** Yashwantrao Chavan Warana Mahavidyalaya, Warananagar
 Tal.- Panhala, Dist.- Kolhapur. Pin- 416 113.
Residence- A/p- Anand Shanti Nagar, Nave Paragaon,
 Tal.- Hatkanangale, Dist.- Kolhapur. Pin- 416 113.
 3. **Phone Number: Office-** 02328 224041
Residence- 8805568073, Mob.- 09420010112
 4. **Date of Birth:** 05-05-1973
 5. **Designation:** Assistant Professor
 6. **Degrees conferred (begin with Bachelor's degree):**

Degree	Institution conferring the degree	Field(s)	Class	Year
B. Sc.	Shivaji University, Kolhapur	Chemistry	1 st class Distinction.	1993
M.Sc.	Shivaji University, Kolhapur	Physical Chemistry	1 st class	1995
Ph.D.	Shivaji University, Kolhapur	Material Science	-----	2011

7. Teaching Experience: [PG- 2 & half years, UG- 17 & half years, Total- 20 years]

Sr. No.	Name of the Institution	From --- To
1	Department of Chemistry, Shivaji University, Kolhapur.	2 nd July, 1996 to 15 th Nov., 1998.
2	Doodhsakhar Mahavidyalaya Bidri.	16 th Nov., 1998 to 29 th Dec., 1999.
3	Y.C.Warana Mahavidyalaya, Warananagar.	30 th Dec., 1999 to the date.

**8. Academic Staff College Orientation / Refresher Course/ ISTE - AICTE
Sponsored STTP/SBP attended so far.**

Name of the Course/ Summer School	Place	Duration	Sponsoring Agency	Grade
Orientation Course	UGC Academic Staff College, Goa University Goa	07/02/2008 To 05/03/2008	UGC	A
Refresher Course	UGC Academic Staff College, Shivaji University, Kolhapur	01/03/2004 To 22/03/2004	UGC	A
Refresher Course	UGC Academic Staff College, University of Mumbai	01/10/2012 To 20/10/2012	UGC	B
Refresher Course	UGC Academic Staff College, Shivaji University, Kolhapur	16/11/2015 To 06/12/2015	UGC	A
Faculty Development Program	Shivaji University, Kolhapur (FDC PMMMNTT)	01/07/2019 To 07/07/2019	FDC PMMMNTT	Completion Certificate

9. Research Contributions:

[3]

I) Shivaji University has given Permanent Recognition as PG Teacher and Guideship for M.Phil. and Ph. D. on 13th feb.,2013.

II) Five students are working their **Ph.D.** under the guidance of me.

Sr. No.	Name of Student	Date of Registration	No. of Paper Published	Remark
1	Mr. H. M. Shinde	01-07-2013	04	
2	Miss. T. T. Bhosale	01-07-2013	02	
3	Mr. J. B. Mulani	01-07-2014	--	
4	Miss. A. A. Kabure	01-07-2014	02	
5	Mr. U. D. Kadam	01-07-2018	02	

III] List of Published Papers in International /National Research Journal :-

1] K.M.Garadkar, **B.S.Shirke**, Y.B.Patil and D.R.Patil, Nanostructured ZrO₂ Thick film resistors as H₂-gas sensors operable at room Temperature, Sensors & Transducers Journal, 110 (2009) 17-25.

2] **B.S.Shirke**, A.A. Patil, P.P.Hankare, K.M.Garadkar, Synthesis of cerium oxide nanoparticles by microwave technique using propylene glycol as a stabilizing agent J. Material Science: Matererial in Electronics, 22 (2011) 200-204.

3] **B.S.Shirke**, P.V.Korake, P.P.Hankare, S.R.Bamane, K.M.Garadkar, Synthesis and Characterization of Pure Anatase TiO₂ Nanoparticles, J. Material Science: Matererial in Electronics, 22 (2011) 821-824.

4] K.M.Garadkar, **B. S. Shirke**, P. P. Hankare and D. R. Patil, Low cost nanostructured anatase TiO₂ as a H₂S Gas sensor synthesized by microwave assisted technique, Sensor Letters, 9 (2011) 526-532.

- 5] L.A.Ghule, **B.S.Shirke**, K.B.Sapnar, S.D.Dhole³, P.P.Hankare, K.M.Garadkar,
Preparation of zinc oxide nanorods by microwave assisted technique using ethylene glycol as a stabilizing agent, J. Material Science: Matererial in Electronics, 22 (2011) 1120-1124.
- 6] **B.S.Shirke**, H.M.Shinde, B.S.Kadwale and K.M.Garadkar, Structural and Electrical Property of Zirconium Oxide Nanoparticles Prepared by Microwave Assisted Sol-gel Method, National Conference on Drug Designing and Discovery [2013] 56-59 [ISBN 978-93-5126-349-4]
- 7] **B.S.Shirke**, H.M.Shinde and K.M.Garadkar, Catalytic Deoximation over Supported Zirconium Oxide Nanoparticles, Vishwawarana National Research Journal, Vol.1, (2015) 22-25. [ISSN No.: 2394-8808].
- 8] **B.S.Shirke**, H.M.Shinde, K.M.Garadkar and D.R.Patil, CuO-Islands on Nanostructured ZrO₂ Surface Act as the ppm Level Ammonia Gas Monitor Working at Room Temperature, Weber Advanced Physics, Vol.1(1), 119, 118-124(2015) [ISSN : 2449-1696].
- 9] **B.S.Shirke** and U.D.Kadam, Hazardous Waste and Managements, Green Audit Report 2014-15, ISBN 978-81-933230-0-7.
- 10] U.D.Kadam,**B.S.Shirke**, S.M.Arde, R.S.Pandav and M.N.Patil, Application of Nutrents to Soil in Splitted Pattern and its Effect on Plant Growth, Advanced Agriculture Techniques and Rural Development, ISBN: 978-81-933230-2-1, PP.154-157.
- 11] **B.S.Shirke**, U.D.Kadam, S.M.Arde, R.S.Pandav and P.R.Salokhe, Analysis of Soil Containing Various Nutrients Which are Responsible for Growth of Plants, Advanced Agriculture Techniques and Rural Development, ISBN: 978-81-933230-2-1, PP.158-162.

12] P.R.Salokhe, S.M.Arde, R.S.Pandav, **B.S.Shirke** U.D.Kadam and M.N.Patil, Role of Wild Variety of Plants in Agriculture and Bioframing, Advanced Agriculture Techniques and Rural Development, ISBN: 978-81-933230-2-1, PP.163-168.

13] S.M.Arde, **B.S.Shirke**, U.D.Kadam, P.R.Salokhe, R.S.Pandav, and M.N.Patil, Effect of Chemical Fertilizers and Organic/Biofertilizers on Crops as well as on Health of Soil, Advanced Agriculture Techniques and Rural Development, ISBN: 978-81-933230-2-1, PP.169-172.

14] T. T. Bhosale, H. M. Shinde, N. L. Gavade, S. B. Babar, V. V. Gawade, S. R. Sabale, R. J. Kamble, **B. S. Shirke** and K. M. Garadkar, Biosynthesis of SnO₂ nanoparticles by aqueous leaf extract of Calotropis gigantea for photocatalytic applications, Journal of Materials Science: Materials in Electronics, 23 January 2018.

15] H. M. Shinde, T. T. Bhosale, N. L. Gavade, S. B. Babar, R. J. Kamble, **B. S. Shirke** and K. M. Garadkar. Biosynthesis of ZrO₂ nanoparticles from Ficus benghalensis leaf extract for photocatalytic activity Journal of Materials Science: Materials in Electronics, 14 March 2018.

16] T. T. Bhosale, A. R. Kuldeep, S. J. Pawar, **B. S. Shirke** and K. M. Garadkar Photocatalytic degradation of methyl orange by Eu doped SnO₂ nanoparticles Journal of Materials Science: Materials in Electronics, 17 June 2019.

17] U. D. Kadam*, **B. S. Shirke**, S. M. Arde and R. S. Pandav, Energy Dispersive Analysis of X-rays (EDAX) an Ideal Tool for elemental mapping of Mixed- Metal Oxides Synthesized by Sol-Gel Method, Aayushi International Interdisciplinary Research Journal (AIIRJ) Special Issue No. 48 pp.153, ISSN 2349-638x.

18] **B.S. Shirke**, A.A. Kabure, M.G. Chikalkar, S.R. Mane and K.M. Garadkar, Adsorption of Rhodamine B from Aqueous Solution onto Low-Cost Cerium Oxide Nanoparticles, Aayushi International Interdisciplinary Research Journal (AIIRJ) Special Issue No. 48 pp.160, ISSN 2349-638x.

19] Kabure A.A., Mane S.R. and Shirke B.S., The LPG gas-sensing performance of CeO₂-CuO nanocomposite film synthesized by microwave assisted sol-gel method, International Journal of Recent Scientific Research, Vol. 11, Issue, 05(C), pp. 38560-38567, May, 2020

IV] Book Published in International Level :

Working as co-author of Micro & Nano Technology Books: Advanced Nanomaterial Series....

V] Research Project :-

Completed one Minor Research Project as **Principal Investigator**

Title of Project:- “Microwave Assisted Synthesis, Characterization and Applications of Single and Mixed Oxide Nanoparticles”.

Funding Agency :- University Grant Commission (**UGC**)

Fund Values :- Rs. 1,95,000/-

Date of Completion:- 28-08-2012

VI] Paper Presented and Participation in International / National Conference / Seminar:-

1] Paper presented in International Conference on Nanomaterials and Applications, Organized by Department of Chemistry and Department of Physics, Shivaji University, Kolhapur on 9-11, Dec., 2008,

2] Paper presented in National Seminar on Advanced Methodologies and Functional Materials, organized by Department of Chemistry, Shivaji University, Kolhapur on 23- 24, Dec., 2009.

3] Paper presented in National Conference on Recent Trends in Chemistry, organized by Department of Chemistry, Science College Satara on 14-15, Oct., 2010,.

4] Participation in National Conference on Non-Conventional Energy Resources, organized by Vivekanand College, Kolhapur on 15-16, Dec., 2010,.

5] Paper presented in “National Symposium on Advances in Synthetic Methodologies and New Materials” organized by Department of Chemistry, Shivaji University, Kolhapur on 21-22, Jan., 2011,

6] Worked as a Organizing Member State level History Conference- 20th convention, organized by Y.C.Warana Mahavidyalaya, Warananagar on 12 -13th Nov., 2011.

7] Paper presented in National Conference on Advanced Techniques of Teaching and Learning in Higher Education, organized by Baba Naik Science Mahavidyalaya, Shirala on 6th Jan., 2012

8] Paper presented in National Conference on Current Research in Chemical Sciences

(CRCS-2013)", organized by Department of Chemistry, Shivaji University, Kolhapur on 22-23, Jan., 2013.

- 9] Worked as referee for Technical Exhibition held during Annual Social Function organized by TKIET on 22nd Feb., 2013.
- 10] Paper presented in National Conference on Drug Designing and Discovery organized by Devchand College Arjunnagar on 6-7, Sept., 2013,
- 11] Paper presented in Frontiers in Chemical and Biological Sciences, organized by Padmabhushan Dr. Vasantdada Patil Mahavidyalaya, Tasgaon, on 23-24, Sept., 2013,
- 12] Participation in 43rd ISTE, National Annual Convention Organized by TKIET Warananagar on 19-21, Dec. 2013.
- 13] Paper presented in UGC-SAP National Symposium on Recent Trends in Chemical and Nano Sciences [CTCNS-2014], organized by Department of Chemistry, Shivaji University Kolhapur on 17-18, Jan., 2014.
- 14] Worked as a Organizing Member in 8th Carnival, Shivaji University Psychology Conference organized by Y.C. Warana Mahavidyalaya, Warananagar on 8th Feb., 2014
- 15] Paper presented in National Conference on Recent Trends in Chemical Sciences (RTCS-2014) Organized by Devchand College Arjunnagar on 18-19, Sept., 2014.
- 16] Participation in National Conference on Women Empowerment organized by Shri V. Y. Arts & Science College Pethvadgaon on 13-14, Oct., 2014.
- 17] Paper presented in National Conference on Recent Trends in Interdisciplinary Research in Material Science- 2014, Organised by Annasaheb Dange College of Engineering and Technology, Ashta, Maharashtra on 26-27, Dec., 2014.
- 18] Participated in Digital India Week, organized by Y.C. Warana Mahavidyalaya, Warananagar in association with T.K.I.E.T., Warananagar (MHRD IIT-Bombay, Remote Centre-1028) from 1st July to 8th July 2015.
- 19] Worked as a Organizing Member in Shivaji University Kolhapur, 'Avishkar- 2015-16' organized by TKIET Warananagar on 17th Feb., 2016.

- 20] Paper presented in National Seminar on Application of Chemical and Material Science for Sustainable Development, organized by Dept. of Chemistry, Shivaji University on 20th February 2016
- 21] Participation in National Conference on Human Right Education and Indian Scenario, Organized by Shri V.Y.Arts & Science College Pethwadgaon on 26-27, Feb., 2016.
- 22] Worked as a Judge for National Level Model Presentation Competition under Jidnyasa 2K16 organized by TKIET on 3rd March, 2016.
- 23] Participation and worked as Organizing Member in National Conference of Marathi and History organized by Y.C.Warana Mahavidyalaya, Warananagar on 9th Mar., 2016.
- 24] Participation and worked as Organizing Member National Conference of Economics and Commerce organized by Y.C.Warana Mahavidyalaya, Warananagar on 10th Mar., 2016.
- 25] Participation and worked as Organizing Member of One Day National Conference on “Human Conflicts Reflected in Global English Literatures” organized by Department of English, Y.C.Warana Mahavidyalaya, Warananagar on 2nd Aug., 2016.
- 26] Participation, paper presented and worked as Organizing Member of National Seminar on “Advanced Agriculture Techniques and Rural Development of Human ” organized by Department of Geography, Y.C.Warana Mahavidyalaya, Warananagar on 24th Aug., 2016.
- 27] Participation, paper presented and worked as Organizing Secretary of One Day National Conference on “Emerging Trends in Chemical and Physical Sciences (ETCPS 2017) organized by Department of Chemistry, Y.C.Warana Mahavidyalaya, Warananagar on 14th Feb., 2017.
- 28] Participation in One Day State Level Seminar on The Revised Process of Assessment & Accreditation by NAAC organized by D.D.Shinde Sarkar College, Kolhapur on 9th, Sept., 2017.
- 29] Participation, paper presented and worked as Organizing Member of One Day National Conference on “Recent Trends in Material Research organized by Department of Physics, Y.C.Warana Mahavidyalaya, Warananagar on 31st, Jan., 2018.

30] Participation and worked as Organizing Member^[3] of One Day National Conference on “Role of Libraries in Changing Information and Communication Technology(ICT) organized by Library, Y.C.Warana Mahavidyalaya, Warananagar on 9th, Feb., 2018.

31] Worked as a Judge for Eureka 2K18, National Level Paper Presentation Context organized by Tatyasaheb Kore Institute of Engineering and Technology, Warananagar on 29th,Sept.,2018.

32] Participation, paper presented and worked as Organizing Secretary of International Conference on “Energy, Environment and Ethics in Research organized by Y. C. Warana Mahavidyalaya, Warananagar on 25th Jan., 2019.

33] Worked as a Examiner for Engineering and Technology category of District Level Avishkar Research Convention, Sangli District, collaboratively organized by Shivaji University, Kolhapur and Balvant College, Vita on 6th, Jan.,2020.

10. Participation in Co-curricular and Extra-curricular activity:-

I] Extension Activities:-

- 1) Total 13 years worked as a Program Officer of National Service Scheme (NSS)
- 2) Organized Blood donation Camps yearly as a NSS Programme Officer.
- 3) Active participation in State level Camp organized by Shivaji University, Kolhapur and Jilha Parishad Kolhapur on 11th to 20th January, 2008.
- 4) Participation in Jalswarajya Project on 2006-2007.
- 5) Participation in Workshop in save daughter campaign on 2007.
- 6) Worked as Member of Arsh Committee, Formed by Collector of Kolhapur District.
- 7) Worked as a Member of Indian Red Cross Society.
- 8) About 3000 trees are planted during NSS program
- 9) Participation in one day University Level Software Training Workshop on “NSS Web Portal-Avyukta” for NSS, ShivajiUniversity, Kolhapur, organized by Dept. of Information Technology, KIT’s College of Engineering, Kolhapur on 2nd July, 2016.
- 10) Completed Refresher Course for NSS Progmme Officers organized by TISS on 25th to 29th March, 2008.

III] Co-curricular and Extra-curricular activities:-

- 1) Worked as Subject Expert in Chemistry on University Selection Committee.
- 2) Worked as V.C. Nominee on University Selection Committee.
- 3) Worked as Member of LIC Committee of Shivaji University, Kolhapur.
- 4) Life Member of the Indian Society for Technical Education.
- 5) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc. Part-II, organized by The New College, Kolhapur on 19th January, 2004.
- 6) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc. Part-III, organized by The New College, Kolhapur on 10th December, 2004.
- 7) Participation in One Day Convention on “Chemistry- A Mirror of Industry” organized by KDCTA at Vivekananda College, Kolhapur on 27th April, 2005.
- 8) Participation in Training Workshop of B.Sc. part-III, organized by Y.C. Institute of Science, Satara on 1st to 3rd September, 2005.
- 9) Worked as organizing Member of one day workshop for College Principal under Lead College Member on 31st January, 2008.
- 10) Participation in Training cum one day workshop organized by Dept. of Chemistry on 26th August, 2011.
- 11) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.III, organized by Vivekanand College, Kolhapur on 13th Aug., 2012.
- 12) Participation in One Day Lead College Workshop on “Water Management: Need of the Hour”, organized by Shri Shiv-Shahu Mahavidyalaya, Sarud, on 15th Feb., 2012.
- 13) Participation in One day workshop on Academic Performance Indicator, organized by Y.C.Warana Mahavidyalaya, Warananagar on 9th March, 2012.
- 14) Participation in Workshop on UGC New API Score System: A Way to Personality Enrichment of Teachers organized by SUTA at Bhasha Bhavan SUK on 18th March, 2012.
- 15) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.III, organized by DABN Arts& Science College, Chikhali on 11th Aug., 2012.
- 16) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.III,

organized by Vivekanand College, Kolhapur^[3] on 13th Aug., 2012

- 17) Participation in National Seminar on The Maharashtra Public Y.C.Institute of Science Satara, organized by Shivaji University Teacher's Association.
- 18) Worked as Examiner in General Knowledge Competition organized by Shri Shahu Shikshan Prasarak Mandal, Pethvadgaon on 14-18, July 2013.
- 19) Participated in One Day Workshop on Recent Developments in Microwave Assisted Synthesis & Rheological Studies, organized by Tatysaheb Kore College of Pharmacy, Warananagar on 3rd Aug., 2013.
- 20) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.I, Paper-I&III organized by Y.C.Institute of Science, Satara on 14th Aug., 2013.
- 21) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.I-Pract. organized by Vishwasrao Naik College, Shirala on 10th Oct., 2013.
- 22) Worked as Examiner in National Workshop on Celebration of Ramanujan-Chandrasekhar Legacy in Science on 27-31st Jan., 2014, organized by Shri V.Y. Arts & Science College, Peth Vadgaon.
- 23) Worked as Examiner in Science Exhibition organized by Shri Shahu Shikshan Prasarak Mandal, Pethvadgaon on 14-18, July 2014.
- 24) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.II., Paper VII&VIII with Practical Sponsored by Shivaji University, Kolhapur organized by Y.C. Institute of Science, Satara on 13th Aug., 2014.
- 25) Worked as a CAP Director and CAP Quality Director of University Examination held in Oct./Nov.-2014.
- 26) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.III., Paper IX&XIII Sponsored by Shivaji University, Kolhapur organized by Willingdon College Sangali on 12th Aug., 2015.
- 27) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.III., Paper IX&XIII Sponsored by Shivaji University, Kolhapur organized by Dr. Patangrao Kadam Mahavidyalaya, Sangali on 20th Aug., 2015.
- 28) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.III., Paper X&XIV Sponsored by Shivaji University, Kolhapur organized by A.S.C.College Ramanandnagar on 27th Aug., 2015.

- 29) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.I., Paper I, II & Practicals Sponsored by Shivaji University, Kolhapur organized by Dept. of Chemistry, Rajarshi Chhatrapati Shahu College, Kolhapur on 11th Aug., 2018.
- 30) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.I., Paper III & IV Sponsored by Shivaji University, Kolhapur organized by A.S.C.College Ramanandnagar on 13th Aug., 2018.
- 31) Participation in Workshop on Revised Syllabus in Chemistry at M.Sc.I., Sponsored by Shivaji University, Kolhapur organized by Willingdon College Sangali on 20th Aug., 2018.
- 32) Participation in Trainers Training Programme of Avishkar organized by D.R.Mane Mahavidyalaya, Kagal on 1st November, 2018.
- 33) Participation in State Level Workshop-2019 of NSS Programme Officer organized by NSS, Higher Education Maharashtra Government and Savitribai Phule University of Pune on 23rd & 24th February 2019.
- 34) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.II., Paper VIII Sponsored by Shivaji University, Kolhapur organized by Rajaram College, Kolhapur on 29th Aug., 2019.
- 35) Participation in Workshop on Revised Syllabus in Chemistry at B.Sc.II., Paper-V Sponsored by Shivaji University, Kolhapur organized by Rajaram College, Kolhapur on 31st Aug., 2019.

[Dr.B.S.Shirke]