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## Resume

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# Dr. Shivanand Masti



**Thin Film and Material Science  
Division,**  
Department of Physics,  
Dr. Ghali College, Gadhinglaj 416502  
MH- India  
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### Personal Profile

- Name : **Dr. Shivanand Appanna Masti.**
- Father's Name : **Appanna Nagu Masti.**
- Date of Birth : **1<sup>st</sup> January 1973.**
- Material Status : **Married.**
- Permanent Address: **"Swapanawell" Sambhaji Raje Nagar, Shendri Road,  
Gadhinglaj, Tal – Gadhinglaj Dist- Kolhapur M.S**

### Education Qualification:

- **Doctorate degree (Ph.D.)** in Physics (Material science) (**2005**).
- **Master degree in Physics** (Thin film physics) (**1995**).

### Work experience:

- Ph.D. Guide ship of Shivaji University, Kolhapur in physics.
- 22 Years teaching experience in Department of physics of Dr. Ghali college, Gadhinglaj.
- 7 years member of Executive council of Indian Association of Physics Teacher (IAPT) at National level.
- 5 years worked as a NAAC coordinator during the reaccreditation of the college.
- 17 Years research experience with especially in the field of experimentation and theoretical calculations and Preparation of various mixed Ferrites by ceramic and sol-gel methods, their characterization, electrical and magnetic property testing.
- Experience in deposition thin film by spray pyrolysis, chemical bath deposition and of nanoparticle by chemical vapour deposition techniques. Experience in development of new technologies of experimentation.
- Experience in arrangement of science conference, seminars, workshop etc.
- Experience in conducting science minor/major research project.

## Academic Record:

Degree Awarded	Board /University	Year of passing	Subjects/Specialization	Division
SSC	Pune Board	1988	All subjects	First class with distinction ( <b>76.6%</b> )
HSC	Pune Board	1990	Phys, Chem, Bio, Maths	First Class ( <b>69.7%</b> )
Bachelor of Science	Shivaji University	1993	Physics	First class with Distinctions ( <b>80.45%</b> )
Master of Science	Shivaji University	1995	Physics	First class ( <b>60.12%</b> )
Ph. D.	Shivaji University	2005	Physics	<b>O+ grade</b> (M. Phil Theory work)

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## Research Papers published in the Journals

- Influence of Cd<sup>2+</sup> and Cr<sup>3+</sup> substitution on magnetization and permeability of magnesium ferrites** S. A. Masti, A. K. Sharma and P. N. Vasambekar Journal of Magnetism and Magnetic Material Volume 305, Issue 2, (2006) pp 436-439.
- Synthesis by co-precipitation method and study of DC electrical resistivity study of Cu-Zn ferrites.** S. A. Masti Indian Streams Research Journal Vol -1 , ISSUE -1, Feb - 2011.
- On the study of permeability of Cr<sup>3+</sup> substituted mixed Mg-Cd ferrites** S. A. Masti Indian Streams Research Journal Vol -1 , ISSUE -2, March - 2011.
- Study of Behavior of Dielectric Properties in Substituted Mg-Cd ferrites** S. A. Masti, A. K. Sharma P.N. Vasambekar; International Journal of Scientific and Research Publications, Volume 3, Issue 6, June 2013 pp 1-4.
- Theoretical estimation of Curie temperature and cation distribution in substituted Magnesium Ferrites**, Shivanand Masti, Ashok Sharma, Pramod Vasambekar  
Volume 37 Issue 1, 22 October 2013 DOI: 10.3906/fiz-1304-17 .
- Crystallographic, Electrical And Magnetic Properties Of Gd<sup>3+</sup> Substituted And Non Substituted Mg-Zn Ferrites** S. A. Masti, Journal of Engineering Computers & Applied Sciences (JEC&AS) Volume 2, No.12, December 2013.
- DC electrical resistivity and cation distribution in Zn<sup>2+</sup> substituted copper ferrites** S. A. Masti, A. K. Sharma and P.N. Vasambekar; Advances in Applied Science Research, 2013, 4(3) pp 163-166.
- Preparation and study of gas sensor property of the cadmium ferrites** S. A. Masti, A. K. Sharma P. N. Vasambekar JOPA, 2(1) 2013.
- Behavior of dielectric constant and dielectric loss tangent in Cd<sup>2+</sup> and Cr<sup>3+</sup> substituted magnesium ferrites** S. A. Masti, A. K. Sharma and P. N. Vasambekar Advances in Applied Science Research, 2013, 4(4) pp 335-339.

10. **Study of Behavior of Dielectric Properties in Substituted Mg-Cd ferrites** S. A. Masti, A. K. Sharma, P.N. Vasambekar International Journal of Scientific and Research Publications, Volume 3, Issue 6, June 2013 pp 1-4.
11. **Preparation and study of magnetic properties of Gd<sup>3+</sup> substituted magnesium Zinc ferrites**, Shivanand A. Masti Extensive Journal of Applied Sciences Journal-2013-1-1,pp 5-8.
12. **Synthesis and susceptibility study of Gd<sup>3+</sup> substituted Mg-Zn ferrites** S. A. Masti ; Research Review I 2013 pp 45-47.
13. **Crystallographic, Electrical And Magnetic Properties Of Gd<sup>3+</sup> Substituted And Non Substituted Mg-Zn Ferrites** S. A. Masti ; Journal of Engineering, Computers & Applied Sciences (JEC&AS) Volume 2, No.12, December 2013
14. **Synthesis and susceptibility study of Gd<sup>3+</sup> substituted Mg-Zn ferrites** S.A. Masti, Research View, Volume 2 Number 2 December 2013 pp 45-48.
15. **Susceptibility and Curie temperature of Cr<sup>3+</sup> substituted Mg-Cd ferrites;** S.A. Masti ,Material science an Indian Journal MSAIJ ,10(4)2014 pp 139-142.
16. **Crystallographic and electrical resistivity study of Cr<sup>3+</sup> substituted Mg-Cd ferrites for low loss power devices** Shivanand A. Masti International Journal of Advances in Engineering & Technology, Jan. 2014 Vol. 6, Issue 6, pp. 2433-2438.
17. **Study of structural and electrical properties of Barium and Zinc doped CdS thin film by spray pyrolysis method**, S. A. Masti, A. G. Godghate, A. S. Patil and M. M. Jadhav Archives of Physics Research, 2014, 5 (1) pp 51-55.
18. **Influence of rare earth substitution on thermo-electric power of Mg-Zn mixed ferrite** Shivanand A. Masti Archives of Physics Research, 2014, 5 (1) pp 60-65.
19. **Preparation and thermoelectric properties of Cd<sup>2+</sup> and Cr<sup>3+</sup> substituted Magnesium ferrites** S. A. Masti, A. K. Sharma and P. N. Vasambekar European Journal of Applied Engineering and Scientific Research, 2014, 3 (1)pp 9-15.
20. **Saturation magnetization and susceptibility study of Cr<sup>3+</sup> substituted Mg-Cd ferrites** S.A. Masti, A. K. Sharma, P. N. Vasambekar, International Journal of Science, Engineering and Technology Research (IJSETR), Volume 3, Issue 3, March 2014 pp 640-651.
21. **Preparation characterization and magnetic property study of Gd<sup>3+</sup> substituted Mg-Zn Ferrites** S. A. Masti; Indian Journal of applied Research Volume 4 Issue 1 Jan 2014 pp 475-477.
22. **Liquefied petroleum gas sensor based on Cr<sup>3+</sup> substituted mixed Mg-Cd spinel ferrites** Shivanand A. Masti Ashoik K Sharma and Pramod N. Vasambekar, Archives of Physics Research, 2015, 6 (1) pp 1-6.
23. **Preparation, characterization and resistivity of CuNiO<sub>4</sub> thin films by modified SILAR method** S.A. Masti in Journal of Mathematics and scientific research vol.1 (I) 2016 pp23-25.

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### Brief Publication Data

No. of Research papers published= 23

H Index = 3.4

No. of Papers online Seen= 1026

I Index = 0.14

No. of papers downloaded= 856

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## **Research papers published in Conference Proceedings**

1. **Estimation of cation distribution in Cd<sup>2+</sup> and Cr<sup>3+</sup> substituted Magnesium Ferrites** S.A. Masti, A.K. Sharma, and P.N. Vasambekar, in the National Seminar on Materials for Advanced Technologies (NASMAT-2006) January 23-25, 2006, 105. Shivaji University Kolhapur (Oral Presentation).
2. **Dc electrical resistivity and cation distribution in Zn<sup>2+</sup> substituted copper ferrites**, S.A. Masti, A.K. Sharma, and P.N. Vasambekar in National Seminar on Advances in Electro ceramics, (NSAE) May 5-6, 2006, 104 DRDO center for Piezo-ceramics and devices, Pune.
3. **Behavior of dielectric constant and dielectric loss tangent in Cd<sup>2+</sup> and Cr<sup>3+</sup> substituted magnesium ferrites**, S.A. Masti, A.K. Sharma, P.N. Vasambekar A.S. Vaingankar **International Conference** on Nanomaterials and Applications (ICNAMA) December 9-11, 2008 pp-168 189. Shivaji University Kolhapur (Poster Presentation)
4. **Crystallographic study and variation of electrical resistivity of Gd<sup>3+</sup> substituted Mg-Zn ferrites**, in the *International Seminar on Advanced and Applied Materials Science* (ICAAMS-2014) 201-212, Gokhale College, Kolhapur January 17-19 2013.
5. **Energy Crises: A changing trend towards new technology and finding ways of possible solutions**, S. A. Masti in the National seminar on Energy crisis: possible solutions, on 7<sup>th</sup> and 8<sup>th</sup> February 2013 at B.K. Arts, Science and Commerce College, Chikodi, Tal Chikodi, Dist Belgaum Karnataka 204-206.
6. **A.C. electrical properties of Nano particle sized Cu<sub>x</sub>Co<sub>1-x</sub>Fe<sub>2-2y</sub>Al<sub>2y</sub>O<sub>4</sub> ferrites**, S.S. Karande, S. A. Masti, D. H. Bobade, B.R. Karache , in **International conference** on Environmental systems and Sustainable Development held at Chandimal Tarachand Bora College, Shirur Dist Pune on 15<sup>th</sup> and 16<sup>th</sup> Jan 2016.
7. **Synthesis and Characterization of CuNiO<sub>4</sub> thin films by Silar Deposition Method** S.A. Masti, S.B. Karande, in **International conference** on Environmental systems and Sustainable Development held at Chandimal Tarachand Bora College, Shirur Dist Pune on 15<sup>th</sup> and 16<sup>th</sup> Jan 2016.
8. **Synthesis by SILAR method and gas sensing properties of Ni substituted ZnO thin films**, S.A. Masti, National Conference on Electronics Materials Thin Films and its Applications (NCEMTEA-2016) 104-106. December 9-10 2016 at J.D. V.P. G.R. Pandit College, Jalgaon Maharashtra.

## **Research papers Presented in the Conference Seminar/Workshops**

1. **Dc electrical Resistivity of Cu-Zn ferrite prepared by Oxalate precipitation method** S.A. masti, A.K. Sharma, and P.N. Vasambekar, in National seminar on Electro and magneto Ceramics Devices and systems (NSEMCDS-2002) on 21<sup>st</sup> and 22<sup>nd</sup> Oct-2002 at Shankarrao Mohite Mahavidyalaya Akluj Dist Solpur.
2. **Innovative approach to understanding physics practical and theory**, S.A. Masti National convention of Indian Association of Physics Teachers (IAPT) 26 to 28 October 2013. St. Paul's Cathedral Mission College, Kolkatta (WB).

3. **India : Overview of various types of energy utilization and policies for fulfillment of future energy demands**, S.A. Masti, S.D. Potadar and A.A. Patil National conference on Recent trends and Issues in renewable energy (NCRTIRE-2014) 27<sup>th</sup> and 28<sup>th</sup> January 2014 , Shahu College, Kolhapur.
4. **Study of scope for solar energy harvesting in Maharashtra State** S.A. Masti, S.D. Potadar, A.A. Patil and V.S. Sawant, National conference on Recent trends and Issues in renewable energy (NCRTIRE-2014) 27<sup>th</sup> and 28<sup>th</sup> January 2014, Shahu College, Kolhapur.
5. **Spectroscopic study of Cr<sup>3+</sup> substituted and non substituted Magnesium-Cadmium ferrites** in the National seminar on “Applications of spectroscopy in structure determination of organic and inorganic molecules” organized by J.S. S. College, Gokak, Karnataka on 22<sup>nd</sup> and 23<sup>rd</sup> August 2014..
6. **Magnetic properties of Cr<sup>3+</sup> substituted Mg-Cd ferrites**, in the National seminar on “Materials for future technology” organized by Rajaram college, Kolhapur, Maharashtra 26<sup>th</sup> and 27<sup>th</sup> September 2014(Oral Presentation).
7. **Permeability study of substituted and non substituted Magnesium Zinc ferrites**  
In National Seminar on “Materials for Future Technology” on 26<sup>th</sup> -27<sup>th</sup> September 2014 at Rajaram College, Kolhapur (Poster Presentation).
8. **Study of growth of alum crystal by simple saturated solution method** In National Seminar on “Materials for Future Technology” on 26<sup>th</sup> -27<sup>th</sup> September 2014 at Rajaram College, Kolhapur (Poster Presentation).
9. **Synthesis and study of temperature dependent magnetic properties of Gd<sup>3+</sup> substituted Mg-Zn ferrites** in National conference on “Material Science” 2014 on 12-13 Dec.2014 at Kesharbai Kshirsagar College, Beed Maharashtra..
10. **LPG and NO<sub>2</sub> gas sensing properties of nano grained ZnO thin films prepared by spray pyrolysis method** S.A. Masti, in the National Conference on Nanomaterials and nano material based devices, at Ichalkaranji Maharashtra on 23<sup>th</sup> and 24<sup>th</sup> Dec. 2014.
11. **Impact of Education of Physics at school level and its need** in 30<sup>th</sup> National convention of Indian Association of Physics Teachers (IAPT) at St. Pious degree and PG college for women Nacharam, Hyderabad on 30<sup>th</sup> and 31<sup>st</sup> Nov. 2015.
12. **Physics teaching at undergraduate level existence and developments**, in 31<sup>st</sup> National convention of Indian Association of Physics Teachers (IAPT) on 20-22 Oct 2016.
13. **Synthesis and characterization of CuNiO<sub>4</sub> thin films by SILAR deposition method** S.A. Masti, in the International conference on Environmental systems and sustainable development ESD 2016.
14. **A study of preparation and electrical resistivity of gadolinium substituted Ni-Cd ferrite system**, in National conference on Emerging trends in chemical and physical sciences (ETSPS-2017), on 14<sup>th</sup> February 2017 Yashvantrao Chavan Warana Mahavidyalaya, Warananagar.
15. **Synthesis and study of magnetic properties of gadolinium doped Mg-Zn ferrites** Shivanand A. Masti, Kiran N. Patil In National Conference on Materials and Environmental Science on 15<sup>th</sup> February 2017 at Shri. Yashvantrao Science College, Solankur Tal- Radhanagari Dist Kolhapur.
16. **Preparation of Soya Paneer (TOFU) from Soya-Milk**, Snehal S. Patil, Neha K. Chougule, Kiran N. Patil, Shivanand A. Masti, in National Conference on

Materials and Environmental Science on 15<sup>th</sup> February 2017 at Shri. Yashvantrao Science College, Solankur Tal- Radhanagari Dist Kolhapur.

17. **Synthesis by Spray Pyrolysis Method and Gas Sensing Properties of Mg doped CdS Thin Films**, Mayur Shevale, Yogesh Zond, Kiran Patil, Shivanand Masti, in National Conference on Materials and Environmental Science on 15<sup>th</sup> February 2017 at Shri. Yashvantrao Science College, Solankur Tal- Radhanagari Dist Kolhapur.
18. **Synthesis of Bio-diesel from KARANJI Seeds Oil** Prashant P. Patil, Shashikant S. Patil, Kiran N.Patil, Shivanand A. Masti In National Conference on Materials and Environmental Science on 15<sup>th</sup> February 2017 at Shri. Yashvantrao Science College, Solankur Tal- Radhanagari Dist Kolhapur.
19. **Understanding the methods of physics teaching through demo experiments S.A. Masti** in 32<sup>nd</sup> Annual National IAPT Convention on 17<sup>th</sup> Oct to 22<sup>nd</sup> Oct 2016 at held at Gandhinagar, Gujarat.
20. **Understanding of conceptual physics using Java based computer interaction and animated experiments**, S.A. Masti, in National Conference on Use of Computer in Higher Education in Rural Area on 9<sup>th</sup> and 10<sup>th</sup> Oct 2017 at Arts Commerce and science College, Kowad.
21. **Preparation and gas sensing properties of Ferrites** S.A. Masti, V. S. Sawant In National conference on Recent trends in Nanomaterials on 28<sup>th</sup> September 2017 at Y.C. institute of Science, Satara.

### **Invited Lectures as a Resource Person (at College level)**

1. Sadashivrao Mandlik Mahavidyalaya Murgud Tal Kagal Dist Kolhapur on 23<sup>rd</sup> July 2011.
2. One day Seminar on New Horizons in Solar Energy at Dr. Patangrao Kadam Mahavidyalaya Sangli on 20<sup>th</sup> December 2015.
3. Dr. J. .P. Naik Mahavidyalaya Uttur Tal- Ajara Dist Kolhapur on 19<sup>th</sup> January 2015.
4. National workshop on Future in Physics at Jaysingpur College, Jaysiungpur on 22<sup>nd</sup> January 2016.
5. Shri. Balasaheb Desai College, Patan on 5<sup>th</sup> February 2016.
6. Dr. J. .P. Naik Mahavidyalaya Uttur Tal- Ajara Dist Kolhapur on 2nd January 2016.
7. Mohanrao Patangrao Patil Mahavidyala Borgaon, Tal- Walava Dist Sangli on 11<sup>th</sup> January 2016.
8. Dr. J. .P. Naik Mahavidyalaya Uttur Tal- Ajara Dist Kolhapur on 7<sup>th</sup> February 2017.

### **Articles Published in various papers / bulletin/proceedings etc**

1. Article on “Why to celebrate International year of Astronomy” in the proceeding of IAPT RC-8 regional convention (pp 12-17).

2. Article on “NAAC and its Functioning” in the proceeding of State level Seminar on “Reflections: IQAC and its functioning (pp 25-30).
3. 32 Articles weekly published in Gadhinglaj Pragati News paper on in Marathi in the year 2005.

### **Training Programme/Five days workshop attended**

1. Training programme on Maintenance of Laboratory instruments from 21<sup>st</sup> June to 26<sup>th</sup> June 2004 at Parvatibai Chougule College, Margaon Goa.
2. ALTOP workshop from 30<sup>th</sup> Oct 2010 to 03<sup>rd</sup> Nov. 2010 at Anveshika center Kanpur UP.
3. One week Training program on Computer Interfaced Science Experiments from 2<sup>nd</sup> May to 7<sup>th</sup> may 2016 at Inter University Acceleration Center (IUAC) New Delhi.
4. STEM Teachers Training workshop on Research based Pedagogical Tools from 26<sup>th</sup> February to 1<sup>st</sup> March 2017 at IISER Pune.
5. Completed online course Prof. H.C. Verma Course on **Experimentation and demonstrations of Physics.**

### **Refresher Orientation/Short Term Courses**

1. **Orientation Course** from 19<sup>th</sup> January to 15<sup>th</sup> February 2001 at ASC Goa University, Goa.
2. **Refresher Course** from 10<sup>th</sup> November 2005 to 1<sup>st</sup> December 2005 at ASC Aligarh Muslim University Aligarh Uttar Pradesh.
3. **Refresher Course** from 31<sup>st</sup> January 2007 to 20<sup>th</sup> February 2007 at ASC Sambalpur University Sambalpur Oddisa.
4. **Refresher Course** from 24<sup>th</sup> September 2012 to 15<sup>th</sup> October 2012 at ASC Sant Gadage baba Amaravati University, Amaravati, Maharashtra.
5. **Short Term Course on Nano Science and Nanotech** from 29<sup>th</sup> August 2016 to 3<sup>rd</sup> September 2016 at ASC Dr. Babasaheb Ambedkar Marathwada University, Aurangabad Maharashtra.

### **Research Guidance at Undergraduate level (Project Desertation)**

1. 12 research groups of B.Sc. students guided to perform research based projects.

### **Conference/Seminar/Workshop organized**

1. State level one day workshop on “**Einstein’s centenary celebration 1905-2005**” on 22<sup>nd</sup> September 2005 in Dr. Ghali College, Gadhinglaj.
2. “**Experimentation and Innovative Techniques in Environmental Studies**” on 4<sup>th</sup> October 2006 in Dr. Ghali College, Gadhinglaj.

3. State level Seminar on “**Reflections: IQAC and Its Functioning**” on 5<sup>th</sup> and 6<sup>th</sup> September 2009.
4. State level IAPT convention on 12<sup>th</sup> and 13<sup>th</sup> September 2009 in Dr. Ghali College, Gadhinglaj.
5. University level Avishkar Mahostva on 26<sup>th</sup> December 2016 Dr. Ghali College, Gadhinglaj.

### Projects

1. Minor research project on “**Vermi compost preparation and study**” sponsored by BAIF Pune Rs. 7000.- (completed) 2007.
2. Minor research project on “**Solid waste management**” (completed) sponsored by BAIF Pune Rs. 7000.- (completed) 2008.
3. Minor research project on “**Preparation, characterization, Electrical and magnetic property of Gd<sup>3+</sup> substituted Mg-Zn ferrites** (completed) UGC sponsored of Rs. 65000/- in year 2010-11.

### Participation in Seminar/Conference/Workshop etc

1. National Seminar on “**Solid state physics and number theory and applications**” on 5<sup>th</sup> December 1997, S.S. Arts college and T.P. science institute, Sankeshawar.
2. One day workshop on “**Cleanness drive**” on 24<sup>th</sup> February 2006, Shivaji University, Kolhapur.
3. One day workshop on “**AQAR of IQAC and RAR**” on 1<sup>st</sup> March 2006, Ajara Mahavidyalay, Ajara.
4. One day workshop on “**New technique in teaching and evaluation**” on 28<sup>th</sup> September 2007, Dr. Ghali College, Gadhinglaj.
5. One day workshop on “**NAAC’s new methodology and grading system**” on 3<sup>rd</sup> February 2008, Arts, Commerce and Science College, Chandgad.
6. One day workshop on “**Gateway to research writing and funds**” 9<sup>th</sup> February 2008, Dr. Ghali College, Gadhinglaj.
7. One day workshop on “**NAAC Reaccreditation**” on 4<sup>th</sup> February 2009, Ajara Mahavidyalay, Ajara.
8. One day workshop on “**Use of Audio visual Aids**” on 14<sup>th</sup> March 2009, Dr. Ghali College, Gadhinglaj.
9. One day workshop on “**Regular Programme and special camp of NSS**” on 28<sup>th</sup> December 2009, S.K. Patil Mahavidyalay, Kurundwad
10. One day workshop on “**Global Warming**” on 9<sup>th</sup> February 2010, Adult and continuous Education center, Shivaji University, Kolhapur.
11. State level annual convention of Indian Association of Physics Teachers IAPT RC-8 on “**Recent trends and innovations in laboratory Experiments in physics**” on 4<sup>th</sup> and 5<sup>th</sup> October 2010, Yeshwant College, Nanded, Maharashtra.

12. Two days state level workshop on **“Recent trends in Nuclear Science”** on 14<sup>th</sup> and 15<sup>th</sup> February 2011, Shivraji College, Gadhinglaj.
13. One day seminar on **“Social responsibility of college teachers”** on 27<sup>th</sup> February 2011, Shivaji University teachers Association (SUTA) at Shahu Smarak Bhavan Dasara Choulk Kolhapur.
14. Workshop on **“Physics experiments through computer Interface”** on 25<sup>th</sup> March 2011, Carmel College of Arts, Science and Commerce for women, Nuvem, Gao.
15. One day workshop on **“Revised syllabus of B.Sc.”** on 6<sup>th</sup> August 2011, S.M. Dr. Bapuji Salunkhe College, Miraj.
16. National Seminar on **“Quality sustenance : challenges in post accreditation”** 17<sup>th</sup> and 18<sup>th</sup> October 2011, Dr. Ghali College, Gadhinglaj.
17. Participated as a Examiner in District level Aviskar Research event at Karmveer Bhaurao patil College, Islampur Tal Walava Dist Sangli on 26<sup>th</sup> December 2012.
18. State level Annual convention of Indian Association of Physics Teachers on 11<sup>th</sup> and 12<sup>th</sup> January 2013, Wardha, Mahahrashtra.
19. Workshop on **“Innovations in Physics”** on 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> June 2013, Mitra Anveshika Luchnow, Shiksha Sopan and IIT Kanpur and Regional Science Center Luchnow, Utter Pradesh.
20. One day **Brainstorming meet for state level Evaluators of National children science congress**, Maharashtra on 22<sup>nd</sup> June 2013, Homi Bhaba center for science Education (HBCSE), Mankhurd Mumbai.
21. **2<sup>nd</sup> IAPT National student symposium in Physics** on 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> January 2014, Department of Physics, Panjab University, Chandigarh.
22. **One day Teachers training programme** on revised syllabus of Shivaji University Kolhapur at Y.C. college, Halkarni Tal Chandgad on 21<sup>st</sup> August 2014.
23. Participated in **National workshop of IAPT Anveshika Coordinators and Senior Resource person of Utsahi Physics Teachers** at Vivekanand Global University Jaipur Rajasthan from 4<sup>th</sup> to 6<sup>th</sup> June 2016.
24. Participated **National workshop of IAPT Anveshika Coordinators and Senior Resource person of Utsahi Physics Teachers** at Mata Vaishnavo Devi University Katra, Jammu & Kashmir on 4<sup>th</sup> to 6<sup>th</sup> June 2017.
25. Participated in **XXXII Annual IAPT convention 2017 and National symposium on “Recent Trends in Physics at Different Scales”** from 29<sup>th</sup> Oct to 31<sup>st</sup> Oct 2017 at Gurukula Kangri Vishvidyalaya, Haridwar, Uttara Kahand.

### **Research Specialization**

- Material science: Electrical and Magnetic properties of ferrites, solar energy technology, thin films, X-ray and IR Spectroscopy.
- Sensors: Change in resistance of sensors using different gases like CO<sub>2</sub>, C<sub>2</sub>H<sub>5</sub>OH, Liquefied petroleum gas (LPG), N<sub>2</sub> etc.

## **Instruments developed in the Physics Lab Dr. Ghali College**

- Spray Pyrolysis Unit.
- Chemical Vapor Deposition Unit.
- Chemical Bath Deposition Unit.
- Sound pollution measurement unit..
- Hysteresis measurement unit.
- Muffle furnace, Cylindrical furnace.
- Two probe and four probe resistivity measurement unit.
- Thin film by screen painting method unit.

## **Technical skills:**

- Handling and working on scientific instruments like, Chemical Bath Deposition technique, Spray pyrolysis unit, Chemical vapor deposition unit, LCR –Q meter, Hysteresis Curve instrument, and resistivity set up TEP set up, Susceptibility set up etc.

## **Strengths**

- Highly motivated scientific approach.
- Ability to learn new technologies and concepts.
- Good communication and interpersonal skills.
- Commitment and determination towards work.
- Ready to work amicably with colleagues as well as superiors.
- Ready to share responsibilities and knowledge.
- Comprehensive Knowledge of the tools and methods to generate effective teaching and learning activities.
- Good organizational, relationship building and time management skills.

## **Work at Institution level:**

- 1) Worked as NAAC Coordinator:** I worked as a NAAC co-ordinator for second phase of reaccreditation from 2004 to 2010 of our college by NAAC Bangalore. NAAC peer Team visited our institution on December 2010. I took all responsibilities and worked as leader of the college. From 2004 to 2010 we prepared year wise AQAR and send to the NAAC office and in 2009 we prepared RAR report with the help of NAAC steering committee which include 6 teachers, Principal and college management members etc. In the preparation to presentation before the NAAC peer team, I took whole responsibilities. I planed presentation of various documents to be presented before the team, Department wise PPT prepared, guide to all departments of Arts, Commerce, Science and BBA, how to face and present before pear team. With this effort our college got “B” grade with CGPA 2.43 marks.
- 2) NSS Programme officer:** I worked as a national Service Scheme (NSS) Programme officer for 8 academic years from 2003 to 2010. I actively participated in all activities throughout the year and yearly special camp in one of village for ten days. Our NSS unit has 250 students/ volunteers.

- 3) **IQAC member:** Now I am working as a member of Internal Quality Assurance Cell (IQAC) of the college, which plans future activities and development of college.
- 4) **Head, UGC planning Board:** Working as a Head of the UGC planning Board in the college. This committee was as per UGC rules and regulation. This committee looks before funding from UGC and prepares various scheme proposal, infrastructure proposal and seminar conference proposal and send to the UGC. This committee also provides new rules and regulations of UGC to the Staff.
- 5) **Coordinator of SUTA (Teachers Association):** Shivaji University Teachers Association is a formal Teachers Association of our University. This Association works with Maharashtra Federation of University and College Teachers Association (MFUTO) at state level and work with All India Federation of University and College Teachers Association (AIFUCTO) at National level. I worked as a college representative to the SUTA in the year 2008 to 2012.
- 6) **Coordinator of GCG-IAPT Anveshika center:** In the Department of physics we established a excellence in science and physics innovative laboratory center named Anveshika. This is working under the National Network of Anveshika of India (NANI) (which is part of IAPT) coordinated by **Prof. H.C. Verma of IIT Kanpur**. This center has developed more than 470 demo and Hands on experiments which are suitable for students and teachers from school level to PG level. Each year we conduct screening and prelims examinations of National Anveshika experimental skill test (NAEST) for school and UG/PG level. This is a national level activity. This center trains the B.Sc. students for demo presentation and sends them in various schools to present various physics demonstrations. From 2015 to till today in more than 200 schools and colleges our students presented the demo experiments.

### Various Social and NGO level activities

#### 1) IAPT level activities

- Life member of IAPT from 1995. Life member no .L 3681.
- GCG-IAPT Anveshika center Co-ordinator.
- Various more than 32 activities organized.
- Worked as a Secretary at sub IAPT RC-8 D.
- Worked as EC member of IAPT RC-8.
- Organized RC-8 level convention in the Department of College.
- Made 21 life members of IAPT.

#### 2) Marathi Vigyan Parishad Activities (MVP):

- Life member from 1996.
- Working as Co-convener of the MVP Gadhinglaj.
- organize each year more than 20 activities like Guest lectures at different school, Bal Vigyan Sammelan, Marathi and English medium Science Quiz

competitions, Science teachers and school level children 2 to 6 days workshops  
Celebrations of national science day and other days etc.

- Our MVP Gadhinglaj had received two times best center award at state level.

### **3) Andhshradha Nirmulan Samiti (ANIS) Gadhinglaj:**

- Life member from 1999 and working as a EC member of the region.
- Organized camps at different villagers to remove superstition among the villagers and create scientific awareness.
- Street plays on Daru Bandi Abhiyan, AIDS awareness, Ghutakha Bandi etc.
- 4 Bondu Baba and 6 other non scientific relative activists have been criticized.

### **4) Bal Vigyan Samelan :**

- We organize at least two Bal vigyan samelan at different schools each year, to convey scientific attitudes.
- Different activities are Inauguration by National level Scientists , Guest lectures, Science Exhibitions, Question –Answer programme, Sky watching programmes.
- Film show on different aspects of science and study tour to good farmer 's field.

### **5) Sahyandri Adventure Club activities:**

- We had established a club named Sahyandri Adventure Club which organizes number of activities for like camps for school children as well as for other local persons who are interested in adventure activities.
- Each year we organize at least on 6 days residential camp in different jungles from Maharashtra, Goa, and Karnataka. In each camp there are different activities like Trekking, Rippling, Zoomring, Blind trekking, Horse riding, river crossing, Night wondering, bird watching etc.

### **6) As a Guest lecturer**

- I delivered more than 94 lectures cum demonstrations at school level in various schools and various other occasions like Bal Vigyan Sammelan, Science Mela, Science teachers workshop, etc.
- Topics covered, Sky watching, Global warming, Science demo, Science projects, Sound Pollution, Astronomy, Disaster management, Water and Soil analysis, etc.

### **7) Hypnotism Stage Show Programmes:**

- I was invited as hypnotists for more than 100 times in different schools, colleges, villages and clubs in various places in Maharashtra.