
Resume

Prof. (Dr.) Shivanand Masti



**Thin Film and Material Science
Division,**
Prof. and Head
Department of Physics,
Dr. Ghali College, Gadhinglaj 416502
MH- India
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Education Qualification:

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

Personal Profile

- Name: **Prof. Dr. Shivanand Appanna Masti.**
- Father's Name: **Appanna Nagu Masti.**
- Date of Birth: **1st January 1973.**
- **Religion/Caste: Hindu Lingayat.**
- Permanent Address: **2nd Lane House No.457, Hasur-champu, Tal –
Gadhinglaj Dist- Kolhapur M.S.
India. – 416501.**

Academic Record:

Degree Awarded	Board /University	Year of passing	Specialization	Division
Bachelor of Science	Shivaji University	1993	Physics	First class with Distinctions
Master of Science	Shivaji University	1995	Physics (Thin film physics)	First class
Ph. D.	Shivaji University	2005	Physics (Material Science)	“O” grade in M.Phil. Theory

Work experience

- Worked as a in charge Principal of Dr. Ghali College, Gadhinglaj from 19 August 2023 to 14 May 2024.
- Working as a Centre Co-Ordinator of GCG-IAPT Anveshika Centre, Dr. Ghali College, Gadhinglaj.
- Recognized Guide of Shivaji University, Kolhapur Ph.D. Four students working for Ph.D.
- 27 Years teaching experience in Department of physics of Dr. Ghali college, Gadhinglaj M.S. as a Professor and Head.
- 17 Years research experience with especially in the field of experimentation and theoretical calculations.
- Worked as a NAAC /IQAC Co-Ordinator for two times 2005 to 2010 and 2017 to 2024.
- Developed more than 530 Physics Demonstrations from 7th Std to PG level in the Anveshika Center which part of Physics Department and National Network of India (NANI). Presented in many places from Jammu to Kanyakumari.
- Experience in development of new technologies of experimentation.
- Experience in arrangement of science conference, seminars, workshop etc. Two seminars were already organized for teachers.
- Experience in conducting science miner/major research project.

Projects

- Miner research project on “Preparation, characterization and properties of copper ferrites thin films by spray pyrolysis method.
- “Preparation and properties of Transparent conducting oxides (TCO) thin films”.
- Project proposed to University Grant commission on “Preparation of oxide nanoparticles for gas sensing and other applications.”

Research Specialization

- Thin Film and Material science: Electrical and Magnetic properties of ferrites, solar energy technology, Supercapacitor, Waste water treatment, Development of various thin films.
- Development of Instrument and measurement of Change in resistance of sensors using different gases like CO₂, C₂H₅OH, Liquefied petroleum gas (LPG), N₂ etc.

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.

Computer Knowledge

- Software: Operating System – DOS, Window family, Linux etc
- Scripting Language – HTML
- Languages –BASIC, C, C++ etc.

Strengths

- Highly motivated scientific approach.
- Ability to learn new technologies and concepts.
- Ability to lead community of people (Leadership Quality).
- Good communication skills.
- Commitment and determination towards work.
- Ready to work amicably with colleagues as well as superiors.
- Ready to share responsibilities and knowledge.

Management

- Vice President of Indian Association of Physics Teachers (IAPT) at National level.
- Executive member of Indian Association of Physics Teachers (IAPT) at National level two times and State level three times.
- Head of UGC and research committee in the college.
- Worked as a Secretary of Educational institutions i) Diploma in Education ii) Shiv Shahu Industrial Training Center, Gadhinglaj run by Shiva-Shahu Manch Trust, Kolhapur.
- EC member of Sahyndri Advantures, Gadhinglaj.
- EC and Life member of Marathi Vidgyan Parishad Gadhinglaj.
- Member of CASTME, Vidyanvadi Prabodhini, ANIS, and many more.

Social activities

- Work through National service scheme, **Program Officer** (NSS) 8 years.
- Worked as Invitee for different social programmes in Gadhinglaj region.
- Members of 10 various social organizations and related activities.

Research Contribution

Research papers published in Journals

1. **S.A. Masti**, A.K. Sharma, P.N. Vasambekar, A.S. Vaingankar “Influence of Cd²⁺ and Cr³⁺ substitution on magnetization and permeability of Magnesium ferrites” Journal of Magnetism and Magnetic Material (JMMM); 305, 2, (2006) pp 436-439.
2. **S.A. Masti**, “Synthesis by co-precipitation method and study of DC electrical resistivity study of Cu-Zn ferrites” Indian Streams Research Journal; Vol.1, Issue 1 (2011) pp 1-7.
3. **S.A. Masti**, “On the study of permeability of Cr³⁺ substituted mixed Mg-Cd ferrites”, Indian Streams Research Journal; Vol.1, Issue 2, (2011) pp 1-4.
4. **S.A. Masti**, A.K. Sharma, P.N. Vasambekar, “Study of Behavior of Dielectric Properties in Substituted Mg-Cd ferrites” International Journal of Scientific and Research Publications; Vol.3, Issue 6, (2013) pp.1-4.

5. **S.A. Masti**, "Crystallographic, Electrical and Magnetic Properties of Gd^{3+} Substituted and Non-Substituted Mg-Zn Ferrites", Journal of Engineering Computers & Applied Sciences (JEC&AS); Vol.3, No.12 (2013) pp 38-42.
6. **S.A. Masti**, A.K. Sharma, P.N. Vasambekar, "DC electrical resistivity and cation distribution in Zn^{2+} substituted copper ferrites" Advances in Applied Science Research; Vol.4 (3) (2013) pp.163-166.
7. **S.A. Masti**, A.K. Sharma, P.N. Vasambekar, "Behavior of dielectric constant and dielectric loss tangent in Cd^{2+} and Cr^{3+} substituted magnesium ferrites" Advances in Applied Science Research; Vol.4. (4) (2013) pp. 335-339.
8. **S.A. Masti**, "Preparation and study of magnetic properties of Gd^{3+} substituted magnesium Zinc ferrites" Extensive Journal of Applied Sciences J; Vol.1 Issue 1 (2013) pp. 5-8.
9. **S.A. Masti**. "Synthesis and susceptibility study of Gd^{3+} substituted Mg-Zn ferrites", The Research View; Vol.1., Issue 1, (2013) pp. 45-47.
10. **S.A. Masti**, "Susceptibility and Curie temperature of Cr^{3+} substituted Mg-Cd ferrites" Material science an Indian Journal MSAIJ; Vol.10, Issue 4, (2014) pp. 139-142.
11. **S.A. Masti**, "Crystallographic and electrical resistivity study of Cr^{3+} substituted Mg-Cd ferrites for low loss power devices" International Journal of Advances in Engineering & Technology; Vol.6, Issue 6, (2014) pp.2433-2438.
12. **S. A. Masti**, A. G. Godghate, A. S. Patil and M. M. Jadhav, "Study of structural and electrical properties of Barium and Zinc doped CdS thin film by spray pyrolysis method", Archives of Physics Research; vol.5 (1) (2014) pp. 51-55.
13. **S. A. Masti**, "Influence of rare earth substitution on thermo-electric power of Mg-Zn mixed ferrite", Archives of Physics Research; Vol.5 (1) (2014) pp. 60-65.
14. **S.A. Masti**, A.K. Sharma, P.N. Vasambekar, "Preparation and thermoelectric properties of Cd^{2+} and Cr^{3+} substituted Magnesium ferrites", European Journal of Applied Engineering and Scientific Research; Vol.3. (1) (2014) pp.9-15.
15. **S.A. Masti**, A.K. Sharma, P.N. Vasambekar, "Saturation magnetization and susceptibility study of Cr^{3+} substituted Mg-Cd ferrites", International Journal of Science, Engineering and Technology Research (IJSETR); Vol.3. Issue 3 (2014) pp.640-651.
16. **S.A. Masti**, "Preparation characterization and magnetic property study of Gd^{3+} substituted Mg-Zn Ferrite", Indian Journal of applied Research; Vol.4 Issue 1. (2014) pp. 475-477.
17. **S.A. Masti**, A.K. Sharma, P.N. Vasambekar, "Liquefied petroleum gas sensor based on Cr^{3+} substituted mixed Mg-Cd spinel ferrites", Archives of Physics Research; Vol.6. Issue 1 (2014) pp.1-6.
18. **S. A. Masti**, "Preparation, characterization and resistivity of $CuNiO_4$ thin films by modified SILAR method", Journal of Mathematics and Scientific Research, Vol. () pp.
19. **S. A. Masti**, "Estimation of Curie temperature and cation distribution in Cadmium substituted Magnesium ferrites", Journal of Chemical, Biological and Physical Sciences; Vol.10. Issue 1 (2020) pp. 8-15.
20. **S.A. Masti** "Synthesis and study of temperature Dependent magnetic properties of Gd^{3+} substituted Mg-Zn Ferrites", International Journal of Advanced Research in Basic and Applied Sciences; Vol. Issue () pp.

21. **S. A Masti** “Synthesis by SILAR method and gas sensing properties of Ni substituted ZnO thin films”, Journal of Research in Electronics; Vol. Issue () pp.
22. **S. A. Masti**, “Study of Effect of Gadolinium and Zinc substitution on susceptibility Magnesium ferrites”, Vision Research Journal for Pure Science; Vol.5, Issue 9, (2017) pp.54-58.
23. **S. A. Masti**, “A study of preparation and Electrical Resistivity of Gadolinium substituted Ni-Cd Ferrites system”, ROYAL An International Multidisciplinary Journal; Vol. 7, Issue 1, (2018) pp.150-154.
24. **S.A. Masti**, “On the structural studies of Aurivillius-Type Structure Ceramic $\text{Ca}_{(1-x)}\text{Sr}_x\text{Bi}_2\text{Nb}_2\text{O}_9$ composition”, Interlink Research Analysis; Vol.2 Issue 18 (2018) pp.22-27.
25. **S.A. Masti**, A.K. Sharma, P.N. Vasambekar, “Synthesis and gas sensing properties of Chromium substituted Cadmium Ferrites”, Ajanta –An international Multidisciplinary Research Journal; Vol.8, Issue 3, (2019) pp.165-170.
26. **S.A. Masti**, V.S. Sawant, “Synthesis and gas sensing properties of substituted Lithium Ferrites”, Universal Research Analysis; Vol.2, Issue 20, (2019) pp. 48-54.
27. **S.A. Masti** “Microwave properties of $\text{Ca}_{(1-x)}\text{Sr}_x\text{Bi}_2\text{Nb}_2\text{O}_9$ solid solution prepared by chemical co-precipitation method”, International Journal of Scientific Research and Technology; Vol. 9, Issue 2, (2021) pp. 133-137.
28. T.S. Masti, **S.A. Masti**, “Studies on major Solar proton Events and Coronal Mass Ejection during 2000 to 2005”, International Journal of Research in Engineering and Science (IJRES); Vol.10, Issue 7, (2022) pp. 859-867.
29. A.G. Godghate, S. N. Sawant, L.V. Wayadande, M. R. Naik, **S.A. Masti**, “Analysis of rhizome of curcuma longa linn with spatial reference to physicochemical and phytochemical”, International journal of Creative Research thoughts (IJCRT), Volume 11, Issue 6 (2023) pp 812-817.
30. “**Study Properties of Plant Medicated Green Synthesis of Silver Nanoparticles**”, S. S. Nangnurkar, P. S. Banage, S. N. Jadhav, S. M. Patil1, **R. M. Patil, S. A. Masti**, International Journal of Innovative Science and Research Technology, Volume 8, Issue 7, July – 2023, ISSN No:-2456-2165.
31. Mahesh R. Charapale, Tukaram D. Dongale, Omkar. A. Patil, Aviraj M. Teli, Sonali A. Bknalkar, Sajid B. Mullani, Sagar M. Mane, Jaewoong Lee, **Shivanand A. Masti** “Hierarchical 3D flowers of $1\text{T}@2\text{H-MoS}_2$ assembled with an array of ultrathin nano-petals for high-performance supercapacitor electrodes”

Research Papers presented in the Conferences/Seminar

1. **S.A. Masti**, S.D. Potadar, A.A. Patil and V.S. Sawant “Study of scope for solar energy harvesting in Maharashtra State” National conference on Recent trends and Issues in renewable energy (NCRTIRE-2014) on 27th and 28th January 2014, Shahu College, Kolhapur.
2. **S.A. Masti**, S.D. Potadar and A.A. Patil “India: Overview of various types of energy utilization and policies for fulfillment of future energy demands” National conference on Recent trends and Issues in renewable energy (NCRTIRE-2014) 27th and 28th January 2014 Shahu College, Kolhapur.
3. **S. A. Masti**, A. K. Sharma, P.N. Vasambekar “Behavior of dielectric constant and dielectric loss tangent in Cd^{2+} and Cr^{3+} substituted magnesium ferrites

International Conference on Nanomaterials and Applications (ICNAMA) December 9-11, 2008 Shivaji University Kolhapur.

4. **S. A. Masti**, A. K. Sharma, P.N. Vasambekar “Estimation of cation distribution in Cd^{2+} and Cr^{3+} substituted Magnesium Ferrites” National Seminar on Materials for Advanced Technologies (NASMAT) January 23-25, 2006, Shivaji University Kolhapur.
5. S.A. Masti, A. K. Sharma, P.N. Vasambekar “Dc electrical resistivity and cation distribution in Zn^{2+} substituted copper ferrites” International Seminar on Advanced and Applied Materials Science (ICAAMS-2014) Shivaji University Kolhapur.
6. National Seminar on Advances in Electro ceramics, (NSAE) May 5-6, 2006, DRDO center for Piezo- ceramics and devices, Pune.
7. S.A. Masti Crystallographic study and variation of electrical resistivity of Gd^{3+} substituted Mg-Zn ferrites, International Conference in Gokhale College, Kolhapur, January 17-19 2013.
8. S.A. Masti, “**Use of Computer interface to understand the concepts of Physics**” was presented and published Proceedings of the National Conference on Use of Computers in Higher Education and rural areas on 9th and 10th Oct 2017 at Kowad College, Kowad.
9. S.A. Masti, “Preparation and electrical properties of ferrites” was presented in the National conference on YC college, Satara.
10. S.A. Masti, P. R. Jadhav, A.R. Tashildar, A.P. Salamwade in the National conference on “Biosynthesis of Fe_3O_4 nano particles using caricaya papaya leaves extract” held at Solankur Tal- Radhanagari
11. S.A. Masti, “Effect of sound pollution on human” National conference on “Recent Advances in Physics and Natural sciences” held at Islampur Tal- Walava Dist Sangli on 23/01/2018.
12. S.A. Masti, Miss N.P. Patil and Miss S.S. Desai presented Research paper on “Synthesis and Structural Studies of Aurivillius Type structure Ceramic $\text{Ca}_{1-x}\text{Sr}_x\text{Bi}_2\text{Nb}_2\text{O}_9$ composition” in the international conference on ICAMS at Raje Ramrao College, Jath Dist Sangli.
13. S.A. Masti “Study of Susceptibility properties of Cadmium substituted Mg-Cd Ferrites” in the 6th International Conference on Advances in Material Science (ICAMS-2021)” on 23rd and 24th April 2021.Raje Ramrao Mahavidyalaya Jat Dist Sangli.
14. S.A. Masti “Microwave Properties of $\text{Ca}(1-x)\text{Sr}(x)\text{Bi}_2\text{Nb}_2\text{O}_9$ Solid Solution Prepared by Chemical Co-precipitation Method ' in the International Conference on Recent Trends in Nano Materials and Its Applications RTNA-2021 held during 9th and 10th April, 2021, Department of Physics Sangola Taluka Shetkari Shikshan Prasarak Mandal Sangola's, Vidnyan Mahavidyalaya, Sangola, Tal-Sangola, Dist-Solapur.
15. S.A. Masti And V.S. Sawant “Study of Gas Sensing Properties of Cobalt Substituted Lithium Ferrites” , in the intranational conference on Sustainable Development in Science, Social Sciences and Languages in Dr. Ghali College, Gadhinglaj.

Training cum Teachers programme

1. Participated in the Level 2 workshop on Research Based Pedagogical Tools in science teaching organized by Newton Bhabha Fund, DBT and IISER pune at Indian National Science Academy, New Delhi from 6th December to 8th December 2017.
2. Three days' workshop on "Video/Photography recording and editing" at Panji m Gao on 24 and 25th December 2019.
3. ALTOP-workshop for physics Teachers, 30th October to 2 November 2010, Indian Association of physics Teachers (IAPT) Kanpur, Sharda Mandir, Kanpur
4. Training programme on "Maintenance of Laboratory instruments" 21st June to 26th June 2004, Western Regional Instrumentation center Mumbai at Parvatibai Chougule Cultural foundations college of Arts and science college, Margao, Goa.
5. Participated as co-ordinator in "State level campaign on Shram Sanskar Abhiyan Shivaji University, Kolhapur and Zilla Parishad Kolhapur at Ambap, Tal Hatkanganle Dist Kolhapur.

Seminar/Workshops organized (Worked as a Convenor)

1. State level seminar on "Einstein's centenary celebration" 2005, Dr. Ghali College, Gadhinglaj Worked as convener
2. One day workshop on How to do science Projects for Science Teachers 2013 Dr. Ghali College, Gadhinglaj
3. One day workshop on "Life skill development" 26th February 2013, Dr. Ghali College, Gadhinglaj
4. State level Convention of Indian Association of Physics Teachers (IAPT) Dr. Ghali College, Gadhinglaj
5. State level seminar on Roll of IQAC in reaccreditation Dr. Ghali College, Gadhinglaj

Guest/Resource Person in Seminar/Workshops

Delivered more than 120 Guest lecture cum resource person in many events/Conferences/ student's programmes and workshops for Teachers and students in various regions of India from Jammu to Kanyakumari and Ahmadabad to Assam in different schools and colleges in India on topics, Magic of physics, Physics Demonstrations, Sound pollution, Environmental pollution, Electricity and magnetism, Disaster management, Atomic and non-conventional Energy, Global warming, energy conservation, sky watching etc. Recent programmes are,

- "Chandrayaan Mission" in honour of the launch of Chandrayan-3 in Dr. Ghali College, Gadhinglaj in which 132 students and teachers participated.
- Celebrated Dr. A. P. J. Abdul Kalam's death Anniversary on 27th July 2024 by organizing a lecture on "Life of Dr. A. P. J. Abdul Kalam".
- Worked as a resource person for one day workshop on "Preparation of project cum working models on the basis of physics concepts" for all B. Sc. I and II students.

- Demonstration on “**Physics concepts on Thermodynamics**” by Dr. S.A. Masti in Dr. Ghali College, Gadhinglaj.
- In celebration of National Science Day on February 28, 2024, a **guest lecture at Kanagala**, organized by Kanangala High School, Kanangala (Karnataka).
- Resource person at a one-day conference on the "New Education Policy 2020: Implementation" held on October 19, 2023, at T. K. Kolekar Arts & Commerce College, Nesari.
- Resource person in the two-day Maharashtra State IAPT Convention 2024 and conference on "Physics Education under NEP at Different Scales," organized by IAPT and the Department of Physics, Anantrao Pawar College, Pirangut, Pune, from January 13th to 14th, 2024 and delivered lecture of “Various demo models of physics”
- Guest lecture delivered by **Dr. S. A. Masti on “Akash-Darshan”** in two days Science Exhibition organized by Karmali High School, Karmali.
- Demonstrated the “**Science Experiment**” at the State Level INSPIRE Award organized by Y. C. College of Science, Karad, on April 23rd, 2024.
- Participation of Departmental Faculty as a Resource person at “**Bal-Vidnyanic Sambhelan**” on 28th December 2023 organized by Shri. Parvati-Shankar Vidyalay, Uttur.
- Guest lecture at Shri Venkatesh Mahavidyalaya, Ichalkaranji, on February 17, 2024, on " **Physics demonstrations based on 12th Std.**”.
- Delivered a guest lecture on “**Understanding Science Concepts by Performing Experiments**” at Shri Parvati-Shankar Vidyalay, Uttur, on January 31, 2024.
- Resource person at **online One day National seminar on "Summer Solstice 21st June: Astrophysics and Geographical Relevance"** on 21st June 2021 organized by Devchand College, Arjunnagar, Nipani.
- Resource person at **online One day National seminar on "New trends in Research and Innovations"** on 9th June 2021 organized by KBP College, Islampur Dist Sangli.
- Resource person for Full night sky observation and its importance in our Life on 28th February 2020 organized by New Horizon School Aurnal where more than 250 participated.
- Resource person for Revised syllabus workshop at Y.C. College Karad of B.Sc. II on 22 August 2019.
- key note speaker at the National seminar on Innovations in Physics and Chemistry at V.N. College, 32 Shirala on 7/2/2018.
- Worked as resource person for school level event at Belewadi for Science exhibition on 14th Jan 2018.
- Delivered guest lecture on 17th Jan 2018 for NSS students in camp site of J.P Naik College Uttur.

Public Shows

1. Organized public show of Solar Eclipse on the view of Partial solar Eclipse on 26th December 2019 where more than 500 enjoyed the observation of Solar Eclipse through spectacles.

Participation in Different Workshops/Seminars/ and Programmes

1. participated in three days workshop on “Video/Photography recording and editing” at Panji m Gao on 24 and 25th December 2019.
2. workshop on NPTL Awareness camp at Sanjay Ghodavat University, Kolhapur on 22/7/2019.
3. Participated in three days workshop on “ MAC@2019” at Indian Institute of Technology Guwahati (IIT), Asam on 3-5 June 2019. Attended Anveshika Co-ordinators meet with Prof. H.C. Verma in IIT Guwahati, Asam.

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