# Udai P Singh

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 73 papers | 1,375 citations | 623734 14 h-index | 361022 35 g-index |
| 74 all docs | 74 docs citations | 74 times ranked | 1757 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Copper indium gallium selenide based solar cells â€“ a review. Energy and Environmental Science, 2017, 10, 1306-1319. | 30.8 | 522 |
| 2 | Numerical modelling and analysis of earth abundant Sb2S3 and Sb2Se3 based solar cells using SCAPS-1D. Solar Energy Materials and Solar Cells, 2021, 230, 111184. | 6.2 | 112 |
| 3 | Progress in Polycrystalline Thin-Film Cu(In,Ga)<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mtext>Se</mml:mtext><mml:mtext>2</mml:mtext></mml:msub></mml:mrow></mml:math> Cells. International Journal of Photoenergy, 2010, 2010, 1-19. | 2.6 | 82 |
| 4 | Inorganic photovoltaics â€“ Planar and nanostructured devices. Progress in Materials Science, 2016, 82, 294-404. | 32.8 | 50 |
| 5 | Surface sulfurization studies of Cu(InGa)Se2 thin film. Solar Energy Materials and Solar Cells, 2006, 90, 623-630. | 6.2 | 33 |
| 6 | Effect of substrate on the structural, optical and electrical properties of SnS thin films grown by thermal evaporation method. Thin Solid Films, 2018, 645, 97-101. | 1.8 | 32 |
| 7 | Application of ionic liquid doped solid polymer electrolyte. Ionics, 2010, 16, 645-648. | 2.4 | 27 |
| 8 | Impact of substrate temperature on the structural, optical and electrical properties of thermally evaporated SnS thin films. Materials Science in Semiconductor Processing, 2016, 56, 381-385. | 4.0 | 26 |
| 9 | Impact of rapid thermal annealing on structural, optical and electrical properties of DC sputtered doped and co-doped ZnO thin film. Applied Surface Science, 2014, 288, 411-415. | 6.1 | 25 |
| 10 | Graded band gap structure of kesterite material using bilayer of CZTS and CZTSe for enhanced performance: A numerical approach. Solar Energy, 2021, 216, 601-609. | 6.1 | 22 |
| 11 | Impact of Al and Ga co-doping with different proportion in ZnO thin film by DC magnetron sputtering. Journal of Materials Science: Materials in Electronics, 2016, 27, 7161-7166. | 2.2 | 21 |
| 12 | Annealing induced AgInSe2 formation from Ag/In/Ag/In multilayer film for solar cell absorbing layer. Optical Materials, 2018, 84, 618-624. | 3.6 | 20 |
| 13 | Bilayer CIGS-based solar cell device for enhanced performance: a numerical approach. Applied Physics A: Materials Science and Processing, 2021, 127, 1. | 2.3 | 19 |
| 14 | Study of thickness and temperature dependence on the performance of SnS based solar cell by SCAPS-1D. Materials Today: Proceedings, 2021, 39, 1833-1837. | 1.8 | 17 |
| 15 | Post-growth annealing effect on the performance of Cu<sub>2</sub>SnSe<sub>3</sub> solar cells. Materials Research Express, 2018, 5, 105505. | 1.6 | 16 |
| 16 | Performance optimization of lead free-MASnI3/CIGS heterojunction solar cell with 28.7% efficiency: A numerical approach. Optical Materials, 2021, 122, 111812. | 3.6 | 16 |
| 17 | Surface sulfurization studies of thin film Cu(InGa)Se2 solar cells. Vacuum, 2009, 83, 1344-1349. | 3.5 | 15 |
| 18 | Effect of low energy proton beam irradiation on structural and electrical properties of ZnO:Al thin films. Materials Science in Semiconductor Processing, 2017, 63, 76-82. | 4.0 | 14 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | A Modified Polysaccharideâ€Based Hydrogel for Enhanced Osteogenic Maturation and Mineralization Independent of Differentiation Factors. Macromolecular Bioscience, 2017, 17, 1600268. | 4.1 | 14 |
| 20 | Numerical modeling and performance analysis of Sb-based tandem solar cell structure using SCAPS â€“ 1D. Optical Materials, 2022, 127, 112282. | 3.6 | 14 |
| 21 | Synthesis, characterization of TiO2nano particles for enhancement of electron transport application in DSSC with Cu-BPCA Dye. IOP Conference Series: Materials Science and Engineering, 2018, 410, 012008. | 0.6 | 13 |
| 22 | Efficient UV photocatalytic dye decomposition activity with cost effective solid state reaction grown Zinc Orthotitanate (Zn2TiO4) nanoparticles. Journal of Alloys and Compounds, 2018, 764, 895-900. | 5.5 | 13 |
| 23 | Effect of selenization temperature on the formation of CZTSe absorber layer. Applied Physics A: Materials Science and Processing, 2019, 125, 1. | 2.3 | 13 |
| 24 | Surface evolution of titanium oxide thin film with swift heavy ion irradiation. Radiation Effects and Defects in Solids, 2011, 166, 571-577. | 1.2 | 12 |
| 25 | Preparation of Cu2ZnSnS4 thin film by a simple and cost effective route using metallic precursors and effect of selenization on these films. Journal of Renewable and Sustainable Energy, 2013, 5, 053131. | 2.0 | 12 |
| 26 | Influence of oxygen during deposition on chemically deposited CdS film. Thin Solid Films, 2013, 527, 147-150. | 1.8 | 12 |
| 27 | Impact of post-deposition annealing in Cu2SnS3 thin film solar cells prepared by doctor blade method. Vacuum, 2018, 156, 298-301. | 3.5 | 12 |
| 28 | Impact of pre-annealing temperature on the formation of Cu2ZnSnS4 absorber layer. Journal of Alloys and Compounds, 2015, 648, 332-337. | 5.5 | 11 |
| 29 | Effect of HCl and NH4OH etching on CZTSSe absorber layer. Vacuum, 2018, 155, 336-338. | 3.5 | 11 |
| 30 | Performance optimization of single graded CIGS absorber and buffer layers for high efficiency: A numerical approach. Superlattices and Microstructures, 2022, 161, 107094. | 3.1 | 11 |
| 31 | Acceptor states in Pd/n-GaAs devices and effect of hydrogenation. Semiconductor Science and Technology, 1991, 6, 1126-1129. | 2.0 | 10 |
| 32 | Post-Deposition Sulfur Incorporation into CuInSe<sub>2</sub> Thin Films. Materials Research Society Symposia Proceedings, 2001, 668, 1. | 0.1 | 10 |
| 33 | Enhancement of Li <sup>+</sup> ion conductivity in solid polymer electrolytes using surface tailored porous silica nanofillers. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2016, 7, 035011. | 1.5 | 10 |
| 34 | Effect of Substrate on the Structural, Optical and Electrical Properties of CuSnS Thin Films Prepared by Doctor Blade Method. Materials Today: Proceedings, 2017, 4, 12529-12535. | 1.8 | 9 |
| 35 | Kesterite based thin film absorber layers from ball milled precursors. Journal of Materials Science: Materials in Electronics, 2016, 27, 12412-12417. | 2.2 | 8 |
| 36 | Stability factors of perovskite (CH3NH3PbI3) thinfilms for solar cell applications: A study. Materials Today: Proceedings, 2021, 39, 1829-1832. | 1.8 | 8 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Optimization of selenization parameters for fabrication of CZTSe thin film. Superlattices and Microstructures, 2020, 144, 106578. | 3.1 | 8 |
| 38 | Enhancement of structural & opt- electronic properties of vacuum processed Cu2ZnSnS4 thin film by thiourea treatment. Journal of Alloys and Compounds, 2017, 708, 181-186. | 5.5 | 7 |
| 39 | Donor states in Pd/p-GaAs devices and the effect of hydrogenation. Semiconductor Science and Technology, 1995, 10, 1368-1375. | 2.0 | 6 |
| 40 | Impact of sputtering power on the properties of Al and Ga co-sputtered ZnO thin films. Journal of Materials Science: Materials in Electronics, 2015, 26, 4280-4284. | 2.2 | 6 |
| 41 | Effect of post annealing on the properties of aluminium doped Zinc oxide thin films deposited by DC sputtering. Materials Today: Proceedings, 2021, 39, 1821-1828. | 1.8 | 6 |
| 42 | Impact of germanium nano layer on the CZTSe absorber layer properties. Materials Science in Semiconductor Processing, 2022, 138, 106276. | 4.0 | 6 |
| 43 | Study of hydrogen in hydrogenated Pd/semiconductor device by ERDA. Vacuum, 1996, 47, 1427-1429. | 3.5 | 5 |
| 44 | CZTSSe absorber layer formation and impact of annealing process on its properties. Journal of Materials Science: Materials in Electronics, 2019, 30, 1100-1108. | 2.2 | 5 |
| 45 | Optical performance of europium-doped Î² gallium oxide PVD thin films. Journal of Materials Science: Materials in Electronics, 2021, 32, 3958-3965. | 2.2 | 5 |
| 46 | Silver incorporated bilayer Kesterite solar cell for enhanced device performance: A numerical study. Solar Energy, 2022, 233, 1-10. | 6.1 | 5 |
| 47 | 50ÂkeV H<sup>+</sup> ion beam irradiation of Al doped ZnO thin films: Studies of radiation stability for device applications. Surface and Interface Analysis, 2017, 49, 1279-1286. | 1.8 | 4 |
| 48 | Nanostructure PEOâ€Silica Hybrids: A New Class of Additive Material for Composite Polymer Electrolytes. ChemistrySelect, 2017, 2, 12019-12027. | 1.5 | 4 |
| 49 | Co-sputtering of Lu<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub> and Ga<sub>2</sub>O<sub>3</sub> for optoelectronics applications. IOP Conference Series: Materials Science and Engineering, 2020, 872, 012062. | 0.6 | 4 |
| 50 | Influence of substrate heating on structural, optical and electrical properties of CdS thin film deposited from precursor solutions. Journal of Materials Science: Materials in Electronics, 2017, 28, 6560-6565. | 2.2 | 3 |
| 51 | 100ÂkeV H<sup>+</sup> ion irradiation of asâ€deposited Alâ€doped ZnO thin films: An interest in tailoring surface morphology for sensor applications. Surface and Interface Analysis, 2018, 50, 705-712. | 1.8 | 3 |
| 52 | Variation of different layer parameters in a CZTS based solar cell for optimum performance: A simulative approach. Materials Today: Proceedings, 2021, 39, 1876-1883. | 1.8 | 3 |
| 53 | Impact of buffer layers on the performance of graded CIGS solar cells: a numerical approach. Applied Physics A: Materials Science and Processing, 2021, 127, 1. | 2.3 | 3 |
| 54 | Impact of capping during the formation of Cu2ZnSn(S,Se)4 thin films. Materials Science in Semiconductor Processing, 2016, 50, 55-60. | 4.0 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Optimization of Selenization and Sintering Conditions of DC Magnetron Sputtered Ag/In/Ag/In Multi-Layer Metal Precursor for Preparation of AgInSe2 Thin Films. Advanced Science Letters, 2014, 20, 631-634. | 0.2 | 2 |
| 56 | A numerical study on defect densities of double absorber CH3NH3PbI3/CIGS solar cell. Materials Today: Proceedings, 2022, 62, 987-991. | 1.8 | 2 |
| 57 | Influence of defect densities on perovskite (CH3NH3PbI3) solar Cells: Correlation of experiment and simulation. Materials Today: Proceedings, 2022, , . | 1.8 | 2 |
| 58 | Hydrogenation studies in p-GaAs. Semiconductor Science and Technology, 1998, 13, 1219-1224. | 2.0 | 1 |
| 59 | Analysis of chemically deposited SnS thin film for solar cell application. , 2015, , . | | 1 |
| 60 | A Comparative study of kesterite thin films prepared from different ball milled precursors. Materials Today: Proceedings, 2017, 4, 12536-12544. | 1.8 | 1 |
| 61 | Effect of Annealing on the Thin Cu<sub>2</sub>Sn(S<sub>x</sub>,Se<sub>1-x</sub>)<sub>3</sub> Films deposited by Chemical Route. , 2018, , . | | 1 |
| 62 | Cu<sub>2</sub>ZnSn(S,Se)<sub>4</sub> absorber layer formation and characterization using solution dip coating and selenization method. Materials Research Express, 2019, 6, 126456. | 1.6 | 1 |
| 63 | Effect of Ge & ZnO inter-layer on the properties of CZTSSe absorber layer. Materials Today: Proceedings, 2021, 39, 1843-1847. | 1.8 | 1 |
| 64 | Direct Transformation of Amorphous to Preferentially Oriented Rutile Phase in DC Sputtered TiO2 Thin Film. Advanced Science Letters, 2014, 20, 638-642. | 0.2 | 1 |
| 65 | Formation of Cu(InGa)Se<inf>2</inf> thin films by selenization using Se vapour. , 2009, , . | | 0 |
| 66 | Preparation and evaluation of Cu<inf>2</inf>ZnSnS<inf>4</inf> thin films using non vacuum low cost technique. , 2013, , . | | 0 |
| 67 | Preface to Special Topic: Selected Papers from the International Conference on Solar Energy Photovoltaic, Bhubaneswar, India, 2012. Journal of Renewable and Sustainable Energy, 2013, 5, 031501. | 2.0 | 0 |
| 68 | International Conference on Solar Energy Photovoltaics. Conference Papers in Energy, 2013, 2013, 1-1. | 0.6 | 0 |
| 69 | Fabrication and characterization of pristine and annealed Ga doped ZnO thin films using sputtering. AIP Conference Proceedings, 2016, , . | 0.4 | 0 |
| 70 | Structural and electrical properties of Al doped ZnO thin film grown on different substrates. , 2016, , . | | 0 |
| 71 | Deposition of Al:ZnO thin film by DC magnetron sputtering in presence of hydrogen. AIP Conference Proceedings, 2017, , . | 0.4 | 0 |
| 72 | Macromol. Biosci. 3/2017. Macromolecular Bioscience, 2017, 17, . | 4.1 | 0 |

| # | ARTICLE | IF | CITATIONS |
|---|---|---|---|
| 73 | Formation of CZTSSe absorber layer using thiourea treatment of CZTSe. Materials Today: Proceedings, 2021, 39, 1838-1842. | 1.8 | 0 |