## PROFILE

Name: Dr. G. K. Naik

Educational Qualifications: M. Sc., Ph. D

Area of Specialization: Physical Chemistry

**Designation:** Associate Professor

Institution: Parvatibai Chowgule College of Arts and Science, Margao-Goa, INDIA

**Teaching Experience:** 32 years

Research Area Interest: Materials Science, Catalysis, Electrochemistry, Thermal Analysis



#### LIST OF PUBLICATIONS IN REFERED JOURNALS

- 1. Yatin P. Desai, Shantadurga Desai, Disha Sinai Sangaonkar, Manoj M. Kothawale, **G.K. Naik**; Effect of Co substitution on structural and magnetic properties of Ni<sub>0.6</sub>Zn<sub>0.4</sub>Fe<sub>2</sub>O<sub>4</sub> nano ferrite; Materials Today: Proceedings 46 (4): 2261-2265, June 2021; DOI:10.1016/j.matpr.2021.03.590.
- M. M. Kothawale, R. B. Tangsali, G. K. Naik, J. S. Budkuley; Enhancement of Magnetization and Tailoring of Blocking Temperatures of Nano-Ni–Zn Ferrite Powder Synthesized Using Microwave-assisted Combustion Method; *Journal of Superconductivity and Novel Magnetism*, (2018), DOI: 10.1007/s10948-018-4719-3, ISSN 1557-1957.
- M. M. Kothawale, R. B. Tangsali, G. K. Naik, J. S. Budkuley; Synthesis of super paramagnetic Ni 0.40 Zn 0.60 Fe<sub>2</sub>O<sub>4</sub> Nanoparticles Using a Microwave-Assisted Combustion Method; *Journal of Superconductivity and Novel Magnetism*, (2015), DOI 10.1007/s10948-015-3046-1, ISSN 1557-1957, published online: 14<sup>th</sup> April 2015.
- Kothawale, M. M., Tangsali, R. B., Naik G. K., Budkuley, J. S., Meena, S. S., Bhat, P.; Sintering Effect on Structural and Magnetic Properties of Ni<sub>0.6</sub>Zn<sub>0.4</sub>Fe<sub>2</sub>O<sub>4</sub> Ferrite; Conference Proceeding 1512, DOI: 10.1063 / 1.4791460, 1160 -1161 (2013).
- M. M. Kothawale, R. B. Tangsali, G. K. Naik and J. S. Budkuley; Effect of Sintering on Magnetic Properties of Ni 0.55 Zn 0.45 Fe<sub>2</sub>O<sub>4</sub>; *Journal of Superconductivity and Novel Magnetism*, (2013) 26: 3293–3298, ISSN 1557-1939 Volume 26 Number 11 DOI: 10.1007/s 10948-013-2171-y.

- M. M. Kothawale; R. B. Tangsali; G. K. Naik; J. S. Budkuley; S. S. Meena; Synthesis of Nanoparticles Ni<sub>0.55</sub> Zn<sub>0.45</sub> Fe<sub>2</sub>O<sub>4</sub> by Novel Precursor Method Showing Enhanced Resistivity; American Institute of Physics, AIP Conference Proceeding 1447, DOI: 10.1063/1.4710007, 317-318 (2012).
- M. M. Kothawale, R. B. Tangsali, G. K. Naik and J. S. Budkuley; Characterization and Magnetic Properties of Nanoparticle Ni<sub>(1-x)</sub>Zn<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub> Ferrites Prepared Using Microwave Assisted Combustion Method; Journal of Superconductivity and Novel Magnetism; DOI 10.1007/s10948-012-1510-8 26-6; 1907-1911(2012); ISSN 1557-1939, Volume 25 Number 6.
- M. M. Kothawale; R. B. Tangsali; Jaison Joseph; G. K. Naik; J. S. Budkuley; Sher Singh Meena; S. M. Yusuf; J. V. Yakhmi; Characterization and Mossbauer Study of Ni<sub>0.45</sub>Zn<sub>0.55</sub>Fe<sub>2</sub>O<sub>4</sub> Nanoparticles Prepared By Novel Precursor Method; American Institute of Physics AIP Conference Proceeding 1349, doi: 10.1063/1.3606278; 1165-1166 (2011); [ISSN: 0094-243X; E-ISSN: 1551-7616]
- R. B. Tangsali, J. S. Budkuley, S. H. Keluskar, G. K. Naik, S. C. Watave; High Density Nanoparticle Mn-Zn Ferrite Synthesis, Characterisation and Magnetic Properties; *International Journal of Nanotechnology*, Volume 8, Nos. 10/11/12 948-962 (2011).
- R. B. Tangsali, S. H. Keluskar, G. K. Naik, Y. P. Desai, J. S. Budkuley, S. C. Watve; Microstructure and Magnetic properties of nano particle and bulk Mn <sub>x</sub> Zn <sub>(1-x)</sub> Fe<sub>2</sub>O<sub>4</sub>; Proceedings of National Conference on Advanced Functional Materials (NCAFM 2008), pp 18-20 (2008)
- Rudraji B. Tangsali, Satish H. Keluskar, Ganpat K. Naik and J. S. Budkuley; Effect of sintering conditions on resistivity of nanoparticle Mn-Zn ferrite prepared by nitrilotriacetate precursor method; *Journal of Material Sciences*, 42: 878-882 (2007).
- S. H. Keluskar, R. B. Tangsali, G. K. Naik and J. S. Budkule;, High permeability of low loss Mn-Zn ferrite obtained by sintering nanoparticle Mn-Zn ferrite; *Journal of Magnetism and Magnetic Materials*, 305, 296-303 (2006).
- S. H. Keluskar, R. B. Tangsali; G. K. Naik; J. S. Budkuley; Dielectric properties of Mn-Zn ferrite prepared by microwave assisted auto combustion synthesis; Proceedings of the 51<sup>st</sup> DAE Solid State Physics Symposium; 301-302 (2006); ISBN 81-8372-030-7
- S. H. Keluskar, R. B. Tangsali, G. K. Naik and J. S. Budkuley; High Performance Nanoparticle Mn-Zn Ferrite prepared by Nitrilotriacetate precursor method using Microwave Induced Decomposition; Proceedings of the 50<sup>th</sup> DAE Solid State Physics Symposium; 201-202 (2005); ISBN 81-8372-019-6
- R. B. Tangsali, S. H. Keluskar, G. K. Naik and J. S. Budkuley; Effect of Sintering Conditions on Magnetic Properties of Nanoparticle Mn-Zn Ferrite Synthesized with Nitrilotriacetate Precursor Method; *International Journal of Nano science*, Vol. 3, Nos. 4 & 5 589-597 (2004).
- 16. Jayant S. Budkuley and Ganpat K. Naik; Thermo analytical properties of monobasic nitrilotriacetate salts of alkaline earth metals and zinc; *Thermochimica Acta*, 320, 115-120 (1998).
- 17. J. S. Budkuley and G. K. Naik; Synthesis, Characterization, Spectral and Thermal properties of Metal-hydrazinium nitrilotriactates; *Journal of Thermal Analysis*, Vol. 50, 815-821(1997).
- 18. Ganpat K. Naik and Jayant S. Budkuley; Synthesis, Spectral and Thermal Properties of Na/K-Nickel Nitrilotriacetate Hydrazinates; *Asian Journal of Chemistry*, Vol. 8, No 4, 687-692 (1996).

- 19. G. K. Naik and J. S. Budkuley; Thermal properties of metal- hydrazinium nitrilotriacetate; Proceeding of the Ninth National Symposium on Thermal Analysis; pp 472-475; November 1993
- J. S. Budkuley and G. K. Naik; Thermo analytical properties of nickel nitrilotriacetate hydrazine complexes; Proceeding of the Eighth National Symposium on Thermal Analysis; pp 570-573; December 1991.

### **RESEARCH PAPERS PRESENTED AT INTERNATIONAL/NATIONAL/ STATE/CONFERENCES/ SYMPOSIUM/ WORKSHOP/ SEMINARS:**

- 1. Thermo analytical properties of nickel nitrilotriacetate hydrazine complexes; Eight National Symposium on Thermal Analysis, jointly organized by Indian Thermal Analysis Society-Bombay and RRL, Bhubaneswar, held at Bhubaneswar, during December 19<sup>th</sup>- 21<sup>th</sup>, 1991.
- Thermal properties of metal-hydrazinium nitrilotriacetate; Ninth National Symposium on Thermal Analysis, jointly organized by Indian Thermal Analysis Society-Bombay and Department of Chemistry, Goa University at Goa University, during December 8<sup>th</sup>-10<sup>th</sup>, 1993.
- New approach for calculation of kinetic parameters from Thermogravimetric data; Symposium on Recent Trends in Instrumental Methods of Analysis; organized by Department of Chemistry, University of Roorkee, Roorkee, held during September 18<sup>th</sup> -20<sup>th</sup>, 1997.
- 4. Synthesis of highly active cobaltite catalysts using metal carbonates; National Workshop on Catalysis, organized by RRL, Trivandrum, Kerala-India, during December 11<sup>th</sup>-13<sup>th</sup>, 1997.
- Nitrilotriacetate precursor for Synthesis of nanoparticle Mn-Zn ferrite; National Seminar on Solid State Spectroscopy (NSSSS-2001), organized by Department of Physics, Sri Venkateswara University, Tirupati, during August 29<sup>th</sup>- 31<sup>th</sup>, 2001.
- 6. Effect of sintering temperature and environment on magnetic properties of Nano particles Mn-Zn ferrite synthesized with nitrilotriacetate precursor method; 2<sup>nd</sup> National Conference on Recent Advances in Materials Science (sponsored by CSIR DRDO) organised by Post Graduate and Research Department of Applied Physics, Nehru Memorial College, Tiruchirapalli, Tamil Nadu-India, during December11<sup>th</sup> 12<sup>th</sup>, 2002.
- Effect of sintering conditions on Magnetic properties and microstructure of nano particle Mn-Zn ferrite synthesized with nitrilotriacetate precursor method;2<sup>nd</sup> International Conference on Materials for Advanced Technologies and IUMRS - International Conference in Asia 2003, held in Singapore, during June 29<sup>th</sup>- July 5<sup>th</sup>, 2003.
- Magnetic properties of nanoparticle Mn-Zn ferrite synthesized with Nitrilotriacetate precursor method; Workshop, New Frontiers in Chemistry; organized by Department of Chemistry, Goa University, on February 26<sup>th</sup>, 2003.
- Temperature dependence of Magnetic properties of nanoparticle Mn-Zn ferrite prepared using Nitrilotriacetate precursor method; National Seminar on Chemical Physics (NSCP-2003), organized by Department of Physics, Annamalai University, Tamil Nadu- India, during March 10<sup>th</sup>-11<sup>th</sup>, 2003.
- 10. Effect of Sintering conditions on resistivity of Nanoparticle Mn-Zn Ferrite prepared by Nitrilotriacetate precursor method; 3<sup>rd</sup> National Conference on Thermo physical Properties

(NCTP-2005), jointly organized by Thermo physical Society of India, Gauhati University, Assam and Department of Physics, Goa University, at Department of Physics, Goa University, Goa during January 2005.

- 11. High permeability of low loss Mn-Zn ferrite obtained by sintering nanoparticle Mn-Zn Ferrite;3<sup>rd</sup> International Conference on Materials for Advanced Technologies (ICMAT 2005), organised by The Materials Research Society of Singapore, during July 3<sup>rd</sup>-8<sup>th</sup>, 2005.
- 12. Comparison of Physical and Magnetic Properties of Mn-Zn Ferrites prepared by Microwave Induced Decomposition and Ignition of Nitrilotriacetate based precursors; 4<sup>th</sup> National Symposium and Conference on Solid State Chemistry and Allied Areas, jointly organized by Department of Chemistry, Goa University, and Indian Association of Solid State Chemists and Allied Scientists (ISCAS), held at Goa University, during December1<sup>st</sup>-3<sup>rd</sup>, 2005.
- 13. Effect of sintering temperature on Magnetic Properties of Nanoparticle Mn-Zn Ferrite prepared by Nitrilotriacetate precursor method using Microwave Induced Decomposition; 4<sup>th</sup> National Symposium and Conference on Solid State Chemistry and Allied Areas, jointly organized by Department of Chemistry, Goa University and Indian Association of Solid State Chemists and Allied Scientists (ISCAS), held at Goa University, during December 1<sup>st</sup>-3<sup>rd</sup>, 2005.
- Effect of Microwave Induced Decomposition on Physical and Magnetic Properties of Nanoparticle Mn-Zn Ferrites prepared by Nitrilotriacetate precursor method; National Symposium on Current Trends in Material Characterization, organized by Indian Institute of Technology- Kanpur, held during December 5<sup>th</sup>-7<sup>th</sup>, 2005.
- 15. High performance Nanoparticle Mn-Zn Ferrite prepared by Nitrilotriacetate precursor method using Microwave Induced Decomposition; 50<sup>th</sup> DAE Solid State Physics Symposium held at BARC- Mumbai, during December 5<sup>th</sup> 9<sup>th</sup>, 2005.
- 16. High performance ultra loss nanoparticle Mn-Zn ferrite material prepared by nitrilotriacetate precursor with induced microwave combustion; Indo-Australian Symposium on Nanomaterials and Nanotechnology, organized by Indian Institute of Science, Bangalore, held at I. I. Sc.-Bangalore, during March 31<sup>st</sup> - April 1<sup>st</sup>, 2006.
- 17. Dielectric properties of Mn-Zn ferrite prepared by microwave assisted auto combustion synthesis; 51<sup>st</sup> DAE Solid State Physics Symposium, organised by Barkatullah University, Bhopal, held at Bhopal, during December 26<sup>th</sup> -30<sup>th</sup>, 2006.
- Magnetic properties of nanoparticle Mn<sub>0.67</sub>Zn<sub>0.33</sub>Fe<sub>2</sub>O<sub>4</sub> spinel ferrite prepared by microwave induced combustion; International Conference on Advanced Nano Material (ANM-2007), organised by and held at I IT- Bombay, during January 8<sup>th</sup> -10<sup>th</sup>, 2007.
- Influence of sintering conditions on microstructure and dielectric properties of nanoparticle Mn<sub>x</sub>Zn<sub>(1-x)</sub> Fe<sub>2</sub>O<sub>4</sub>; 10<sup>th</sup> International Conference on Advanced Materials, jointly organized by Material Research Society of India and Indian Institute of Science, Bangalore- India, held at Bangalore, during October 8<sup>th</sup>-13<sup>th</sup>, 2007.
- 20. Microstructure and Magnetic properties of nanoparticle and bulk Mn<sub>X</sub>Zn (1-X) Fe<sub>2</sub>O<sub>4</sub>; National Conference on Advanced Functional Materials (NCAFM-2008), at Department of Physics, Faculty

of Engineering and Technology, SRM University, Kattankulathur, Kanchipuram District- Tamil Nadu, during February 15<sup>th</sup>-16<sup>th</sup>, 2008.

- 21. High Density Nanoparticle Mn-Zn Ferrite Synthesis, Characterization and Magnetic Properties; International Conference on Advanced Materials (ICAM-2008), organized by School of Chemical Sciences, Mahatma Gandhi University, Kottayam, Kerala, India, during February 18<sup>th</sup>- 21<sup>st</sup>, 2008.
- 22. Permeability of low loss Mn<sub>x</sub>Zn<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub>Ferrites synthesized using Microwave assisted auto combustion; International Conference on Magnetic Materials and its Applications for 21<sup>st</sup> Century, jointly organized by National Physical Laboratory, New Delhi, and Magnetic Society of India, held at New Delhi, during October 21<sup>st</sup> 23<sup>rd</sup>, 2008.
- 23. Preparation and Characterization of nanoparticle Mn-Zn spinel ferrite using thermal and microwave induced decomposition; Second International Conference on Frontiers in Nanoscience and Technology, organized by Department of Physics, Cochin University of Science and Technology, Cochin-India, during January 03<sup>rd</sup>- 06<sup>th</sup>, 2009.
- 24. Effect of sintering on microstructure, magnetic and electrical properties of Mn-Zn ferrite nanoparticle; International Conference on Functional Materials for Advanced Technology, organized by Material Research Centre, Department of Physics, Velammal Engineering College, Chennai- Tamil Nadu, India, during January 29<sup>th</sup>- 30<sup>th</sup>, 2009.
- 25. Microwave assisted synthesis of nanoparticle Co<sub>0.4</sub>Ni <sub>0.6</sub> Fe<sub>2</sub>O<sub>4</sub> Ferrite: Characterization and Magnetic Properties; UGC sponsored Two Day National Seminar on "Recent Trends in Nanoscience, Nanotechnology and their Applications" organized by Bhaurao Kakatkar College, Belgaum, during February 20<sup>th</sup>- 21<sup>st</sup>, 2009.
- 26. Synthesis of Ni-Zn ferrite using Nitrilotriacetate based precursor by microwave assisted decomposition; National Conference on Advances in Physical and Theoretical Chemistry, APT Chem 2009, organized by Department of Chemistry, University of Calicut, Malappuram - Kerala, during March 19<sup>th</sup>- 20<sup>th</sup>, 2009.
- 27. Microwave assisted and normal auto combustion synthesis of nanoparticle Ni <sub>0.6</sub>Co<sub>0.4</sub>Fe<sub>2</sub>O<sub>4</sub> Ferrite: Characterization, Magnetic and Electrical Properties; International Conference on Multifunctional Oxide Materials (ICMOM-2009) organized by Department of Physics, Himachal Pradesh University, Shimla, India, during April 16<sup>th</sup> -18<sup>th</sup>, 2009.
- 28. Study of Cation Distribution and Its Effect on Magnetic Properties of Nano-Size Ni<sub>1-x</sub>Zn<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub> Ferrites Prepared by using Novel Method; International Conference on Nano Materials: Synthesis and Characterization and Applications (ICM-2010), organized by Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India, during April 27<sup>th</sup> - 29<sup>th</sup>, 2010.
- Synthesis and Magnetic Properties of Nanoparticle Ni<sub>1-x</sub>Zn<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub>Ferrite Prepared by Precursor Method; International Workshop and Symposium on the Synthesis and Characterization of Glass/Glass-Ceramics (IWSSCGGC-2010), organised bythe Centre for Materials For Electronics Technology, Pune and Materials Research Society of India, heldat Pune, during July,7<sup>th</sup> -10<sup>th</sup>, 2010.
- 30. Synthesis and Characterization of Microwave Assisted Copper Substituted Ni-Zn Ferrite; International Workshop and Symposium on the Synthesis and Characterization of Glass/Glass-

Ceramics (IWSSCGGC-2010), organised by the Centre for Materials for Electronics Technology, Pune, and Materials Research Society of India, held at Pune, during July,7<sup>th</sup>-10<sup>th</sup>, 2010.

- 31. MossbauerStudy of Nickel Zinc Ferrite;3<sup>rd</sup> International Symposium on Materials Chemistry, organized by Society for Materials Chemistry, Mumbai and Chemistry Division, BARC Trombay, Mumbai, sponsored by Board of Research in Nuclear Sciences, DAE, Government of India, Mumbai, held at BARC Trombay, Mumbai, during December 7<sup>th</sup> 11<sup>th</sup>, 2010.
- 32. Characterization and Mossbauer Study of Nanoparticles Ni<sub>0.45</sub> Zn<sub>0.55</sub> Fe<sub>2</sub>O<sub>4</sub>Prepared By Novel Precursor Method;55<sup>th</sup> DAE-Solid State Physics Symposium (DAE-SSPS 2010), organized by Department of Physics, Manipal University, Manipal- Karnataka, sponsored by Board of Research in Nuclear Sciences, DAE, Government of India, Mumbai, held at Manipal, during December 26<sup>th</sup>-30<sup>th</sup>, 2010.
- 33. Synthesis Of Nanoparticles Ni<sub>0.55</sub>Zn<sub>0.45</sub>Fe<sub>2</sub>O<sub>4</sub> By Novel Precursor Method Showing Enhanced Resistivity; 56<sup>th</sup> DAE Solid State Physics Symposium (DAE-SSPS 2011) held at SRM University, Kattankulathur - Chennai, during December 19<sup>th</sup>- 23<sup>rd</sup>, 2011.
- 34. Dielectric Properties Of Nanoparticles Ni<sub>0.65</sub>Zn<sub>0.35</sub>Fe<sub>2</sub>O<sub>4</sub> Prepared By Precursor Method; International Conference on "Nanotechnology and Functional Materials" jointly organized by Sreenidhi Institute of Science and Technology and University of South Africa, held at Yamnampet, Ghatkesar, Hyderabad-501301, during January 4<sup>th</sup>- 7<sup>th</sup>, 2012.
- 35. Lattice Contraction, Magnetization Enhancement, Resonance Frequency Variation and Microstructure Evolution on Heating Nanoparticle Ni<sub>0.55</sub>Zn<sub>0.45</sub>Ferrite; International Conference on the Theme 'Nano Technology-Innovative Materials, Processes, Products, and Applications', 'NANOCON 2012'organized by College of Engineering, Bharati Vidyapeeth University, Pune-India, during October 7<sup>th</sup>- 10<sup>th</sup>, 2012.
- 36. Sintering Effect on Structural and Magnetic Properties of Ni<sub>0.6</sub>Zn<sub>0.4</sub>Fe<sub>2</sub>O<sub>4</sub> Ferrite; 57<sup>th</sup> DAE Solid State Physics Symposium (DAE-SSPS 2012), organized by BARC-Mumbai, held at IIT-Bombay, Mumbai, during December 3<sup>rd</sup>- 7<sup>th</sup>, 2012.
- 37. "Synthesis and Catalytic Applications of Nano Chromite Spinels" at the 2<sup>nd</sup> National Conference on Emerging Trends in Chemistry and Materials Science- 2016, organized by Department of Chemistry, Gogte Institute of Technology, Belgavi held at Belgavi, on January 23<sup>rd</sup>, 2016.
- Synthesis, Characterization and Catalytic activity of Copper Chromite Catalyst for Hydrogenation of Ester; 2<sup>nd</sup> Two Day National Conference entitled 'New Frontiers in Chemistry- From Fundamentals to Applications - II' (NFCFA - 2017) at BITS- Pilani KK Birla, Goa Campus, held during January 28<sup>th</sup> - 29<sup>th</sup>, 2017.
- 39. "Synthesis, Characterization and Photocatalytic Activity of Cadmium Sulphide" 3<sup>rd</sup> National Conference on Emerging Trends in Chemistry and Materials Science-2018, organized by Department of Physics and Chemistry, Gogte Institute of Technology, Belgavi held on February 24<sup>th</sup>, 2018.
- 40. Microwave Assisted Synthesis and Characterization of Copper Substituted Nickel Zinc Ferrite; Proceedings of the International Conference on "Modern Trends in Chemical Sciences Including

Green Chemistry MTCSGC-2018" held at SRM Institute of Science and Technology, Ramapuram Campus, Chennai -89, during December 27<sup>th</sup> - 29<sup>th</sup>, 2018.

- Synthesis, Characterization, and photo catalytic activity of Cadmium Sulphide; Proceedings of the International Conference on "Modern Trends in Chemical Sciences Including Green Chemistry MTCSGC-2018" held at SRM Institute of Science and Technology, Ramapuram Campus, Chennai - 89, during December 27<sup>th</sup> -29<sup>th</sup>, 2018.
- 42. "Synthesis, Structural and Magnetic Properties of Copper Substituted Ni-Zn Ferrite" 66<sup>th</sup> DAE Solid State Physics Symposium, organized by Bhabha Atomic Research Centre, Mumbai, held at Birla Institute of Technology, Mersa Ranchi, Jharkhand, during December 18<sup>th</sup> – 22<sup>th</sup>, 2022
- 43. Presented Poster Paper entitled, "Synthesis, Characterization and Photocatalytic Study of Manganese doped Zinc Oxide Nanoparticles", at National Seminar Organized by Government College of Arts, Commerce and Science, Quepem-Goa, held at Ravindra Bhavan, Margao-Goa, held during March 3<sup>rd</sup> - 4<sup>th</sup>, 2023.
- 44. Oral Presentation of the Paper entitled, "Synthesis and Photocatalytic Studies on Manganese Doped Zinc Oxide Nanoparticles", at School of Chemical Science, Goa University, Goa; Margao-Goa, held on March 21<sup>st</sup>, 2023.

# INTERNATIONAL / NATIONAL / STATE / CONFERENCE / SYMPOSIUM / WORKSHOP / SEMINAR ATTENDED:

- Eighth National Symposium on Thermal Analysis, organized by Indian Thermal Analysis Society-Bombay and Regional Research Laboratory (RRL) Bhubaneswar, at Bhubaneswar held during December 19<sup>th</sup> - 21<sup>th</sup>, 1991.
- 2. Group Monitoring Workshop on DST funded Projects in Inorganic Chemistry at Goa University, during March 23<sup>rd</sup> 24<sup>th</sup>, 1992.
- Ninth National Symposium on Thermal Analysis, jointly organized by Indian Thermal Analysis Society-Bombay and Department of Chemistry, Goa University at Goa University, during December 8<sup>th</sup> - 10<sup>th</sup>, 1993.
- Group Monitoring Workshop on DST funded Projects in Organic Chemistry at Goa University during April 06<sup>th</sup> - 08<sup>th</sup>, 1994.
- One Week Training Course in Thermo Analytical Technique and participated in fabrication of Differential Thermal Analysis (DTA) apparatus at BARC- Trombay, Mumbai, during May 30<sup>th</sup> -June 03<sup>rd</sup>, 1994.
- Four Day Workshop on ELECTROANALYTICAL TECHNIQUES, organized by SAEST, Bombay Chapter held at Indian Institute of Technology, Bombay, during September 19<sup>th</sup> - 22<sup>th</sup>, 1995.
- One Day Workshop on Chemistry Paper Setting, organized by Smt. Parvatibai Chowgule College, Margao- Goa, held on March 17<sup>th</sup>, 1996.
- Ten Day National Workshop on Radiochemistry and Applications of Radioisotopes; jointly organized by Goa College of Pharmacy and Goa University, in association with Indian Association of Nuclear Chemists and Allied Scientist (IANCAS) at Goa College of Pharmacy, Panajim- Goa, during November 18<sup>th</sup> - 27<sup>th</sup>, 1996.

- 9. Group Monitoring Workshop on DST funded Projects in Inorganic Chemistry at Goa University, during January 10<sup>th</sup> 11<sup>th</sup>, 1997.
- 10. Group Monitoring Workshop on DST funded Projects in Physical Chemistry at Goa University during March 18<sup>th</sup> 19<sup>th</sup>, 1997.
- 11. Zonal /State Level Science Seminar 1997, organized by the State Institute of Education, Alto-Porvorim, at Loyala High School, Margao held on July 15<sup>th</sup>, 1997.
- 12. Three Day Workshop in Analytical Chemistry at Department of Chemistry, Goa University, held during November 5<sup>th</sup> 7<sup>th</sup>, 1997.
- 13. Three Day National Workshop on Catalysis held at RRL, Trivandrum- Kerala, during December 11<sup>th</sup> 13<sup>th</sup>, 1997.
- 14. One Day Workshop on "Project Paper", organized by Smt. Parvatibai Chowgule College, Margao- Goa, held on February 23<sup>rd</sup>, 1998.
- 15. Four Day Workshop in Analytical Chemistry, organizes by Department of Chemistry, Dempe College of Arts and Science, Panaji- Goa, during October 14<sup>th</sup> 17<sup>th</sup>, 1998.
- Four Day Workshop on "MICROSCALE TECHNIQUES IN CHEMISTRY", organized by Department of Chemistry, Smt. Parvatibai Chowgule College, Margao, held during February 3<sup>rd</sup> -6<sup>th</sup>, 1999.
- The Course on 'Some Landmarks in the History of Physical and Chemical Sciences' at National Institute of Advanced Studies, Indian Institute of Science Campus, Bangalore, during February 15<sup>th</sup> -17<sup>th</sup>, 1999.
- 18. One Day Workshop on "APPLIED ELECTROCHEMISTRY AND CORROSION," organized by SAEST, Bombay Chapter, at The Institute of Science, Mumbai, held on February 26<sup>th</sup>, 1999.
- One Day Meeting jointly organized by Department of Chemistry, Goa University and Smt. Parvatibai Chowgule College, Margao, Goa at Smt. Parvatibai Chowgule College, Margao, on January 7<sup>th</sup>, 2001.
- Two Day "Workshop in Industrial Chemistry" for College Teachers of Goa University, organized by Department of Chemistry, Government College of Arts, Science and commerce, Sanuelim-Goa, held during August 19<sup>th</sup> - 20<sup>th</sup>, 2001.
- "ONE DAY CONVENTION OF ASSOCIATION OF CHEMISTRY TEACHERS" organized by Department of Chemistry, PES College of Arts and Science, Farmagudi, Ponda- Goa on September 23<sup>rd</sup>, 2001.
- 22. One Day Workshop on Thermal Techniques, organized by Department of Chemistry, Goa University held on September 30<sup>th</sup>, 2002.
- II National Conference on Recent Advances in Material Sciences (NCMS-2002), sponsored by CSIR and DRDO, held at Nehru Memorial College, Tiruchirapalli, Tamil Nadu during December 11<sup>th</sup>-12<sup>th</sup>, 2002.
- 24. One Day Workshop on "RADIO CHEMISTRY AND APPLICATIONS OF RADIOISOTOPES" held at St. Xavier's College, Mapusa- Goa on January 18<sup>th</sup>, 2003.
- 25. A TALK CUM DEMONSTRATION ON 'RADIOACTIVITY AND APPLICATIONS OF RADIOISOTOPES', held at Carmel College of Arts, Science and Commerce for Women, Nuvem, Margao- Goa, on January 21<sup>st</sup>, 2003.
- One Day State Level Seminar on 'Changing Trends in Chemical Research' organized by Department of Chemistry, Smt. Parvatibai Chowgule College, Margao-Goa on February 13<sup>th</sup>, 2003.

- 27. One Day Symposium, New Frontiers in Chemistry, organized by Department of Chemistry, Goa University on February 26<sup>th</sup>, 2003.
- Three Day "WORKSHOP ON 'ATOMIC STRUCTURE, BONDING AND SPECTROSCOPY' FOR COLLEGE TEACHERS", held at Department of Chemistry, Goa University, during September 12<sup>th</sup> - 14<sup>th</sup>, 2003.
- 29. One Day SECOND ANNUAL CONVENTION OF ASSOCIATION OF CHEMISTRY TEACHERS- GOA, held at Carmel College of Arts, Science and Commerce, Nuvem- Margao, on February 6<sup>th</sup>, 2004.
- 30. One Day Workshop on 'Applications of X-Ray Diffraction' organised by Department of Chemistry, Goa University under UGC-SAP Programme held on February 27<sup>th</sup>, 2004.
- 31. Two Day Workshop on 'EXAFS AND ITS APPLICATIONS IN MATERIALS SCIENCES', organized by Department of Physics, Goa University under UGC-SAP Programme during March 25<sup>th</sup> 26<sup>th</sup>, 2004.
- 32. Two Day National Seminar on 'Recent Advances in Electrochemical and Surface Sciences for Industry and Society', organized by Department of Chemistry and Industrial Chemistry, Kuvempu University, Shimoga District, Karnataka, during December 3<sup>rd</sup> - 4<sup>th</sup>, 2004.
- 33. Two Day THIRD ANNUAL CONVENTION OF ASSOCIATION OF CHEMISTRY TEACHERS, GOA, held at Smt. Parvatibai Chowgule College of Arts and Science, Margao-Goa during February 4<sup>th</sup> - 5<sup>th</sup>, 2005.
- 34. One Day Symposium on 'NMR Spectroscopy and its Applications in Chemistry', organized by Department of Chemistry, Goa University held on October 22<sup>nd</sup>, 2005.
- 35. The Fourth National Symposium and Conference on Solid State Chemistry and Allied Areas, at Department of Chemistry, Goa University, during December 1<sup>st</sup> 3<sup>rd</sup>, 2005.
- 36. The 50<sup>th</sup> DAE Solid State Physics Symposium jointly organized by BARC-Trombay and TIFR-Mumbai, held at BARC and TIFR- Mumbai, during December 5<sup>th</sup> - 9<sup>th</sup>, 2005.
- 37. Two Day UGC Sponsored State Level Seminar on RECENT TRENDS IN CHEMICAL RESEARCH, organized by Department of Chemistry, Smt. Parvatibai Chowgule College, Margao, during January 13<sup>th</sup>- 14<sup>th</sup>, 2006.
- One Day Symposium on 'IR Spectroscopy and its Applications in Chemistry', organized by Department of Chemistry, Goa University, on January 28<sup>th</sup>, 2006.
- 39. One Day Symposium on Green Chemistry: Principles and Practice, held at Department of Chemistry, Goa University on March 4<sup>th</sup>, 2006.
- 40. The 51<sup>th</sup> DAE Solid State Physics Symposium, organized by Department of Physics and Electronics, Barkatullah University, Bhopal, held during December 26<sup>th</sup> 30<sup>th</sup>, 2006.
- International Conference on Experimental Condensed Matter Physics; Advanced Nano Materials-2007, organized by Department of Physics, IIT-Bombay Mumbai, India, held during January 8<sup>th</sup> -10<sup>th</sup>, 2007.
- 42. One Day Symposium on "Experimental Chemistry" organized by Department of Chemistry, Goa University in association with Chemistry Department Faculty and Alumni Association, Department of Chemistry, Goa University at Department of Chemistry, Goa University, on March 7<sup>th</sup>, 2007.
- 43. One Day Workshop on 'Model Question Paper Setting and Evaluation Methodology' for T.Y. B.Sc. Chemistry Course, organized by the Department of Chemistry, PES College of Arts and Science, Farmagudi, Ponda, in Association with Board of Studies in Chemistry, Goa University held on April 3<sup>rd</sup>, 2007.

- 44. The 10<sup>th</sup> International Conference on Advanced Materials (IUMRS-ICAM 2007) held at Indian Institute of Science, Bangalore, during October 8<sup>th</sup> 13<sup>th</sup>, 2007.
- 45. International Conference on Advanced Materials (ICAM-2008), organized by School of Chemical Sciences, Kottayam- Kerala, during February 18<sup>th</sup> 21<sup>th</sup>, 2008.
- 46. UGC sponsored State Level Seminar on "Microscale Experimental Techniques", organized by the Department of Chemistry, Dempe College of Arts and Science, Miramar, Panjim- Goa, during March 28<sup>th</sup> - 29<sup>th</sup>, 2008.
- Three Day Indo-Russian Workshop on Self Propagating High Temperature Synthesis (I.I. Sc.-Centenary Celebration) at Indian Institute of Science, Bangalore, during November 27<sup>th</sup> - 29<sup>th</sup>, 2008.
- 48. Five Day SERC School (Science and Engineering Research Council), on Synthesis, Characterization and Applications of Nanoparticles, sponsored by the Department of Science and Technology (DST), Government of India; organized by Department of Chemical Engineering, I I T- Bombay, during December 16<sup>th</sup> - 20<sup>th</sup>, 2008.
- 49. The Pre-Conference Workshop in connection with the Second International Conference on Frontiers in Nano Science and Technology, at Department of Physics, Cochin University of Science and Technology, Cochin, Kerala-India, held on January 3<sup>rd</sup>, 2009.
- Second International Conference on Frontiers in Nanoscience and Technology; organized by Department of Physics, Cochin University of Science and Technology, Cochin, Kerala-India, during January 3<sup>rd</sup> - 6<sup>th</sup>, 2009.
- 51. One Day Symposium for T.Y. B.Sc. Students on the theme "Fascinating World of Chemical Sciences" organized by Department of Chemistry, Goa University in association with Chemistry Department Faculty and Alumni Association, Department of Chemistry, Goa University at Department of Chemistry, Goa University on February 6<sup>th</sup>, 2009.
- 52. State Level Workshop on Hazards of Mercury and its safe Disposal; organised by Goa Desk Resource Centre in association with Toxics Link-New Delhi held at Caritas Holiday Home, Panajim-Goa on July 25<sup>th</sup>, 2009.
- Two Day National Conference on Advances in Physical and Theoretical Chemistry [APTChem-2009], organized by Department of Chemistry, University of Calicut, Malappuram- Kerala, during March 19<sup>th</sup> - 20<sup>th</sup>, 2009.
- 54. International Conference on "Multifunctional Oxide Materials" (ICMOM-2009) organized by Department of Physics, Himachal Pradesh University, Shimla, during April 16<sup>th</sup> -18<sup>th</sup>, 2009.
- 55. One Day State Level Seminar on "RECENT DEVELOPMENTS IN CHEMISTRY", organised by Department of Chemistry, Smt. Parvatibai Chowgule College, Margao, held on December 2<sup>nd</sup>, 2009.
- 56. One Day Eighth Annual Convention of Association of Chemistry Teachers, Goa, held at Government College of Arts, Commerce and Science, Quepem- Goa on February 6<sup>th</sup>, 2010.
- Two Day Seminar on "Emerging fields in Chemical Sciences: Pharmaceutical/Diagnostic/ Drug Delivery", organized by Department of Chemistry, Goa University, during February 18<sup>th</sup> - 19<sup>th</sup>, 2010.
- 58. 4<sup>th</sup> Annual Intercollegiate T. Y. B. Sc. Chemistry Students on the theme "Fascinating World of Chemical Sciences" organized by Department of Chemistry, Goa University in association with Chemistry Department Faculty and Alumni Association, Department of Chemistry, Goa University at Department of Chemistry, Goa University on February 27<sup>th</sup>, 2010.

- 59. International Workshop and Symposium on the Synthesis and Characterization of Glass/Glass-Ceramics (IWSSCGGC-2010), organised by Centre For Materials For Electronics Technology, Pune and Materials Research Society of India, heldat Yashada MD Center, Pune, during July,7<sup>th</sup>-10<sup>th</sup>, 2010.
- 60. 76<sup>th</sup> Annual Meeting, Indian Academy of Sciences- Bangalore, organised by National Institute of Oceanography, Dona Paula- Goa, held during November 12<sup>th</sup> 14<sup>th</sup>, 2010.
- 61. One Day "Workshop on Critical Thinking" under Faculty Development Programme organized by Smt. Parvatibai Chowgule College, Margao, held on October 15<sup>th</sup>, 2010.
- 62. One Day State Level Seminar on "Organic Chemistry", organized by Department of Chemistry, Smt. Parvatibai Chowgule College, Margao, held on December 11<sup>th</sup>, 2010.
- 63. One Day Seminar on CRYSTALLOGRAPHY, organized by Department of Chemistry, Dempe College of Arts and Science, Miramar-Panaji, Goa, held on December 13<sup>th</sup>, 2010.
- 64. Two Day National Seminar on 'NOVEL CARBON MATERIALS AND THEIR APPLICATIONS', organised by Department of Chemistry, Government College of Arts, Science and Commerce, Sanquelim- Goa, held during February 25<sup>th</sup> 26<sup>th</sup>, 2011.
- 65. Two Day Symposium entitled "Chemistry in Human Well-being: Emerging Opportunities and Challenges" organized by Department of Chemistry, Goa University, with the support received from UGC, New Delhi, during March 04<sup>th</sup> 05<sup>th</sup>, 2011.
- 66. 5<sup>th</sup> Annual Intercollegiate T. Y. B. Sc. Chemistry Students on the theme "Fascinating World of Chemical Sciences" organized by Department of Chemistry, Goa University in association with Chemistry Department Faculty and Alumni Association, Department of Chemistry, Goa University at Department of Chemistry, Goa University on March 14<sup>th</sup>, 2011.
- 67. A Seminar on "Instrumentation Solutions for Research & Development and Quality Control in Pharmaceutics and Chemistry"; organized by Anton Paar India Private Limited, Gurgaon, Haryana- India, at Hotel Fidalgo, Panaji- Goa, held on December 12<sup>th</sup>, 2011
- 68. Two Day UGC sponsored National Seminar on NANOMATERIALS: SYNTHESIS, CHARACTERISATION AND APPLICATIONS, organized by Department of Chemistry, Smt. Parvatibai Chowgule College, Margao, held during February 2<sup>nd</sup> - 3<sup>rd</sup>, 2012.
- 69. 6<sup>th</sup> Annual Intercollegiate T. Y. B. Sc. Chemistry Symposium on the theme "Fascinating World of Chemical Sciences" organized by Department of Chemistry, Goa University, in association with Chemistry Department Faculty and Alumni Association, Department of Chemistry, Goa University at Department of Chemistry, Goa University held on March 17<sup>th</sup>, 2012.
- 70. A Seminar on Thermo Scientific Analytical Technologies and Solutions, organized by Thermo Fisher Scientific India Private Limited Andheri (E) Mumbai, held at The International Centre, Taleigao-Goa, on April 20<sup>th</sup>, 2012.
- 71. 7<sup>th</sup> Annual Meet of the Chemistry Department Faculty and Alumni Association (CDFAA), held at Department of Chemistry, Goa University, on April 28<sup>th</sup>, 2012.
- 72. International Conference on the Theme 'NanoTechnology- Innovative Materials, Processes, Products, and Applications', 'NANOCON 2012'held at and organized byCollege of Engineering, Bharati Vidyapeeth University, Pune- India, during October 7<sup>th</sup> - 10<sup>th</sup>, 2012.
- International Conference on Emerging Technologies: Micro to Nano 2013 (ETMN- 2013) held at BITS Pillani, K. K. Birla Goa Campus, Goa held during February 23<sup>rd</sup> - 24<sup>th</sup>, 2013.
- 74. 7<sup>th</sup> Annual Intercollegiate T. Y. B. Sc. Chemistry Students on the theme "Fascinating World of Chemical Sciences" organized by Department of Chemistry, Goa University in association with

Chemistry Department Faculty and Alumni Association, Department of Chemistry, Goa University at Department of Chemistry, Goa University on March 09<sup>th</sup>, 2013.

- 75. A Lecture by Prof. Dr. Goverdhan Mehta on "Enhancing Nature and chemical space: Synergy between products and organic synthesis for human weii-being" organized by "VerGo Continuing Education Foundation" and "Prof. S. K. Paknikar Research and Education Trust", at VerGo Pharma Research Pvt. Ltd., CorlimTiswadi- Goa, on April24<sup>th</sup>, 2014.
- 76. The Lecture Series on Materials Science, organized byDepartment of Physics, Parvatibai Chowgule College, Margao, held at Parvatibai Chowgule College, Margao-Goa, during September15<sup>th</sup> - 18<sup>th</sup>, 2014.
- 77. "National Seminar on Recent Advances in Nanomaterials and Catalysis" organized by Department of Chemistry, Goa University, at Department of Chemistry, Goa University on December 5<sup>th</sup>, 2014.
- 78. The International Conference on Education in Chemistry (ICEC-2014), organized by Association of Chemistry Teachers (ACT) and Homi Bhabha Centre for Science Education (HBCSE, TIFR), held at Homi Bhabha Centre for Science Education (TIFR), TIFR Campus, Mumbai, during December 12<sup>th</sup> -14<sup>th</sup>, 2014.
- A Lecture by Prof. Dr. M. S. Wadia on "2D NMR" organized by VerGo Continuing Education Foundation and Prof. S. K. Paknikar Research and Education Trust, at VerGo Pharma Research Pvt. Ltd., CorlimTiswadi-Goa, on December 19<sup>th</sup>, 2014.
- 80. A Lecture on "X-Ray Diffraction, Instrumentation and its Applications" by Shri. Vikram Khanka, Branch Manager, I. R. Technology Services Pvt. Ltd., organized by the Post Graduate Department of Chemistry, Parvatibai Chowgule College, Margao, held on January 15<sup>th</sup>, 2015.
- 81. One Day Workshop on "ATOMIC ENERGY: ARCHITECT OF FUTURE" organized by the National Institute of Technology, Goa, in association with BARC- Mumbai, at NIT Goa Campus, to celebrate the Diamond Jubilee of Department of Atomic Energy, BARC- Mumbai held on February 9<sup>th</sup>, 2015.
- 82. A Lecture by Dr. Shrinivas Reddy on "Medicinal Chemistry" organized by VerGo Continuing Education Foundation and Prof. S. K. Paknikar Research and Education Trust, at VerGo Pharma Research Pvt. Ltd., Corlim Tiswadi- Goa, on February 20<sup>th</sup>, 2015.
- 83. One Day 13<sup>th</sup> Annual Convention of the Association of Chemistry Teachers, Goa, organized by the Department of Chemistry, Parvatibai Chowgule College, Margao, on February 25<sup>th</sup>, 2015.
- 84. Two Day Seminar on "INSTRUMENTATION AND ANALYSIS: Spectroscopic, Thermal and Chromatographic Methods" organized by the Post Graduate Department of Chemistry, Parvatibai Chowgule College, Margao, held during March 4<sup>th</sup> - 5<sup>th</sup>, 2015.
- 85. Seminar on "INSTRUMENTATION AND ANALYSIS: High Performance Liquid Chromatography", organized by the Post Graduate Department of Chemistry, Parvatibai Chowgule College, Margao, held on March 17<sup>th</sup>, 2015.
- 86. 2<sup>nd</sup> Adv. Luis Caraciolo Memorial Lecture 2015, on the topics, 'Green Nanotechnology-Implications in Nano-medicine for the creation of Holistic Integrative Medicine (HIM)', by Dr. KatteshKatti, Professor of Cancer Research, University of Missouri, USA and 'Trends in Higher Education', by Dr. James Scott, International Centre, University of Missouri, USA, held at Institute Menezes Brabanza, Panajim Goa, on April 1<sup>st</sup>, 2015.
- 87. Two Day National Workshop on "Drug Discovery Technology: Insights of Protein-Ligand Interactions" jointly organized by Bio Discovery Group India and Department of Biotechnology,

Parvatibai Chowgule College of Arts and Science (Autonomous), Margao-Goa, held at Chowgule College Margao-Goa, held during January 15<sup>th</sup> - 16<sup>th</sup>, 2016.

- 88. 2<sup>nd</sup> National Conference on Emerging Trends in Chemistry and Materials Science- 2016, organized by Department of Chemistry, Gogte Institute of Technology, Belgavi held at Belgavi on January 23<sup>rd</sup>, 2016.
- One Day Symposium on *"Trends in Natural Product Chemistry"* Organised by "VerGo Continuing Education Foundation" at Vergo Pharma Research Laboratories Pvt. Ltd. Verna- Goa held on June 26<sup>th</sup>, 2015.
- 90. A Talk on "Nano-Catalysis: Engineered Materials for sustainability and Biomimetics", by Dr. Amit Vernekar, Research Associate from Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, INDIA, on July 08<sup>th</sup>, 2015.
- 91. Two Day Workshop on "Applications on X-Rays and Neutrons in the Study of Condensed Matter" organised by Indian Association of Physics Teachers Goa Regional Council and Parvatibai Chowgule College of Arts and Science, Autonomous held at Parvatibai Chowgule College, during September 3<sup>rd</sup> - 4<sup>th</sup>, 2015.
- 92. Workshop on "*Heal-thy Conflicts*" on Leadership Quality by Mr. Pravin Sabnis, a leading Corporate Coach, organised by Parvatibai Chowgule College of Arts and Science, Autonomous, on October 29<sup>th</sup>, 2015.
- 93. Workshop on Digital Marketing organised by Parvatibai Chowgule College of Arts and Science (Autonomous), at College Premises, on November 28<sup>th</sup>, 2015.
- 94. One Day Workshop on "*Micro scale Techniques in Chemistry*" organized by the Department of Chemistry, Parvatibai Chowgule College of Arts and Science (Autonomous), Margao-Goa, in association with Department of Chemistry, Gogate Jogalekar College, Ratnagiri- Maharashtra, a College of MoU, held on March 5<sup>th</sup>, 2016.
- 95. The 2<sup>nd</sup> Two Day National Conference, "New Frontiers in Chemistry- From Fundamentals to Applications- II" (NFCFA 2017) at BITS - Pilani KK Birla, Goa Campus, held during January 28<sup>th</sup> - 29<sup>th</sup>, 2017
- 96. One Day Workshop on the Theme "Journey of Science in India from Kanaad to Kalam" organised by Vidnyan Parishad, Goa, in association with Goa Science Centre, Miramar Panjim, at Goa Science Centre, Miramar-Panjim, Goa, held on August 6<sup>th</sup>, 2016,
- 97. One Day Symposium on "Problem Solving Approaches on Green Synthesis" organised by "VerGo Continuing Education Foundation" held at Vergo Pharma Research Laboratories Pvt. Ltd. Verna, Salcette- Goa, on September 17<sup>th</sup>, 2016.
- 98. Two Day Series of Lecture on "Hyphenated Techniques: GC-FTIR, GC-MS, LC-MS, MS-MS, ICP-MS, TG-MS" by R. Girijan, Product Consultant, Toshvin Analytical Pvt. Ltd., Mumbai, organized by Post Graduate, Department of Chemistry, Parvatibai Chowgule College of Arts and Science, Autonomous, Margao-Goa held during September 20<sup>th</sup> and 21<sup>th</sup>, 2016.
- 99. One Day Symposium on Theme "Scientific Insight into Mandovi: The Lifeline of Goa" organised by Vidnyan Parishad, Goa, in Association with Goa Science Centre, Miramar Panjim, held at Goa Science Centre, Miramar-Panjim, Goa, on October 23<sup>rd</sup>, 2016.
- 100. Workshop "YOUreka" on building 'Leadership Skills' for Faculty organized by Parvatibai Chowgule College of Arts and Science, Autonomous, Margao-Goa at Parvatibai Chowgule College, held on December 10<sup>th</sup>, 2016.

- 101. State Level Workshop on "Chromatographic Techniques in Pharmaceutical Analysis" organized by and held at Department of Chemistry, D. M's College, Assagao- Bardez, Goa, on March 21<sup>st</sup>, 2017.
- 102. Lectures delivered to PG students by Visiting Faculty Yeshwant Phadke, Group Head, Sanofi Verna- Goa on the Course, Calibration and Validation, during March 2017.
- 103. Two Day National Workshop on "Computational and Theoretical Chemistry" organised by Post Graduate Department of Chemistry, St. Agnes College (Autonomous), Mangaluru, Karnataka-India, held during February 14<sup>th</sup> - 15<sup>th</sup>, 2018.
- 104. 3<sup>rd</sup> National Conference on Emerging Trends in Chemistry and Materials Science (ETCM 2018) jointly organized by Department of Physics and Chemistry, Gogte Institute of Technology, Belgavi held at Belgavi, on February 24<sup>th</sup>, 2018.
- 105. The session of presentation cum Talk on "Preparation for NAAC (4<sup>th</sup> cycle)-Understanding New Guidelines" by Shri V. R. Shirgurkar, Member of Governing Body, Ex-Principal of Parvatibai Chowgule College, and an expert member of NAAC, on December 11<sup>th</sup>, 2017.
- 106. The Nobel Dialogue in the Nobel Prize Series, India 2018 Event, organised by Media AB, Department of Biotechnology, Government of India and Department of Science and Technology, Government of Goa, held at Kala Academy, Panjim- Goa, on February 2<sup>nd</sup>, 2018.
- 107. International Conference on "Modern Trends in Chemical Sciences Including Green Chemistry MTCSGC-2018" held at SRM Institute of Science and Technology, Ramapuram Campus, Chennai -89, during December 27<sup>th</sup> - 29<sup>th</sup>, 2018.
- 108. Attended and Coordinated Four Day the "Science Film Festival of India- 2019, from January 16<sup>th</sup> 19<sup>th</sup>, 2019, at ESG, Panjim Goa, organized by Vidhyan Parishad Goa, a Unit of Vijnana Bharathi.
- 109. One Day 17<sup>th</sup> Annual Convention of the Association of Chemistry Teachers, Goa, organized by Association of Chemistry Teachers-Goa and Government College of Arts, Science and Commerce, Khandola, Marcela-Goa, on February 23<sup>rd</sup>, 2019.
- 110. Attended the 7<sup>th</sup> Edition of India International Science Film Festival (IISFF 2021) from 6<sup>th</sup> to 14<sup>th</sup> December 2021, at Entertainment Society of Goa (ESG) complex. The IISFF-2021, was organised in association with Department of Science & Technology, Government of India, Vigyan Bharati, Government of India, held during 10<sup>th</sup> to 13<sup>th</sup> December 2021.
- 111. Attended the 7<sup>th</sup> Edition of Science Film Festival of India (SCIFFI-2022) from 26<sup>th</sup> to 28<sup>th</sup> April 2022, at Entertainment Society of Goa (ESG) complex. The SCIFFI-2022, was organised in association with Department of Science & Technology and Environment, Government of Goa, Entertainment Society of Goa, Goa University, National Institute of Oceanography (CSIR-NIO), Vigyan Prasar (DST), Government of India and Goa Science Centre.
- 112. Two Day National Seminar on 'Trends in the Techniques of Preparation & Characterization of Smart Materials' organized by Government College of Arts, Commerce and Science, Quepem-Goa, sponsored by The Directorate of Higher Education, Government of Goa, held at Ravindra Bhavan, Margao-Goa, held during March 3<sup>rd</sup> - 4<sup>th</sup>, 2023.

#### **PARTICIPATION IN WEBINAR:**

- 1. National level webinar on 'Chemical and Laboratory Safety' on 22<sup>nd</sup> July 2020 organized by Carmel College of Arts, Science and Commerce for women, Nuvem, Goa.
- Expert Webinar FDP Series on "Effective Online Teaching Learning Evaluation" organized by Centre for Teaching Learning, powered by IQAC, Parvatibai Chowgule College of Arts and Science, held on 23<sup>rd</sup> and 24<sup>th</sup> June, 2020.

- Online Interactive Session for School Teachers on Importance of Metrology in Day-to-Day Life organized by Council for Scientific and Industrial Research (CSIR) and CSIR-National Physical Laboratory (CSIR-NPL) in association with Vijnana Bharati (VIBHA) held on May 20<sup>th</sup>, 2020, presented by Vidyarthi Vigyan Manthan.
- 4. "Regional workshop on Research Based Pedagogical Tools (RBPTs) for Undergraduate Science Teachers", sponsored by the Department of Science and Technology (DST), Government of India and co-organized with the MHRD-supported Centre of Excellence in Science and Mathematics Education (COESME) at IISER Pune and organized as an Interdisciplinary activity under DBT Star College Scheme of Chowgule College, during 5<sup>th</sup> to 7<sup>th</sup> March 2020.
- 5. Online Workshop on "Managing Inquiry-Based Learning in Online Classrooms" organized by Orange Slate.com on 11<sup>th</sup> July, 2020.
- Provided Valuable support as Evaluator of Story/Poster/Photo/Video section of entries received for competition *Me and my Environment: A lockdown experience* organized as a part of World environment day 2020 celebration, 5<sup>th</sup> June 2020.
- Worked as Evaluator for Science based Experiment / Demonstration video making competition in Masti Se Mastishk Tak: Lockdown Activity-I of Vidyarthi Vigyan Manthan (VVM) 2019-20 a joint venture of Vijnana Bharati (VIBHA); Vigyan Prasar, Department of Science and Technology, Govt. of India and National Council of Educational Research and Training (NCERT), Ministry of Human Resource Development, Govt. of India held online from 07 May, 2020 to 17 May, 2020.
- Participated as a delegate in the muti session web Workshop on "Designing Quality Multiple Choice Questions" during August 01<sup>st</sup> – 10<sup>th</sup>, 2020, organised by Association of Chemistry Teachers (ACT), C/O Homi Bhaba Centre for Science Education (TIFR) Mumbai.
- ACT National Webinar on Instrumental Methods of Analysis (NWIMA-2020), organized by Association of Chemistry Teachers (ACT), C/O Homi Bhaba Centre for Science Education (TIFR) Mumbai and Chemistry Department, Kamla Nehru Mahavidyalaya, Nagpur and Kalasalingam Academy Research and Education, Krishnakoli, India, held during October 17<sup>th</sup> -18<sup>th</sup>, 2020.
- 10. The webinar entitled "General Research Methodology (Literature Search and Paper Writing)" organized by the Department of Chemistry, DAV University, Jalandhar, India on November 3<sup>rd</sup>, 2020.
- 11. National Level Technical Meet on "Micro and Nano Fbrication and Characterization Techniques" organized by Department of Physics (SF), Kamaraj College, Thoothukudi-628003, Tamil Nadu, held on November 9<sup>th</sup>, 2020.
- National Webinar "Electrochemical Microsystems for Bioanalysis" organized by Department of Chemistry, K. L. E. Institute of Technology, Gokul, Hubballi (Approved by AICTE, New Delhi, affiliated to VTU, Belagavi, and ISO 9001:2015 certified, accredited by NBA) held on November 18<sup>th</sup> 2020.
- National Conference (virtual) on "Nanomaterials for Environmental Applications" organized by the Post Graduate Department of Chemistry, Ponda Education Society's, Ravi S. Naik College of Arts and Science, Farmagudi, Ponda-Goa, held during December 28<sup>th</sup> - 29<sup>th</sup>, 2020.

- National Quiz on "Chemical Sciences" organised by Department of Applied Chemistry, Karunya Institute of Technology and Sciences (Deemed University) Coimbatore, India, held on January 14<sup>th</sup>, 2021.
- 15. International Webinar on "Empowering Diversity in Science", organized by Department of Chemistry, Kamla Nehru Mahavidyalaya, Nagpur (Maharashtra) and Association of Chemistry Teachers (ACT), C/O Homi Bhaba Centre for Science Education (TIFR) Mumbai in Collaboration with International Union of Pure and Applied Chemistry (IUPAC), Global Women's Breakfast, held on February 9<sup>th</sup>, 2021.
- 16. One Week Faculty Development Programme on "Functional Materials for Engineering Applications" sponsored by the Centre for Excellence in Advanced Materials Research, TEQIP-III, organized by B. M. S. College of Engineering, Bengaluru-19, an Autonomous Institute affiliated to V.T.U, Belgavi, in association with MJP Rohilkhand University, Bareilly, during February 15<sup>th</sup> 19<sup>th</sup>, 2021.
- International Webinar on "Innovations in Science and Technology", (IWIST-2021) organized by Department of Chemistry, Smt. Narsamma Arts, Commerce and Science College, Kiran Nagar Amravati (Maharashtra) and Association of Chemistry Teachers (ACT), C/o Homi Bhabha Centre for Science Education (TIFR) Mumbai, held on February 27<sup>th</sup>, 2021.
- International Webinar on "Sub stainable Chemistry", (IWSC-2021) organized by Association of Chemistry Teachers (ACT), C/O Homi Bhabha Centre for Science Education (TIFR) Mumbai, held on March 18<sup>th</sup>, 2021.
- 19. National Webinar on "Innovations in Materials Science and Green Technologies", organized under the aegis of MHRD-Design Innovation Centre, Centre for Converting Technologies, University of Rajasthan, Jaipur, held on March 31<sup>st</sup>, 2021.
- One-Week online Faculty Development Programme on "Essential Skills and Technologies for Quality Research", organized by Library and Information Centre, P. E. S. College of Engineering, Madya, Karnataka- 571401, an Autonomous Institute affiliated to V. T. U, Belgavi, during March 31<sup>th</sup> - April 04<sup>th</sup>, 2021.
- 21. One Week Online STTP "Design Thinking as Strategical Tool for Innovation and Creating Startup", sponsored by GUJCOST and ICSII, and organized by the "Mechanical Engineering Department" IITE, Indus University, Ahmedabad (Gujrat), during April 19<sup>th</sup> - 23<sup>rd</sup>, 2021.
- 22. National Webinar on the topic "Bio-inspired Chemistry for Understanding the Role of Metal Ions in Biocatalysis" organised by Srushti Eco Club in collaboration with Department of Chemistry, Ponda Education Society's Ravi S. Naik College of Arts and Science Farmagudi, Ponda-Goa, held on May 28<sup>th</sup>, 2021.
- International E-Conference on Recent Advances in Chemical, Physical and Biological Sciences (RACPBS-2021) organized by Department of Chemistry, Nabira Mahavidyalaya, Katal and Association of Chemistry Teachers (ACT), C/o Homi Bhabha Centre for Science Education (TIFR) Mumbai, during 29<sup>th</sup> - 30<sup>th</sup> June, 2021.
- 24. The NAAC Sponsored National Webinar on "The Impact of Covid-19 Pandemic Crisis on Higher Education Institutions in Karnataka and its Challenges" (ICPCHEIKC-2021) organized by Internal Quality Assurance Cell (IQAC), HKE Society's, Shri Prabhu Arts, Science and J. M. Bohra Commerce Degree College, Shorapur, District; Yadgiri, Karnataka-India, held on 20<sup>th</sup> July, 2021.

- 25. The National Webinar on "Recent Advances in Chemistry" organised by the Department of Chemistry and IQAC, Government G. N. A. PG College, Bhatapara (C.G.), held on 26<sup>th</sup> July 2021.
- 26. Participated in the Webinar on "TEACHERS! THE HEROS BEHIND EVERY EMPOWERED CHILD" organized by the Department of Chemistry, SRM Institute of Science and Technology, Ramapuram Campus, Chennai-Tamil Nadu, held on September 6<sup>th</sup>, 2021.
- Participated in the National Webinar on "Spectroscopic Techniques: A Tool for Structure Elucidation" organized by Department of Chemistry, Sophia Girls' College (Autonomous), Ajmer, during, October 21<sup>st</sup> - 22<sup>nd</sup>, 2021.
- 28. Participated in a "Democracy and Electoral Management in India" conducted by Office of the Chief Electoral Officer, Goa and Department of Political Science, Goa University, during December 2021-January 2022.
- 29. Participated in the Sci-Minds Webinar, "Innovations in Technology for Environment Sustainability" organized by the Department of Science and Humanities, Don Bosco College of Engineering, Fatorda-Margao, Goa, held on February 26<sup>th</sup>, 2022.
- 30. Participated in the Webinar on "NUCLEAR ENERGY: GREEN FOR SUSTAINABLE DEVELOPMENT" organized by the Department of Chemistry, SRM Institute of Science and Technology, Ramapuram Campus, Chennai-Tamil Nadu, in association with the Society for Advancement of Chemical Sciences and Education, IGCAR, Kalpakkam, held on February, 28<sup>th</sup> 2022.
- 31. Attended Web Seminar on National Science Day with the emphasis on the theme "Integrated Approach in Science and Technology for Sustainable Future (IASTSF-2022)" organized by School of Sciences, AP Goyal Shimla University, held on February 28<sup>th</sup>, 2022.
- 32. Participated in the National Level Webinar on "Role of Data Analytics in Actuarial Science" organized by the Department of IT & Department of Mathematics and Statistics, organised by MES College of Arts and Commerce, Zuari Nagar-Vasco-Da-Gama, Goa, held on 20<sup>th</sup> October, 2022.