

Scientific publications/Peer-reviewed publications: 31

1. P. Siva Kumar, **Gurusampath Kumar A.**, J. Vijay Kumar, Deepak K.S. Ambast, Rajender Boddula, KesavaRao J.V.V.N., G. Prathibha, Ramyakrishna Pothu, G .K. Sivasankara Yadav, **Journal of Magnetism and Magnetic Materials**, 666 (2026) 174361. <https://doi.org/10.1016/j.jmmm.2026.174361> (IF: 3.0) ISSN: 0304-8853
2. Rajababu Chintaparty, Tiju Thomas, Bandameeda Devendra, Sreenivasa Kumar Godlaveeti, **GuruSampath Kumar Ankisetty***, Alkali-controlled γ -Al₂O₃ nanostructures with high dielectric constant, **Ceramics International**, 2026, <https://doi.org/10.1016/j.ceramint.2026.04.198> (IF: 5.6) ISSN: 0272-8842.
3. **GuruSampath Kumar A.***, V.K.V. Krishna, A.P. Lingaswamy, S. Masma, G. Prathibha, G. Sujatha, P.S. Kumar, T.V. Kumar, J.V.V.N.K. Rao, B.H. Rao, Enhanced physical and optoelectronic properties of Ag-doped SnS thin films, **Chalcogenide Lett.**, 22(2), (2025) 143-149. <https://doi.org/10.15251/CL.2025.222.143> (IF: 1.20) ISSN: 1584-8663
4. **GuruSampath Kumar A.***, Mahender C., Kumar U.M., Obulapathi L., Rao B.H., Yamuna P., Thirupathi A., SomaSundar L.N.V.H., Ramana G.V., Effect of Sputter Power on red-shifted Optoelectronic Properties in magnetron sputtered Ag/ZnO Thin Films, **J. Vacc. Sci. Techol. B**, 42 (2024) 052201. <https://doi.org/10.1116/6.0003690> (IF: 1.50) ISSN:2166-2746
5. Rao G.V., Kumar U.M., Soma Sundar L.N.V.H., Sarada K.L., Kumar J.V., **GuruSampath Kumar A.***(Corresponding Author), Ramana G.V., Rao B., Obulapathi L., Li X., Exploring Liquid Crystal Texture Analysis Through Linear Dichroism, **Brazilian Journal of Physics** (2024) 54:120. <https://doi.org/10.1007/s13538-024-01497-9> (IF: 1.60) ISSN:0103-9733
6. **GuruSampath Kumar A.***, Kumar J.V., Kumar U.M., Kumar P.S., Obulapathi L., Samyuktha V.S., Microwave assisted Sintering of Sr-doped zinc titanate (Sr_{0.2}Zn_{0.8}TiO₃) nano-ceramics, **MATERIALS SCIENCE (MEDŽIAGOTYRA)**, Vol. 23, No. 4. 2023. <http://doi.org/10.5755/j02.ms.33625> (IF: 1.00) ISSN: 1392-1320
7. **A. GuruSampath Kumar**, Xuejin Li, Y. Du, Y. Geng, X. Hong, UV-photodetector based on heterostructured ZnO/(Ga,Ag)-co-doped ZnO nanorods by cost-effective two-step process, **Applied Surface Science**, 509 (2020) 144770. <https://doi.org/10.1016/j.apsusc.2019.144770> (IF: 6.7) ISSN: 0169-4332
8. **A. GuruSampath Kumar**, Li Xuejin, Y. Du, Y. Geng, X. Hong, UV-light enhanced high sensitive hydrogen (H₂) sensor based on Au nanoparticles on ZnO thin films, **Journal of Alloys and Compounds**, 798 (2019) 467–477. <https://doi.org/10.1016/j.jallcom.2019.05.227> (IF: 6.2) ISSN: 0925-8388
9. **A. GuruSampath Kumar**, Li Xuejin, X. Hong, Y. Geng, Y. Du, T Subba Rao, Investigation of structural, electrical and optical properties of oxygen (O⁷⁺) ion irradiated CdZnO thin films for solar cell applications, **Radiation Physics and Chemistry**, 162 (2019) 107–113. <https://doi.org/10.1016/j.radphyschem.2019.02.033> (IF: 2.9) ISSN: 0969-806X
10. V.S Samyuktha, **A. GuruSampath Kumar**, T.S. Rao, R.P. Suvarna, Investigation of electrical and dielectric studies of calcium doped magnesium titanate [Mg_(1-x)CaxTiO₃ (x=0, 0.9)] ceramics, **Digest Journal of Nanomaterials and Biostructures**, 16(2021) 839-846. (IF: 0.963) https://chalcogen.ro/839_SamyuthaVS.pdf ISSN: 1842-3582
11. H.C. Rao Bitra, A.V. Rao, **A. GuruSampath Kumar**, G.N. Rao, Investigation of low temperature dielectric properties of manganese doped-copper oxide nanoparticles by coprecipitation method, **Digest Journal of Nanomaterials and Biostructures**, 16 (2021) 1173-1183. (IF: 0.963) https://chalcogen.ro/1173_BitraHCR.pdf ISSN: 1842-3582

12. D. Jhansi Rani, **A. GuruSampath Kumar**, L. Obulapathi, T.S. Rao, Dielectric and optical properties of zirconium titanate thin films by reactive dc magnetron co-sputtering, *IEEE Transactions on Dielectrics and Electrical Insulation*, 26 (2019) 1108–1112. <https://doi.org/10.1109/TDEI.2019.007887> (IF: 3.1) ISSN: 1070-9878
13. P. SivaKumar, K. Thyagarajan, **A. GuruSampath Kumar**, L. Obulapathi, Investigations on physical properties of Mg-ferrite nanoparticles for microwave applications, *J. Microwave Power and Electromagnetic Energy*, 53(1) (2019) 3-11. <https://doi.org/10.1080/08327823.2019.1569898> (IF: 1.5) ISSN: 0832-7823
14. Yiwen Xu, Youfu Geng, Lina Wang, **A. GuruSampath Kumar**, Lin Fang, Yu Du and Xuejin Li, Femtosecond laser ablated pyramidal fiber taper-SERS probe with laser-induced silver nanostructures, *Journal of Physics D: Applied Physics*, 51 (2018) 285104 (7pp). <https://doi.org/10.1088/1361-6463/aacab2> (IF: 3.4) ISSN: 0022-3727
15. Y. Geng, L. Wang, Y. Xu, **A. GuruSampath. Kumar**, X. Tan, X. Li, Wavelength multiplexing of four-wave mixing based fiber temperature sensor with oil-filled photonic crystal fiber, *Optics Express*, 26(21) (2018) 27907–27916. <https://doi.org/10.1364/OE.26.027907> (IF: 3.83) ISSN: 1094-4087
16. Siva Kumar Pendyala, K. Thyagarajan, **A. GuruSampath Kumar**, L. Obulapathi, Effect of Mg doping on physical properties of Zn ferrite nanoparticles, *J. The Australian Ceramic Society*, 54 (2018) 467–473. <https://doi.org/10.1007/s41779-018-0173-8> (IF:1.9) ISSN: 2510-1560
17. P. Siva Kumar, K. Thyagarajan, **A. GuruSampath. Kumar**, Investigations on physical properties of Zn ferrite nanoparticles using sol-gel auto combustion technique, *Digest J. Nanomaterials and Biostructures*, 13(4) (2018) 1117–1122. https://www.chalcogen.ro/1117_PendyalaSK.pdf (IF: 0.963) ISSN: 1842-3582
18. **GuruSampath Kumar A.**, T. Sofi Sarmash, D. Jhansi Rani, L. Obulapathi, G.V.V. Bhaskara Rao, T. Subba Rao, K. Asokan, Effect of post sputter annealing treatment on nano-structured cadmium zinc oxide thin films, *Journal of Alloys and Compounds*, 665 (2016) 86-92. <https://doi.org/10.1016/j.jallcom.2016.01.029> (IF: 6.2) ISSN: 0925-8388
19. **GuruSampath Kumar**, T. Sofi Sarmash, L. Obulapathi, D. Jhansi Rani, T. Subba Rao and K. Asokan, Structural, optical and electrical properties of heavy ion irradiated CdZnO thin films, *Thin Solid Films*, 605 (2016) 102-107. <https://doi.org/10.1016/j.tsf.2015.12.024> (IF: 2.1) ISSN: 0040-6090
20. **GuruSampath Kumar A.**, L. Obulapathi, T. Sofi Sarmash, D. Jhansi Rani, M. Maddaiah, T. Subba Rao and K. Asokan, Structural, electrical and optical properties of Cd doped ZnO thin films by reactive dc magnetron sputtering, *JOM-US*, 67 (2015) 834-839. <https://doi.org/10.1007/s11837-015-1344-5> (IF: 2.6) ISSN: 1047-4838
21. D. Jhansi Rani, **A. Guru Sampath Kumar** & T. Subba Rao, Substrate temperature-dependent physical properties of nanocrystalline zirconium titanate thin films, *Journal of Coating Technology & Research*, 14 (5) (2017) 971-980. <https://doi.org/10.1007/s11998-017-9951-4> (IF: 2.3) ISSN: 1547-0091
22. D. Jhansi Rani, **A. GuruSampath Kumar**, T. Subba Rao, Effect of Argon/Oxygen Flow Rate Ratios on DC Magnetron Sputtered Nano Crystalline Zirconium Titanate Thin Films, *JOM-US*, 68 (2016) 1647-1652. <https://doi.org/10.1007/s11837-016-1910-5> (IF: 2.6) ISSN: 1047-4838

23. D. Jhansi Rani, **A. GuruSampath Kumar**, T. Subba Rao, Optimization of post deposition annealing temperature of direct current magnetron reactive sputtered zirconium titanate thin films for refractory oxide applications, *Journal of Alloys and Compounds*, 694 (2017) 694-702. <http://dx.doi.org/10.1016/j.jallcom.2016.10.048> (IF: 6.2) ISSN: 0925-8388
24. **GuruSampath Kumar A.**, L. Obulapathi, M. Maddaiah, T. Sofi Sarmash, D. Jhansi Rani, J. V. V. N. Kesava Rao, T. Subba Rao, and K. Asokan, Oxygen partial pressure on the structural and electrical properties of CdZnO thin films, *AIP Conference Proceedings*, 1665 (2015) 080002. <https://doi.org/10.1063/1.4917906> ISSN: 0094-243X
25. **GuruSampath Kumar A.**, T. Sofi Sarmash, L. Obulapathi, D. Jhansi Rani, T. Subba Rao, K. Asokan, Effect of substrate temperature on structural and optical properties of reactive dc magnetron sputtered CdZnO thin films, *Materials Today: Proceedings*, 3 (2016) 1604–1608. <https://doi.org/10.1016/j.matpr.2016.04.049> ISSN: 2214-7853
26. V.Sharon Samyuktha, **A. GuruSampath Kumar**, T.Subba Rao & R.Padma Suvarna, Synthesis, structural and dielectric properties of Magnesium calcium titanate, *Materials Today: Proceedings*, 3 (2016) 1768–1771. <https://doi.org/10.1016/j.matpr.2016.04.072> ISSN: 2214-7853
27. L. Obulapathi, **A. GuruSampath Kumar**, T. Sofi Sarmash, D. Jhansi Rani, G.V.V. Bhaskara Rao, and T. Subba Rao, Effect of film thickness on physical properties of CuCrO₂ thin films, *J. The Australian Ceramic Society*, 52[1] (2016) 102 – 105. https://www.researchgate.net/publication/289519465_Effect_of_film_thickness_on_physical_properties_of_CuCrO2_thin_films (IF: 1.9) ISSN: 2510-1560
28. K. Chandra Babu Naidu, T. Sofi Sarmasha, M. Maddaiah, **A. GuruSampath Kumar**, D. Jhansi Rani, V. Sharon Samyuktha, L. Obulapathi, T. Subbarao, Structural and electrical properties of PbO - doped SrTiO₃ ceramics, *Journal of Ovonic Research*, 11 (2015) 79-84. https://www.chalcogen.ro/79_Naidu.pdf (IF: 1.165) ISSN: 1584-9953
29. M. Maddaiah, **A. GuruSampath Kumar**, L. Obulapathi, T. Sofi Sarmash, K. Chandra Babu Naidu, D. Jhansi Rani, T. Subba Rao, Synthesis and characterization of strontium doped zinc manganese titanate ceramics, *Digest Journal of Nanomaterials and Biostructures*, 10 (2015), 155-159. https://chalcogen.ro/155_Maddaiah.pdf (IF: 0.963) ISSN: 1842-3582
30. L. Obulapathi, **A. GuruSampath Kumar**, T. Sofi Sarmash & T. Subba Rao, Room Temperature Studies of Cr doped copper oxide thin films by reactive dc magnetron sputtering, *Int. J. Nanotechnol. Appl.* (IJNA), 4 (2014), 29-34.
31. **GuruSampath Kumar**, L. Obulapathi, M. Maddaiah, T. Sofi Sarmash, K. Chandra Babu Naidu & T. Subba Rao, Synthesis and characterization of CdZnO thin films by reactive dc magnetron sputtering, *Int. J. Nanotechnol. Appl.* (IJNA), 4 (2014), 41-44

Scientific presentations/peer-reviewed presentations:

1. **International conference on Advances in Light-Matter Interactions (Fundamentals to Frontiers)** organized by the Dept. of Physics, GITAM school of Sciences, **GITAM Deemed to be University**, Bangalore campus, held during **February 4 – 6, 2026 (Best Oral Presentation)**

2. **National Conference on Material Science (NCMS-2015)** held at Department of Physics, Sri Krishnadevaraya University, Anantapuramu, A.P., India-515003 during 13th & 14th November, 2015 (**Best Oral Presentation**).
3. **IUAC Acquaintance Programme of “Applications of accelerators-based research** organized by IUAC, New Delhi in collaboration with Acharya Nagarjuna University, Guntur, held on 09th October, 2015.
4. **CSR Lecture Series-I** conducted by UGC-DAE Consortium for Scientific Research, University Campus, Indore during 14th to 24th September, 2015.
5. **INUP Familiarization workshop on “Nanofabrication Technologies”** conducted at the Centre for Nano Science and Engineering, Indian Institute of Science (IISc.), Bangalore, from 20 -22 July,2015.
6. **International Conference on Recent Advances in Nano Science and Technology (RAINSAT-2015)** “Title: Effect of substrate temperature on structural and optical properties of reactive dc magnetron sputtering” during 8th to 10th July, 2015 held at Sathyabama University, Chennai- 600119, India.
7. **UGC sponsored National seminar on Recent advances in Functional Materials (RAFM-2015)** on 15th March, 2015 held at Dept. of Material Science and Nanotechnology, Yogi Vemana University, Kadapa-516003, Andhra Pradesh, India.
8. **National Seminar on Recent Developments in Physics (NSRDP-2105)** held at Dept. of Physics, Sri Krishnadevaraya University, Anantapuramu, Andhra Pradesh, India-515003 during 26th and 27th March, 2015.
9. **National Conference on Recent Trends in Material Science (RTMS)** held at Dept. of Physics, S.V. Degree College, Kadapa, Andhra Pradesh, India-516 003 during 1st and 2nd March, 2015.
10. **National seminar on New Trends on Advanced Materials (NTAM)** held at Dept. of Physics, Govt. College, for Men (A), Kadapa, Andhra Pradesh, India-516 004 on 27th March, 2015 (**Best Poster Presentation**).
11. **59th DAE Solid State Physics Symposium** held at VIT University, Vellore, Tamilnadu, India-632 014 during 16th to 20th December, 2014.
12. **International Seminar on Glasses and other Functional Materials (ISGFM)** held at Dept. of Physics, Acharya nagarjuna University, Guntur, Andhra Pradesh, India-522 510 during 11th to 13th December, 2014.
13. **International Colloquium on Materials, Manufacturing and Metrology (ICMMM-2104)** held at Dept. of Mechanical Engineering, IITM, Chennai, India-600 036 during 8th and 9th August, 2014.
14. **National Conference on Emerging Nano Materials (NCENM-2014)** held at Dept. of Physics, Sri Krishnadevaraya University, Anantapuramu, Andhra Pradesh, India-515 003 during 21st and 22nd March, 2014.
15. **7th Indo-Singapore Symposium on Experimental Condensed Matter Physics** held at Dept. of Physics, IITB, Bombay during 24th to 26th February, 2014.

16. **International Conference on Nano, Bio & Material Sciences (ICONBMS-2014)** held at Dept. of Physics, Nizam College (A), Osmania University, Hyderabad, Andhra Pradesh, India-500 001 during 8th to 10th January, 2014.
17. Training cum Certificate program on **Synthesis and characterization of thin films** held at Sathyabama University, Chennai, Tamilnadu-600 119 during 13th and 14th December, 2013.
18. **National workshop on Recent Advances in Materials Characterization Techniques** held at Dept. of Physics, S.V University, Tirupati-517 502 on 23rd March, 2013.
19. **International Conference on Recent Advances in material Science (RAMS-2012)** held at Karnataka State Council of Higher Education, Bangalore, Karnataka, India) during 6th to 8th November, 2012.

Invited Talks/Guest Lectures:

1. **“Nanostructured Thin films and its Applications”** Invited talk, Presidency University, Bangalore, Online (MS Teams), 23rd November 2024.
2. Resource person: **Thin film Nanostructures growth and UV/gas sensors**, One week FDP organized on **Emerging Technologies and Changing Scenario on Material Research** by **Santhiram Engineering College**, Nandyal from 27th July to 01st August, 2020.

Patents Published:

1. Dr GuruSampath Kumar A., et al., “Ppm level hydrogen gas sensor based on nanostructured thin films” Indian Patent No.202241076171A, Published On 6.01.2023.
2. Dr GuruSampath Kumar A., et al., “Automatic Computer Vision and AI based Robot system for Surveillance” Indian Patent 202241049864A, Published On 16.09.2022.
3. Dr GuruSampath Kumar A., et al., “Nanostructured gas sensors for Healthcare and Medical sector” Indian Patent 202141035750 A, Published On 13/08/2021.
4. Dr GuruSampath Kumar A., et al., “Machine Learning Technique to analyse the condition of COVID-19 patient based on their saturation levels” Australian Patent No. 2021105808 , Published On 06.10.2021.