K. S. INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Road, Bangalore-560109.

Faculty Name	Dr. Sheeja Krishnan
Designation	Associate Professor
Educational Qualification	Msc., Ph.D
Experience in Years	Teaching: 16 Industry : - Research: 21
Areas of Interest	Semiconductor Physics, Nanomaterials
E-mail	sheejakrishnan@ksit.edu.in

Educational Details

Examination/ Degree	College / University	Year of Passing
UG	Kannur University	1999
PG	Mangalore University	2002
PhD	Mangalore University	2008

Publications

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 energyNanomaterials (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.

Awards

1.

Other Accomplishments

1. Received a Research Grant of Rs. 16,81,500/- for a DAE-BRNS project entitled 'Electron Irradiation Effects on Multiferroic Ferrites and Manganites', serving as the principal investigator, spanning from 27th May 2011 to 31st March 2015.
2. Co-PI for a DAE-BRNS Research Grant of Rs. 10,83,500/- titled 'A Comparative study on the radiation effects on multijunction solar cells', from 27th May 2011 to 31st March 2014.

Research Guidance

1. Awarded PhD – 1
2. Pursuing PhD – 3

Professional Membership

1.

Contact Details

Name: Dr. Sheeja Krishnan

Official Address:

Associate Professor
Department of Applied Science & Humanities
K.S. Institute of Technology
#14, Raghuvanahalli, Kanakapura Road, Bangalore – 50109.

Alternate Email: sheejakrishnan@gmail.com