Publications

1. Peer reviewed International Journals (*published*)

(i) **G. K. Gupta** and A. Dixit, "Effect of precursor and composition on the physical properties of the low-cost solution processed Cu_2ZnSnS_4 thin film for solar photovoltaic application," J. Renew. Sustain. Energy, vol. 9, no. 1, p. 13502, 2017. http://dx.doi.org/10.1063/1.4974341

(ii) **G.K. Gupta**, A. Garg, A. Dixit, Electrical and impedance spectroscopy analysis of sol-gel derived spin coated Cu_2ZnSnS_4 solar cell, J. Appl. Phys. 13101 (2018) 0–11. https://doi.org/10.1063/1.5002619

(iii) **G. K. Gupta** and A. Dixit, "Theoretical studies of single and tandem $Cu_2ZnSn(S/Se)_4$ junction solar cells for enhanced efficiency," Optical Materials vol. 82, no. April, pp. 11–20, 2018. https://doi.org/10.1016/j.optmat.2018.05.030

(iv) **G. K. Gupta,** R. Chaurasiya, and A. Dixit, "Theoretical Studies on Structural, Electronic and Optical Properties of Kesterite and Stannite $Cu_2ZnGe(S/Se)_4$ Solar Cell Absorbers", Computational Condensed Mater, 2018 https://doi.org/10.1016/j.cocom.2018.e00334

(v) **G. K. Gupta,** V. R Reddy, and A. Dixit, "Impact of excess and disordered Sn sites on Cu_2ZnSnS_4 absorber material and device performance: A ^{119}Sn Mössbauer study" Materials Chemistry and Physics,2019, 225, 410-416. https://doi.org/10.1016/j.matchemphys.2018.12.078

2. Peer reviewed International Conference proceedings

(i) **G. K. Gupta** and A. Dixit, "Room temperature electrical properties of solution derived p-type Cu_2ZnSnS_4 thin films," vol. 1728, no. 1, p. 20678, 2016. http://dx.doi.org/10.1063/1.4946729

(ii) **G. K. Gupta** and A. Dixit, "Intrinsic p-type Cu_2ZnSnS_4 thin film for hetero-structure solar photovoltaic device application" (*in press*).

3. Conference without proceedings

(i) **G. K. Gupta** and A. Dixit, "Device grade Cu_2ZnSnS_4 thin film on low cost stainless steel substrate using Co-electrodeposition and post-annealing", International Conference on Nanomaterials & Nanotechnology, March 01-03, 2017 at the Vinoba Bhave Research Institute, Saidabad, Allahabad, India.

(ii) **G. K. Gupta** and A. Dixit, "II-S (II = Cd, Zn) buffer layer impact in Cu_2ZnSnS_4 heterostructure for solar photovoltaic performance", International Conference on

Technologically Advanced Materials and Asian Meeting on Ferroelectricity, November 07-11, 2016, University of Delhi, New Delhi, India.

4. Miscellaneous work

(i) **G. K. Gupta**, R. Chaurasiya, and A. Dixit, "Thermodynamic stability and optoelectronic properties of Cu(Sb/Bi)(S/Se)2 ternary chalcogenides: Promising ultrathin photoabsorber semiconductors" https://doi.org/10.1016/j.solener.2018.11.064.

(ii) Lokesh Saini, Yojana Janu, Manoj Kumar Patra, Raj Kumar Jani, **Goutam Kumar Gupta**, Ambesh Dixit, and Sampat Raj Vadera "Dual Band Resonance in Tetragonal $BaTiO_3$/NBR Composites for Microwave Absorption Applications," J. Am. Ceram. Soc., vol. 99, no. 9, pp. 3002–3007, 2016. DOI: 10.1111/jace.14284

(iii) Lokesh Saini, Manoj Kumar Patra, Raj Kumar Jani, **Goutam Kumar Gupta**, Ambesh Dixit & Sampat Raj Vadera "Tunable Twin Matching Frequency (fm1/fm2) Behavior of $Ni_{1-x}Zn_xFe_2O_4$/NBR Composites over 2–12.4 GHz: A Strategic Material System for Stealth Applications" Scientific Reports | 7:44457 | DOI: 10.1038/srep44457.

(iv) Lokesh Saini, Manoj Kumar Patra, Manoj Kumar Dhaka, Raj Kumar Jani, **Goutam Kumar Gupta**, Ambesh Dixit, Sampat Raj Vadera "Ni/Graphitic Carbon Core-Shell Nanostructured based Light Weight Elastomeric Composites for Ku-Band Microwave Absorbing Applications" CrystEngComm, 2018,20, 4630-4640. DOI:10.1039/C8CE00620B

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