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	Impact of germanium nano layer on the CZTSe absorber layer properties. Materials Science in Semiconductor Processing, 2022, 138, 106276.	4.0	6
2	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
3	Silver incorporated bilayer Kesterite solar cell for enhanced device performance: A numerical study. Solar Energy, 2022, 233, 1-10.	6.1	5
4	Numerical modeling and performance analysis of Sb-based tandem solar cell structure using SCAPS â€“ 1D. Optical Materials, 2022, 127, 112282.	3.6	14
5	A numerical study on defect densities of double absorber CH3NH3PbI3/CIGS solar cell. Materials Today: Proceedings, 2022, 62, 987-991.	1.8	2
6	Influence of defect densities on perovskite (CH3NH3PbI3) solar Cells: Correlation of experiment and simulation. Materials Today: Proceedings, 2022, , .	1.8	2
7	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
8	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
9	Stability factors of perovskite (CH3NH3PbI3) thinfilms for solar cell applications: A study. Materials Today: Proceedings, 2021, 39, 1829-1832.	1.8	8
10	Effect of Ge & ZnO inter-layer on the properties of CZTSSe absorber layer. Materials Today: Proceedings, 2021, 39, 1843-1847.	1.8	1
11	Formation of CZTSSe absorber layer using thiourea treatment of CZTSe. Materials Today: Proceedings, 2021, 39, 1838-1842.	1.8	0
12	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
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	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
15	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
16	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
17	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
18	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

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19	Co-sputtering of Lu₂O₃, Eu₂O₃ and Ga₂O₃ for optoelectronics applications. IOP Conference Series: Materials Science and Engineering, 2020, 872, 012062.	0.6	4
20	Optimization of selenization parameters for fabrication of CZTSe thin film. Superlattices and Microstructures, 2020, 144, 106578.	3.1	8
21	Effect of selenization temperature on the formation of CZTSe absorber layer. Applied Physics A: Materials Science and Processing, 2019, 125, 1.	2.3	13
22	Cu₂ZnSn(S,Se)₄ absorber layer formation and characterization using solution dip coating and selenization method. Materials Research Express, 2019, 6, 126456.	1.6	1
23	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
24	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
25	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
26	Effect of Annealing on the Thin Cu₂Sn(S_x,Se_{1-x})₃ Films deposited by Chemical Route. , 2018, , .		1
27	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
28	Impact of post-deposition annealing in Cu2SnS3 thin film solar cells prepared by doctor blade method. Vacuum, 2018, 156, 298-301.	3.5	12
29	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
30	Post-growth annealing effect on the performance of Cu₂SnSe₃ solar cells. Materials Research Express, 2018, 5, 105505.	1.6	16
31	100ÂkeV H⁺ 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
32	Effect of HCl and NH4OH etching on CZTSSe absorber layer. Vacuum, 2018, 155, 336-338.	3.5	11
33	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
34	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
35	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
36	Copper indium gallium selenide based solar cells â€“ a review. Energy and Environmental Science, 2017, 10, 1306-1319.	30.8	522

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37	Deposition of Al:ZnO thin film by DC magnetron sputtering in presence of hydrogen. AIP Conference Proceedings, 2017, , .	0.4	0
38	Macromol. Biosci. 3/2017. Macromolecular Bioscience, 2017, 17, .	4.1	0
39	50ÂkeV H⁺ 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
40	A Modified Polysaccharideâ€Based Hydrogel for Enhanced Osteogenic Maturation and Mineralization Independent of Differentiation Factors. Macromolecular Bioscience, 2017, 17, 1600268.	4.1	14
41	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
42	A Comparative study of kesterite thin films prepared from different ball milled precursors. Materials Today: Proceedings, 2017, 4, 12536-12544.	1.8	1
43	Nanostructure PEOâ€Silica Hybrids: A New Class of Additive Material for Composite Polymer Electrolytes. ChemistrySelect, 2017, 2, 12019-12027.	1.5	4
44	Fabrication and characterization of pristine and annealed Ga doped ZnO thin films using sputtering. AIP Conference Proceedings, 2016, , .	0.4	0
45	Structural and electrical properties of Al doped ZnO thin film grown on different substrates. , 2016, , .		0
46	Enhancement of Li ⁺ 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
47	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
48	Inorganic photovoltaics â€“ Planar and nanostructured devices. Progress in Materials Science, 2016, 82, 294-404.	32.8	50
49	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
50	Kesterite based thin film absorber layers from ball milled precursors. Journal of Materials Science: Materials in Electronics, 2016, 27, 12412-12417.	2.2	8
51	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
52	Impact of pre-annealing temperature on the formation of Cu2ZnSnS4 absorber layer. Journal of Alloys and Compounds, 2015, 648, 332-337.	5.5	11
53	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
54	Analysis of chemically deposited SnS thin film for solar cell application. , 2015, , .		1

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55	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
56	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
57	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
58	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
59	Preparation and evaluation of Cu<inf>2</inf>ZnSnS<inf>4</inf> thin films using non vacuum low cost technique. , 2013, , .		0
60	Influence of oxygen during deposition on chemically deposited CdS film. Thin Solid Films, 2013, 527, 147-150.	1.8	12
61	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
62	International Conference on Solar Energy Photovoltaics. Conference Papers in Energy, 2013, 2013, 1-1.	0.6	0
63	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
64	Application of ionic liquid doped solid polymer electrolyte. Ionics, 2010, 16, 645-648.	2.4	27
65	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
66	Formation of Cu(InGa)Se<inf>2</inf> thin films by selenization using Se vapour. , 2009, , .		0
67	Surface sulfurization studies of thin film Cu(InGa)Se2 solar cells. Vacuum, 2009, 83, 1344-1349.	3.5	15
68	Surface sulfurization studies of Cu(InGa)Se2 thin film. Solar Energy Materials and Solar Cells, 2006, 90, 623-630.	6.2	33
69	Post-Deposition Sulfur Incorporation into CuInSe₂ Thin Films. Materials Research Society Symposia Proceedings, 2001, 668, 1.	0.1	10
70	Hydrogenation studies in p-GaAs. Semiconductor Science and Technology, 1998, 13, 1219-1224.	2.0	1
71	Study of hydrogen in hydrogenated Pd/semiconductor device by ERDA. Vacuum, 1996, 47, 1427-1429.	3.5	5
72	Donor states in Pd/p-GaAs devices and the effect of hydrogenation. Semiconductor Science and Technology, 1995, 10, 1368-1375.	2.0	6

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73	Acceptor states in Pd/n-GaAs devices and effect of hydrogenation. Semiconductor Science and Technology, 1991, 6, 1126-1129.	2.0	10