Publications

Google Scholar Profile: **Google Scholar** (https://scholar.google.com/citations?hl=en&user=zxvK3TgAAAAJ)
ORCiD Profile: **ORCiD** (https://orcid.org/0000-0002-1451-2918)

1. **Jitendra Kumar**, Eran Edri, "Solution-processed Sb_2Se_3 nanowires for photovoltaic applications" Available at SSRN: https://ssrn.com/abstract=4348366 or http://dx.doi.org/10.2139/ssrn.4348366.
2. Anchal Vashishtha, **Jitendra Kumar**, Neetika Singh, Eran Edri, "Surface Potential Variation Across (hk1) and non-(hk1) Grain Boundaries of Antimony Triselenide", *Journal of Alloys and Compounds*, 2023, 948, 169714 (I.F. 6.371).
3. Yaron Shitrit, Mahesh Duriayasu, **Jitendra Kumar**, Sivas Reddy, Yakov Cohen, Eran Edri, "Deposition of Bismuth Nanoplatelets onto Graphene Foam for Electrocatalytic CO_2 Reduction", *ACS Applied Nanomaterials*, 2022, 5, 11, 16354–16364 (I.F. 6.140).
4. **Jitendra Kumar**, Omer Vana, Subila Balakrishnan, Eran Edri, "Benign solution-processed $(Bi_xSb_{1-x})_2Se_3$ compound for short wavelength infrared mesoporous solar cells", *Journal of Materials Chemistry C*, 2022, 10, 11220 - 11231 (I.F. 8.067) [**Appeared on the front page of the Journal**].
5. **Jitendra Kumar**, Yaniv Dror, Eran Edri, "$(Bi_xSb_{1-x})_2Se_3$ thin films for short-wavelength infrared region solar cells", *Journal of Materials Chemistry C*, 2022, 10, 8702-8710 (I.F. 8.067).
6. Neha Kumari, **Jitendra Kumar**, Sarang Ingole, "Properties of Cu_2ZnSnS_4 films obtained by sulfurization under different sulfur-vapor pressures in a sealed ambient", *Solar Energy*, 2022, 231, 484-495 (I.F. 7.188).
7. **Jitendra Kumar,** Sarang Ingole, "*Optical phonons in pentanary compound $(Ag_xCu_{1-x})_2ZnSnS_4$ semiconductor: a Raman study*", *Journal of Alloys and Compounds*, 2021, 865, 158113 (I.F. 6.371).
8. **Jitendra Kumar,** Sarang Ingole, "*Scalable Fabrication and Electrical Contact formation Process for Vertically Oriented Silicon Nanopillars in Trenches*", *Materials Science in Semiconductor Processing*, 2021, 122, 105470 (I.F. 4.644).
9. **Jitendra Kumar,** Sarang Ingole, "*Tailoring the surface morphology of Cu_2ZnSnS_4 thin films for photovoltaic application*", *Materials Science in Semiconductor Processing*, 2019, 93, 173-181 (I.F. 4.644).
10. **Jitendra Kumar,** Sarang Ingole, "*Evolution of the microstructural, electrical and optical characteristics of sol-gel derived Cu_2ZnSnS_4 thin films during Sulfurization*", *Materials Science in Semiconductor Processing*, 2019, 91, 31-40 (I.F. 4.644).
11. **Jitendra Kumar**, Sarang Ingole, "*Effect of cation ratios and monoethanolamine on the morphology of solution processed Cu_2ZnSnS_4 films*", *MRS Advances*, 2019, 4, 945-951.
12. **Jitendra Kumar,** Sarang Ingole, "*Effect of silicon conductivity and HF/H_2O_2 ratio on the morphology of silicon nanostructures obtained via metal-assisted chemical etching*", *Journal of Electronic Materials*, 2018, 47, 1583-1588 (I.F. 2.047).
13. **Jitendra Kumar**, Sarang Ingole, "*Structural and optical properties of $(Ag_xCu_{1-x})_2ZnSnS_4$ thin films synthesised via solution route*", *Journal of Alloys and Compounds*, 2017, 727, 1089-1094 (I.F. 6.371).
14. **Jitendra Kumar**, S. K. Manhas, Dharmendra Singh, Ramesh Vaddi, "*Optimization of the vertical silicon nanowire-based solar cell using 3D TCAD simulation*", *13th-International Symposium on Integrated Circuits*, Singapore, 2011, 528-531.

Conferences

1. **Jitendra Kumar**, Yaniv Dror, Omer Vana, "*$(Sb,Bi)_2Se_3$ thin films for short wavelength infrared region solar cell*", E-MRS 2023 Spring Meeting, Strasbourg, France, June 2023.
2. **Jitendra Kumar**, Omer Vana, Subila Balakrishnan, Eran Edri, "*Benign solution-processed Sb_2Se_3 and Bi-alloyed Sb_2Se_3 solar cells for the short-wavelength infrared region solar cells*", HI-SCORE All-Hands-Meeting, Helmholtz Zentrum Berlin, Germany, November 2022.
3. **Jitendra Kumar**, Omer Vana, Subila Balakrishnan, Eran Edri, "*Solution processed $(Bi_xSb_{1-x})_2Se_3$ nanowires for near-infrared solar cell*", Climate Day: Special Spotlight Event on Environmental Science, Ben-Gurion University of the Negev, Israel, November 2022.
4. **Jitendra Kumar**, Omer Vana, Eran Edri, "*Solution processed Sb_2Se_3 and $Bi_{2-x}Sb_xSe_3$ for energy applications*", 86th Annual meeting of Israel Chemical Society, Tel-Aviv, Israel, September 2022.
5. **Jitendra Kumar**, Neha Kumari, "*A study of the efficiency limiting defects in $Cu_2Ba_xZn_{1-x}SnSe_4$ thin film based solar cell*", 86th Annual meeting of Israel Chemical Society, Tel-Aviv, Israel, September 2022.

6. **Jitendra Kumar**, Sameer Sapra, "*Inorganic Perovskite $CsPbI_xBr_{3-x}$ Nanocubes and Influence of Bi Doping*", 86th Annual meeting of Israel Chemical Society, Tel-Aviv, Israel, September 2022.
7. **Jitendra Kumar**, Omer Vana, Subila, Eran Edri, "*Benign solution-processed $(Bi_xSb_{1-x})_2Se_3$ alloys for short wavelength infrared solar*", 23rd Sede Boqer Symposium on Solar Electricity Production, September 2022.
8. **Jitendra Kumar**, Neha Kumari, "*A study of the efficiency limiting defects in $Cu_2Ba_xZn_{1-x}SnSe_4$ thin film based solar cell*", The 2022 Latsis Symposium on Earth-Abundant Materials for Future Photovoltaics, EPFL, Switzerland.
9. **Jitendra Kumar**, Sarang Ingole, "*Synthesis and characterization of $(Ag_xCu_{1-x})_2ZnSnS_4$ thin film for photovoltaic application*", Virtual Chalcogenide P.V. conference 2020, May 2020, Jointly organized by Helmholtz-Zentrum Berlin, CNRS - Centre national de la recherche scientifique, Institut Photovoltaïque d'Ile-de-France (IPVF), Empa, Universität Luxemburg, AIST and Colorado State University.
10. **Jitendra Kumar**, Sarang Ingole, "*Fabrication of silicon nanowire-based device platform using deep reactive ion etching*", 4th International Conference on Emerging Electronics, Bengaluru, India, December 2018.
11. **Jitendra Kumar**, Sarang Ingole, "*Structural and electronic properties of the pentanery compound $(Ag_xCu_{1-x})_2ZnSnS_4$ synthesized via solution route*", MRS fall meeting and exhibit, Boston, USA, November 2018.
12. **Jitendra Kumar**, Sarang Ingole, "*Investigation of Cu_2ZnSnS_4 thin films using Raman spectroscopy*", International Conference on Materials Engineering, IIT Kanpur, India, June 2017.
13. **Jitendra Kumar**, Sarang Ingole, "*Application of alumina as a hard mask in Deep Reactive Ion Etching for the fabrication of micro-trenches with micro-Pillars*", 8th-ISSS National Conference on MEMS, Smart Materials, Structures and Systems, IIT Kanpur, India, September 2016.
14. **Jitendra Kumar**, Sarang Ingole, "*Morphology of Cu_2ZnSnS_4 thin films obtained through solution chemistry*" 20th International Conference on Ternary and Multinary Compounds, Halle (Saale), Germany, September 2016.
15. **Jitendra Kumar**, Sarang Ingole, "*A novel silicon nanowire-based device plate form for sensor and energy harvesting application*", National Symposium on Nano Science & Technology, CeNSE, Indian Institute of Science, Bangalore, India, June 2016.
16. **Jitendra Kumar**, Sarang Ingole, "*Copper zinc tin sulfide compound semiconductor as a solar cell absorber material*", Research Scholar's Day, Department of Materials Science & Engineering, IIT Kanpur, India, April 2015.
17. **Jitendra Kumar**, Sarang Ingole, "*Nanograss fabrication using metal-assisted chemical etching*", International Conference on Advance in Energy Material, IIT Roorkee, Saharanpur Campus, India July 2014.
18. **Jitendra Kumar**, Sarang Ingole, "*Fabrication of heavily doped N-Type silicon nanowire via metal-assisted chemical etching*", 7th-ISSS International Conference on Smart Materials, Structures and Systems, Indian Institute of Science, Bangalore, India, July 2014.
19. **Jitendra Kumar**, Sarang Ingole, "*Nanowire fabrication via metal-assisted chemical etching*", MSE PG Symposium, PADARTH, IIT Kanpur, India, November 2013.
20. **Jitendra Kumar**, S. K. Manhas, Dharmendra Singh, "*Optimization of the vertical silicon nanowire-based solar cell using 3D TCAD simulation*", 13th-International Symposium on Integrated Circuits, Singapore, December 2012.
21. **Jitendra Kumar**, S. K. Manhas, Dharmendra Singh and B. K. Kaushik, "*Optimisation of lateral silicon nanowire-based solar cell using 3D-TCAD simulation*", 15th-VLSI Design and Test Symposium, Pune, India, July 2011.

Invited Talks

1. "Bismuth-alloyed antimony selenide thin films for short wavelength infrared region solar cell applications" – Department of Materials Science & Engineering, Indian Institute of Technology Kanpur, May 2022.