Publications
Dept:PHYSICS

Faculty name: Dr.Shashikala B S

Journal Publications:

1) **B. S. Shashikala,** H. B. Premkumar, G. P. Darshan, H. Nagabhushana, S. C. Sharma, S. C. Prashantha, H. P. Nagaswarupa, Synthesis and Photoluminescence Studies of an Orange Red Color Emitting novel $CaAl_2O_4$: Sm^{3+} nanophosphor for LED Applications, Materials Today proceedings, 4 (2017) 11820-11826.
2) **B. S. Shashikala,** H. B. Premkumar, G. P. Darshan, H. Nagabhushana, S. C. Prashantha, Spectroscopic Studies of Strong Red Emitting $CaAl_2O_4$: Eu^{3+} Nano-phosphor for WLED's Applications Using Judd-Ofelt Theory, International Journal of Luminescence and applications, Vol 9(1) February, 2019, ISSN 2277-6362.
3) **B. S. Shashikala**, H. B. Premkumar, G. P. Darshan, H. Nagabhushana, S. C. Sharma, S. C. Prashantha, Rational Design of Bi-Functional RE^{3+} (RE = Tb, Ce) and Alkali Metals (M^+ = Li, Na, K) Co-Doped $CaAl_2O_4$ Nanophosphors for Solid State Lighting and Advanced Forensic Applications, *Mater. Res. Bull.*, 115 (2019) 88-97.
4) **B. S. Shashikala**, H. B. Premkumar, G. P. Darshan, S. C. Sharma, H. Nagabhushana, B. Daruka Prasad, Dy^{3+} ions activated $CaAl_2O_4$ nanophosphors: Photoluminescent and photometric properties prompted manifold applications, *Inor. Chem. Commun.*, 142 (2022) 109619.
5) **B. S. Shashikala**, H. B. Premkumar, G. P. Darshan, D. R. Lavanya, S. C. Sharma, H. Nagabhushana, Intense red-emitting core-active shell SiO_2@$CaAl_2O_4$:Eu^{3+}surface sensitive fluorescent probe for dactylography applications, *Mater.Chem.*, 297 (2023) 127358.

ConferencePapers:

1. "Photoluminescence studies of Eu doped $CaAl_2O_4$ nanophosphor for WLED's Applications" presented at Global Convergence in Technology, Entrepreneurship, Computing and value Engineering: Principles and Practices.ICGCP-2022 held in Sapthagiri College of Engineering, Bengaluru during 5-7 May 2023.Presented a paper "Conductivity studies on molybdo-phosphate glasses containing ZnO" in 62nd DAE Solid State Physics Symposium, held in Bhabha Atomic Research Centre, Mumbai during 26th - 30th December 2017.

2. "Ultrasonication Assisted Synthesis of Dy^{3+} Activated $CaAl_2O_4$ nanophosphor: Photoluminescent and Photometric Properties Prompted WLED's and Latent Fingerprints Development Applications" presented at Global Convergence in Technology, Entrepreneurship, Computing and value Engineering: Principles and Practices.ICGCP-2022 held in Sapthagiri College of Engineering, Bengaluru during 24-25 June 2022.

3. "Photoluminescence studies of strong red emitting Phosphors for display applications" presented at International Conference on Global Convergence in Technology, Entrepreneurship, Computing and value Engineering: Principles and Practices.ICGCP-2021 held in Sapthagiri College of Engineering, Bengaluru during 16-17 July 2021.

4. "Spectroscopic Studies Of Strong Red Emitting $CaAl_2O_4$:Eu^{3+} Nano Phosphor WLED's Applications Using Judd-Ofelt THEORY" presented at International Conference On Luminescence and Its Applications held in Pt. Ravishankar Shukla University, Raipur during 7- 9 Jan 2019.
5. "Structural analysis and enhanced photoluminescence via Ce^{3+} in a Tb^{3+} doped $CaAl_2O_4$ nanophosphor" presented at the National Conference on Trends in Advanced Materials (TAMA-2017) held in Tumkur University during 31st Dec 2017.

6. "Synthesis and Photoluminescence Studies of an Orange Red Color Emitting novel $CaAl_2O_4$: Sm^{3+} nanophosphor for LED Applications" presented at the Inernational Conference on Nanotechnology (ICNANO-2016) held in VTU, Center for post graduate studies , Muddenahalli during 19-21,oct 2016.

"Synthesis and Photoluminescence studies of an orange red color emitting novel $CaAl_2O_4$: Sm^{3+} nanophosphor for LED applications'' presented at the National Conference on Advances in Science and Engineering (AFM-2015) held in Dayananda sagar College of Engineering, Bengaluru during 4-5, Dec 2015.

Faculty name: Dr.Sheeja Krishnan

Journal Publications:

1. Effect of Temperature and Electron Irradiation on the I –V Characteristics of Au/CdTe Schottky Diodes. Solar Energy 81 (2007) 111-116.
2. Studies on the temperature dependence of I–V and C–V characteristics of electron irradiated silicon photo-detectors. Solar Energy Materials and Solar Cells 91 (2007) 1521-1524.
3. 8 MeV Electron Irradiation Effects in Silicon Photo-detectors. Nuclear Instruments andMethods in Physics Research B 264 (2007) 79-82.
4. Effect of 8 MeV electron irradiation on the performance of CSS grown CdTe/CdS solarcells. Semicond. Sci. Technol. 22 (2007) 1307-1311.
5. Electron Irradiation Effects on the Schottky diode characteristics of p-Si. NuclearInstruments and Methods in Physics Research B 226 (2008) 621-624.
6. Electrical properties of RF sputtered CdTe/CdS thin film Solar Cells. The Open Fuels and Energy Science Journal 2 (2009) 110-112.
7. Effect of electron irradiation on the properties of CdTe/CdS Solar cells. Solar EnergyMaterials and Solar Cells 93 (2009) 2-5.
8. Temperature and 8 MeV electron irradiation effects on GaAs solar cells. Pramana, 74(2010) 995-1008.
9. 8 MeV electron irradiation studies on electrical characteristics of Cu(InGa)Se2 solarcells. Solar Energy Materials and Solar Cells, 93 (2009) 1618-1623.
10. Effect of 8 MeV electrons on Au/n-Si Schottky diodes. International Journal of Pureand Applied Physics 5 (2010) 55-62.
11. A study on the variation of c-Si solar cell parameters under 8 MeV electron irradiation. Solar Energy Materials and Solar Cells 120 (2014) 191-196.
12. Electron irradiation induced modification of Bi2Fe4O9 nanoparticles, Radiation Physics and Chemistry 113(2015) 36–40.
13. Dose dependent electrical and structural properties of BiFeO3 nanoparticles underelectron irradiation, AIP Conference Proceedings 1665, (2015) 050070.
14. Magnetic and photoluminescence studies of electron irradiated $Bi_2Fe_4O_9$ nanoparticles, Journal of Magnetism and Magnetic Materials, 401 (2016) 77-79.

15. Effect of space radiation on CTJ new version multijunction solar cells, Radiation Effects an Defects in Solids 176 (2020) 1 - 14 .
16. Study the effect on space radiation on ISO-type multijunction solar cells, J MateSci: Mater Electron 32 (2021) 14014-14027.
17. Multijunction solar cell characterization by capacitance measurement for space craft application, International Journal of Science, Technology, Engineering and Management- a VTU Publication3 (2021) 25-35.
18. Studying the effect of space radiation induced defects in multijunction solar cell using APSYS simulation software and comparison with the experimental data, Nuclear Instruments and Methods in Physics Research B, 535 (2023) 74-87.

Conference Papers :

1. Studies on the temperature dependence of current-voltage characteristics of Cu (In, Ga) Se_2 Solar Cells. National Conference on the Emerging Trends in the PhotovoltaicEnergy Generation and Utilization, March 27-29, 2008.
2. Stability of CdTe/CdS Solar Cells against 8 MeV Electron Irradiation. Proceedings of International Conference on Solar Energy (IC-SOLACE) (2008) p.289.
3. Studies on the Temperature Dependence of I-V Characteristics of Electron Irradiated Au/n-Si Schottky Diodes. Proceedings of the DAE Solid State Physics Symposium (2007) p. 985.
4. Effect of Electron Irradiation on the I-V characteristics of Al/p-Si Schottky Diodes.Proceedings of the DAE Solid State Physics Symposium (2007) p. 953.
5. Electrical Characterization of Electron Irradiated n+-p Silicon photo- detectors. Proceedings of Indian Particle Accelerator Conference 2006 N03 (2006) p.403.
6. National Seminar on Emerging trends in Optoelectronic and solar energy Nanomaterials (EOSN-2011) (2011) September 2011.
7. Stability of CdTe/CdS Solar cells against 8 MeV electron irradiation. Proceedings of International Conference on Solar Energy (IC-Solace) (2008) p.289.
8. Dose Dependent Electrical and Structural Properties of BiFeO3 nanoparticles under Electron Irradiation. American Institute of Physics Conference Proceedings 1665, 2015,050070.