

CURRICULUM VITAE



Capt.DR. VIJENDRA ANANT CHAUDHARI

Department Address:
Department of Physics,
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OBJECTIVE:A position leading towards successful research and development in Materials Science, Chemical routes, and technology.

DATE OF BIRTH:May 7th, 1982.

SEX:Male.

NATIONALITY:Indian.

CAST:O.B.C.

QUALIFICATIONS SUMMARY:

➤ Four years experience in synthesis and investigation of ABO_3 type materials. Comprehensive knowledge in

- Ceramic method;
- Chemical routes deposition;
- Structural characterization of materials;

a) Attended different conferences organized in different universities and institutes.

b) Extensive leadership and communication experience through professional and co-curricular activities.

c) Computer knowledge - windows- 98, XP, Vista; LINUX; BASIC and C-programming.

d) Software's used-

MS-Office 2000-2007, Origin, Powder-X;

INSTRUMENTATIONAL SKILLS:Structural (XRD), Morphological (SEM), Optical (IR-Spectroscopy), Thermal (DSC) and Electrical measurements (Impedance).

WORKED WITH UNIVERSITIES AND INSTITUTES:

- IIT- PAWAI, MUMBAI, India.
- Pune University, Pune, India.
- Solapur University, Solapur, India.
- RTM Nagpur University, Nagpur, India.

Ph.D. WORK:

Date of Joining	Date of Completion	Name and Address of Guide
July - 2005	3 rd July - 2009	Dr. Govind K. Bichile, Formerly Prof. and Head, Department of Physics, Dr. BabasahebAmbedkarMarathwada University, Aurangabad – 431 004, Maharashtra, India.

Ph.D. TOPIC: "STUDIES ON STRUCTURAL, ELECTRICAL AND DIELECTRIC PROPERTIES OF PURE AND DOPED FERROELECTRIC SYSTEMS."

Physics (Material Science) - Department of Physics, Dr. B. A. Marathwada University, Aurangabad.

Aim :

- To synthesize the ferroelectric ABO_3 type materials by ceramic and chemical route technique.
- To characterize this material using X-ray diffraction techniques, Scanning electron microscopic, IR - Spectroscopy, DSC, and electrical measurements.
- To investigate the different phases of ferroelectric material pure and doped systems.
- To study the effect of dopants at A, B and A & B site simultaneously in ferroelectric materials on structural, electrical and dielectric properties.

EDUCATIONAL QUALIFICATIONS:

Sr. No.	Degrees	College/University	Duration		Subject	Award / Division
			From	To		
1	Ph.D.	Dr. BabasahebAmbedkar Marathwada University, Aurangabad – 431 004, Maharashtra (India).	2006	2009	Physics, (Material Science)	Awarded
2	M.Sc.	Dr. BabasahebAmbedkar Marathwada University, Aurangabad – 431 004, Maharashtra (India).	2003	2005	Physics, (Solid statePhysics)	First (66.5%)
3	B.Sc.	S. B. E. S. College of Science, Aurangabad, Maharashtra (India).	2001	2003	Physics, Mathematics, & Computer Science	First (67.18%)

PROFESSIONAL TRAINING RECEIVED:

Year	Nature of Training	Duration	Organization where training was provided
2007	X-ray Diffraction Study	2 Week	IIT Mumbai.
2007	Scanning Electron Microscopy Study	2 Week	Department of Physics, Pune University.
2007	Differential Scanning Calorimetry and IR Study	1 Week	Government College of Pharmacy, Aurangabad.
2008	Complex Impedance Spectroscopic Study	3 Week	Department of Physics, RTM Nagpur University.

TEACHING EXPERIENCE:

Name of Institute	Post Held	Specialization/Subject	Period From To
Department of Physics, Electronic and Computer Science, Dayanand Science College, Latur	Assistant Professor	Condensed Matter Physics, Solid State Physics, Material Science.	11 th December, 2009 to Till Date.

RESEARCH (Ph.D) GUIDE:

Name of Institute	Name of Research Center	Specialization/Subject
Department of Physics, Electronic and Computer Science, Dayanand Science College, Latur	Department of Physics, Swami Ramanand Teerth Marathwada University, Nanded.	Condensed Matter Physics, Solid State Physics, Material Science, Nanotechnology, Glass and Ceramics.

TRAINING PROGRAMME/COURSES:

Name of Courses	Title	Duration	Sponsored By
103 Orientation Programme	Orientation Programme	02/06/2014 to 28/06/2014	UGC-ASC, Dr.B.A.M.U.,Aurangabad.
Refresher Course	Nanoscience (ID)	09/12/2014 to 30/12/2014	UGC-ASC, University of Mumbai

Name of Courses	Title	Duration	Sponsored By
Refresher Course	Special Summer School Program (equivalent to refresher course)	22/05/2017 to 10/06/2017	UGC-ASC, Dr.B.A.M.U.,Aurangabad.
Short Term Course	Short Term Course in Intellectual Property Right and Patents (online)	04/08/2020 to 10/08/2020	UGC-HRDC, Goa University.
Short Term Course	Short Term Course on Research Methodology-I	08/03/2021 to 13/03/2021	UGC-HRDC, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) INDIA - 495009.
Faculty Development Programme	Faculty Development Programme on "MANAGING ONLINE CLASSES and CO-CREATING MOOCS:2.0"	18/05/2020 to 03/06/2020	GOI-MHRD Pandit Madan Mohan Malaviya. (Ramanujan College, university of Delhi)

REVIEWER:

Sr. No.	Name of Journals	Published By
01	Journals in Physics	Elsevier
02	British Journal of Applied Science & Technology	Sciencedomain
03	Nanoscale Research Letters	Springer
04	Journal of Alloys and Compounds	Elsevier
05	Solar Energy Materials and Solar Cells	Elsevier

INVITED LECTURES:

Sr. No	Date	Title of lecture or Academic Session	Title of Conference / Seminar	Organized By	Whether International / National
1.	23/02/2010 to 24/02/2010	Deposition of nano-structured thin films using sol-gel spin coating technique	National Conference on Recent Trends in Thin Film Technology (RTTFT)	Dept. of Phy. Jijamata College of Science &Ars, Bhenda.	National
2.	03/03/2015	Nanoscience and Its application	"Perception – A Lecture Series on Nanotechnology"	Cerebro Scientific at KTHM College, Nashik	State
3.	14/10/2016 to 15/10/2016	Mathematical Tools for the Development of Physical Science	Two days State Level Seminar	Department of Physics & Mathematics, Arts. Commerce and Science College, Nandgaon, Nashik	State

4.	27/07/2020 to 26/08/2020.	Crystal Structures	"Online One Month Country wide National Science Student Development Programme (CWNSSDP-2020)"	Dept. of Physics and Material Science Netaji Subhashchandra Bose College, Nanded, Maharashtra, India	National
5.	24/01/2020 to 25/01/2020	Innovative Applications of Nanomaterials in Science and Technology	Two days State Level Seminar.	Department of Physics, Arts. Commerce and Science College, Nandgaon Dist. Nashik.	State

RESEARCH INTEREST:

- Solid State/ Condensed Matter Physics
- Ferroelectric ceramics for applications.
- Dielectric and electrical properties of materials.
- Sensors based on Thin and Thick film Devices.
- Synthesis and characterization of PZT, PLT, PLZT and Lead Titanate based thin films derived by sol-gel method.
- Thin films and Nano technology.
- Structure evolution studies near morphotropic phase boundary (MPB) region in lead zirconatetitanate (PZT), lead lanthanum titanate (PLT), lead lanthanum zirconatetitanate (PLZT) ferroelectrics.

AWARDS AND HONORS:

- Delivered Invited Lecture as **Resource Person** in National Conference on "Recent Trends in Thin Film Technology (RTTFT-2010)" at Jijamata College of Science and Arts, Bhende, Dist. Ahmednagar.
- **Assistant Coordinator** for Motivational Bridge Course (MBC- 1st to 26 June 2010) in Mathematical Methods in Physics & Laboratory Practices for B.Sc. First and Second year students held at Dayanand Science College, Latur. Course is in Association with Indian Association of Physics Teachers (RC-08) and Indian Academy of Sciences, Bangalore.
- Felicitated by **Lieutenant Rank** after successful completion of Army training during 03 July 2012 to 29 Sept. 2012 at OTA Kamptee.
- **Best Pilot Award** during Army training (03 July to 29 Sept. 2012) at OTA Kamptee.
- **Best Poster Presentation Award** in International Conference on Functional Materials and Microwaves at Dr. B.A.M.U. Aurangabad during 28-30 December 2015.
- **Education and Research Award** –
 - *Bharatratna Dr. A.P.J. Abdul Kalam International Honour Award – 2020.*
 - *Mahatma Jyotiba Phule International Award – 2021.*

CONTRIBUTION IN THE DEVELOPMENT OF THE INSTITUTION – DAYANAND SCIENCE COLLEGE, LATUR:

- Member of steering committee NAAC at college level.
- Member of Internal Examination Committee.
- Member of Youth Festival Committee.
- Member of Discipline Committee.
- Worked as member of Cultural and N.S.S. Committee.
- Presently working Company Commander – NCC.

CO-CURRICULAR ACTIVITIES:

- Commissioned in National Cadet Corps (NCC) – Army Wing [Dated: 05/08/2011]
- Successfully passed N.C.C. A, Band C certificate examination with C, B and B grade.
- Attended the "ALL INDIA TREAKKING EXPEDITION" from Maharashtra at Ranchi.
- Attended "ThalSena Camp" at Latur.
- Attended "Annual Training Camp" in SD and JD.

SPORTS ACTIVITY:

- Represented College at University level in 'Athletics.'

OTHER ACTIVITIES:

- Done an excellent work as a "Social Service" in "INDIAN NATIONAL FOUNDATION FOR THE BLIND."
- Attended Pre-Cadet Training Course conducted by Government of Maharashtra- December, 2003.
- Actively participated "Social Service Activities" during the NCC training year 2000-2004.
- Placement division, conducted campus interview at Dayanand Science College, Latur- April, 2010.

ORGANIZATION OF INTERNATIONAL AND NATIONAL CONFERENCES/WORKSHOPS/:

- Workshop on Skill Enhancement Course [SEC] CBCS in Physics, dated on 6th August 2018 at Department of Physics, Dayanand Science College, Latur.
- International e-Conference on Material Science and Nanotechnology [e-ICMSN-2020] dated on 17 - 19, December - 2020, Sponsored by UGC-CPE at Department of Physics, Dayanand Science College, Latur.

PARTICIPATION IN INTERNATIONAL AND NATIONAL CONFERENCES:

1. National Symposium on Science and Technology of Glass-Glass-Ceramics (NSGC- 15-16 Sept., 2006) atBhabha Atomic Research Centre, Mumbai.
2. International Conference on Advanced Materials and Applications (ICAMA- 15-17 Nov., 2007) at Departmentof Physics, Shivaji University, Kolhapur.
3. National Conference on Current Trends in Materials Research for Advanced Technology (NCMRAT-2007) at Dr. B. A. M. University, Aurangabad.
4. National Conference on Microwaves and Optoelectronics (NCOMO-2004) at Dr. B. A. M. University,Aurangabad.
5. International Conference on Electroceramics (ICE- 13-17 Dec., 2009) at Department of Physics & Astrophysics University of Delhi.

6. National Conference on Advancements in Nanoscience for Different Technologies (NCANDT-2010) at ShrikrishnaMahavidyalaya, Gunjoti.
7. National Conference on Recent Trends in Thin Film Technology (RTTFT- 23-24 Feb., 2010) at Jijamata College of Science and Arts, Bhende.
8. International Workshop and Symposium on the Synthesis and Characterization of Glass/Glass-ceramics (IWSSCGGC- 7-10 July, 2010), C-MET Pune.
9. International Conference on Nanoscience and nanotechnology (ICNN- 11-13 Jan., 2011), at Department of Physics, SRTMU, Nanded.
10. International Conference on Functional Materials and Microwaves (ICFMM – 28-30 Dec., 2015), at Dr. B.A.M.U. Aurangabad.
11. International Conference on Functional Oxides and Nanomaterials (ICFONM- 11-13 Nov., 2016), at Saurashtra University, Rajkot.
12. International Conference on Mathematical Analysis and its Applications (ICMAA – 05-09 March, 2017), at Department of Mathematics, Dayanand Science College, Latur.
13. National Conference on Recent Advances in Nanotechnology (RAN – 05 March, 2019), at Department of Physics, Toshiwal Arts, Commerce and Science College, Sengaoon Dist. Hingoli.
14. International Conference on Advancements in Renewable Energy (ICARE – 10 – 11 Jan., 2020), at School of Physical Sciences, SRTMU, Nanded.

LIST OF RESEARCH PUBLICATIONS:

● **International Journals**

- [1] **Structural and Impedance Spectroscopic Studies on $\text{PbZr}_x\text{Ti}_{1-x}\text{O}_3$ Ceramics.**
Vijendra A. Chaudhari and Govind K. Bichile
Physica B, Vol. 405 (2010) 534-539. ISSN: 0921-4526 Impact Factor: 1.276
- [2] **Synthesis, Structural and Electrical Properties of Pure PbTiO_3 Ferroelectric Ceramics.**
Vijendra A. Chaudhari and Govind K. Bichile
Smart Materials Research, Vol. 2013 (2013) 1-9. ISSN: 2090-357X Impact Factor: 0.272
- [3] **Study of phase transitions and response of Dielectric Behavior of $\text{Pb}_{1-1.5x}\text{La}_x\text{TiO}_3$ (PLT) Ceramics.**
Vijendra A. Chaudhari and Govind K. Bichile
Integrated Ferroelectrics, Vol. 150 (2014) 1-13. ISSN: 1607 – 8489. Impact Factor: 0.486
- [4] **Sol-Gel Synthesis and Characterization of Lead Titanate Films.**
Vijendra A. Chaudhari and Govind K. Bichile
Cogent Chemistry, Vol. 1 [1] (2015) 1-10. ISSN: 2331 – 2009.
- [5] **Structural Characterization and Optimized Condition for Synthesis of Pure SrTiO_3 Ceramics.**

Vijendra A. Chaudhari and Govind K. Bichile.

International Journal of Advanced Research in Basic and Applied Sciences, Vol. 2 [1] (2015) 62–65
ISSN: 2394 – 4072.

- [6] **X-ray Diffraction Study of $\text{Pb}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$ Around MPB Region.**
Vijendra A. Chaudhari and Govind K. Bichile.
International Journal of Bionano Frontier, Vol. 8 [3] (2015) 49–51.
ISSN: 0974 – 0678(P), 2320 – 9593.
- [7] **Synthesis, Structural and Optical Characterization of Spray-Deposited CuInS_2 Thin Films.**
Surekha B. Jaiswal, **Vijendra A. Chaudhari** and Govind K. Bichile
International Journal of Research in Engineering and Applied Sciences, Vol. 5[7] (2015) 51–66.
ISSN: 2249 – 3905 Impact Factor: 5.981.
- [8] **Composition and temperature dependence of the dielectric properties of $\text{PbZr}_x\text{Ti}_{1-x}\text{O}_3$ ferroelectric Ceramics.**
Vijendra A. Chaudhari and Govind K. Bichile (Communicated to journal).

● **International Conferences**

- [1] **Effect of La content on the structural characteristics of Lead Lanthanum ZirconateTitanate [PLZT] ($\text{Pb}_{1-x}\text{La}_x$) ($\text{Zr}_{0.65}\text{Ti}_{0.35}$) O_3 with $0.02 \leq x \leq 0.1$ ceramics.**
V.A. Chaudhari and G.K. Bichile
-International conference on Advanced Materials and Applications (ICAMA-2007) (Oral).
- [2] **Synthesis and electrical behavior of borate glasses with two and three types of alkali ions.**
A.R. Joshi, **V. A. Chaudhari** and G.K. Bichile
-International conference on Advanced Materials and Applications (ICAMA-2007) (Oral).
- [3] **Studies on preparation and characterization of zinc sulfide films by chemical spray deposition.**
R.N. Arle, **V.A. Chaudhari** and G.K. Bichile
-International conference on Advanced Materials and Applications (ICAMA-2007).
- [4] **Synthesis and structural characteristic of $\text{PbZr}_x\text{Ti}_{1-x}\text{O}_3$ ceramics.**
V. A. Chaudhari and G. K. Bichile
-International Conference on Materials for Advanced Technologies (ICMAT-2009), Materials Research Society, Singapore (accepted).
- [5] **Structural and electrical characteristics of $\text{Bi}_4\text{V}_{2(1-x)}\text{Ni}_{2x}\text{O}_{11-3x}$, $0.00 \leq x \leq 0.1$.**
G. K Bichile, **V. A. Chaudhari** and S. M. Desai
-17th International Solid State Ionics Conference (SSI-17, 2009), Alfred University Toronto, Canada (accepted).

- [6] **Phase Development and Dielectric Properties of $\text{Pb}_{1-1.5x}\text{La}_x\text{TiO}_3$ (PLT) Ceramics.**
Vijendra A. Chaudhari, Pravina P. Pawar and Govind K. Bichile
-Materials Science and Technology Conference (MS&T-2009), Pittsburgh, Pennsylvania, USA (accepted).
- [7] **Synthesis, Structural and Dielectric Studies of $\text{PbZr}_x\text{Ti}_{1-x}\text{O}_3$ Ceramics.**
Vijendra A. Chaudhari and Govind K. Bichile
-International Conference on Electroceramics (ICE-2009), University of Delhi.
- [8] **Synthesis and Characterization of Glassy Borate Oxide Systems.**
 Anita Joshi, **Vijendra A. Chaudhari**, Pravina P. Pawar and Govind K. Bichile
-International Workshop and Symposium on the Synthesis and Characterization of Glass/Glass-ceramics (IWSSCGGC - 2010), C-MET Pune.
- [9] **Synthesis of Nano-sized Lead Titanate Powder by the Sol-Gel Method and Size Effect on Structure.**
Vijendra A. Chaudhari, Pravina P. Pawar and Govind K. Bichile
-International Conference on Nanoscience and nanotechnology (ICNN-2011), SRTMU, Nanded.
- [10] **X-ray Diffraction Study of $\text{Pb}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$ Around MPB Region.**
Vijendra A. Chaudhari, and Govind K. Bichile
-International Conference on Functional Materials and Microwaves (ICFMM – 28-30 Dec., 2015), Dr. B.A.M.U. Aurangabad.
- [11] **Identification of Morphotropic Phase Boundary (MPB) Region in $(\text{Pb}_{1-x}\text{La}_x)(\text{Zr}_{0.65}\text{Ti}_{0.35})_{1-0.25x}\text{O}_3$ (PLZT) Ceramics.**
Vijendra A. Chaudhari, and Govind K. Bichile
-International Conference on Functional Oxides and Nanomaterials (ICFONM – 11-13 Nov., 2016), Saurashtra University, Rajkot.
- [12] **Group and Groups Representation Leads to the Idea of Finding Symmetry Operation in Physics.**
Vijendra A. Chaudhari, Shilpa A. Mirikar and Govind K. Bichile
-International Conference on Mathematical Analysis and its Applications (ICMAA – 05-09 March., 2017), Department of Mathematics, Dayanand Science College, Latur.
- [13] **Calculus of variations Tool Mathematics for Classical Problems.**
 Shilpa A. Mirikar, **Vijendra A. Chaudhari**, and Govind K. Bichile
-International Conference on Mathematical Analysis and its Applications (ICMAA – 05-09 March., 2017), Department of Mathematics, Dayanand Science College, Latur.
- [14] **Composition and temperature dependence of the dielectric properties of $\text{PbZr}_x\text{Ti}_{1-x}\text{O}_3$ ferroelectric Ceramics.**
Vijendra A. Chaudhari, and Govind K. Bichile
-International Conference on Advancements in Renewable Energy (ICARE – 10 – 11 Jan., 2020), at School of Physical Sciences, SRTMU, Nanded.

● National Conferences

- [1] **Transport properties of $y[xM_2O(1-x)Me_2O](1-y)B_2O_5$.**
Anita Joshi, **V.A. Chaudhari**, G.M. Agnihotri, K.M. Jadhav, and G.K. Bichile
-National Symposium on Science and Technology of Glass and Glass-Ceramics (NSGC-2006).

- [2] **BINIVOX Family of Oxide Anion Conductors: Structural and Conductivity studies.**
S.M. Desai, P.P. Bardapurkar, **V.A. Chaudhari**, and G.K. Bichile
-National Conference on Current Trends In Materials Research for Advanced Technology (NCMART-2007).

- [3] **Ultrasonic velocities and molecular interactions in aqueous solution of pure GlycineGlycine+NaCl, and Glycine+MgCl₂ based systems.**
S.R. Kanhekar, V.A. Chaudhari, R.T. Dangle and G.K. Bichile
-National Conference on Current Trends In Materials Research for Advanced Technology (NCMART-2007).

- [4] **Synthesis and Characterization of nano thin films.**
Pravina P. Pawar, **Vijendra A. Chaudhari** and Govind K. Bichile
-National Conference on Advancements in Nanoscience for Different Technologies (NCANDT-2010).

- [5] **Sol- gel synthesis and effect of particle size of lead titanate nanoparticles.**
Vijendra A. Chaudhari, Pravina P. Pawar and Govind K. Bichile,
-National Conference on Advancements in Nanoscience for Different Technologies (NCANDT-2010) (Oral).

- [6] **Deposition of nano-structured thin films using sol gel spin coating technique.**
Vijendra A. Chaudhari
-National Conference on Recent Trends in Thin Film Technology (RTTFT-2010) (Invited talk as ResourcePerson)

- [7] **Effect of ion ratio of Cu/In in spray solution and growth temperature on structuralproperties of spread CuInS₂ films.**
S.B. Jaiswal, P.P. Pawar, **V.A. Chaudhari** and G.K. Bichile
-National Conference on Recent Trends in Thin Film Technology (RTTFT-2010).

- [8] **Studies on preparation and characterization of zinc sulfide thin films.**
R.N. Arle, **V.A. Chaudhari**and G.K. Bichile
-National Conference on Recent Trends in Thin Film Technology (RTTFT- 2010) (Oral).

- [9] **Effect of substrate temperature on refractive index and structural properties of Cu/In in spray solution of spread CuInS₂ films.**
S.B. Jaiswal, P.P. Pawar, **V.A. Chaudhari** and G.K. Bichile

- National Conference on Recent Trends in Thin Film Technology (RTTFT-2010).*
- [10] **Structural and optical properties of ZnS thin films prepared by spray pyrolysis.**
R.N. Arle, P.P. Pawar, **V.A. Chaudhari** and G.K. Bichile
-*National Conference on Recent Trends in Thin Film Technology (RTTFT-2010).*
- [11] **Radiation attenuation technique for film thickness measurement.**
P. P. Pawar, **V. A. Chaudhari** and G. K. Bichile
-*National Conference on Recent Trends in Thin Film Technology (RTTFT-2010).*
- [12] **Review of nanostructured materials and their applications in bionanotechnology, biomedical and environment.**
P.P. Pawar, **V.A. Chaudhari**, S.B. Shelke and G.K. Bichile,
-*National conference on Nano Structured Materials and Their Applications (NSMA-2010).*
- [13] **Growth of CuInS₂ nano thin films using spray pyrolysis technique.**
P.P. Pawar, **V.A. Chaudhari**, S.B. Shelke and G.K. Bichile,
-*National conference on Nano Structured Materials and Their Applications (NSMA-2010).*
- [14] **Integro-differential equations in image processing and its applications.**
V.A. Chaudhari and S.S. Bellale
-*Recent Advances in applied mathematics, ISBN- 978-81-920783-0-2, Feb. 2012*
- [15] **Effect of Zr content on the structural characteristics of Lead Titanate PZT Ceramics.**
V.A. Chaudhari and G.K. Bichile,
-*National Conference on Recent Advances in Nanotechnology (RAN – 05 March, 2019).*

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