Sudhanshu Mallick

List of Publications by Year
in descending order

88	1,850	279798 23	302126 39
papers	citations	h-index	g-index

90	90	90	2418
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Comparison of Crosslinking Kinetics of UV-Transparent Ethylene-Vinyl Acetate Copolymer and Polyolefin Elastomer Encapsulants. Polymers, 2022, 14, 1441.	4.5	11
2	All Roomâ€Temperatureâ€Processed Carbonâ€Based Flexible Perovskite Solar Cells with TiO₂ Electron Collection Layer. Energy Technology, 2022, 10, .	3.8	4
3	Nanoparticles based single and tandem stable solar selective absorber coatings with wide angular solar absorptance. Solar Energy Materials and Solar Cells, 2022, 242, 111758.	6.2	7
4	UV resilient thermoplastic polyolefin encapsulant for photovoltaic module encapsulation. Polymer Degradation and Stability, 2022, 201, 109972.	5.8	6
5	A facile co-precipitation method for synthesis of Zn doped BaSnO3 nanoparticles for photovoltaic application. Materials Chemistry and Physics, 2021, 258, 123939.	4.0	8
6	Natural solvent facilitated high-shear exfoliated graphene nanoplatelets enabled economically-efficient and stable DSSC. Materials Letters, 2021, 287, 129263.	2.6	9
7	Characterization of reliability of anti-soiling coatings using tapping mode-AFM phase imaging. Journal of Renewable and Sustainable Energy, 2021, 13, .	2.0	7
8	Damp heat resilient thermoplastic polyolefin encapsulant for photovoltaic module encapsulation. Solar Energy Materials and Solar Cells, 2021, 224, 111024.	6.2	17
9	Impact of different brush designs in robotic cleaning on the degradation of anti-soiling coatings. , 2021, , .		2
10	Recent advances and challenges in solar photovoltaic and energy storage materials: future directions in Indian perspective. JPhys Energy, 2021, 3, 034018.	5.3	10
11	Ambient condition curable, highly weather stable anti-soiling coating for photovoltaic application. Solar Energy Materials and Solar Cells, 2021, 230, 111203.	6.2	8
12	Enhanced charge transport in low temperature carbon-based n-i-p perovskite solar cells with NiOx-CNT hole transport material. Solar Energy Materials and Solar Cells, 2021, 230, 111241.	6.2	19
13	Photodynamic therapy using graphene quantum dot derivatives. Journal of Solid State Chemistry, 2020, 282, 121107.	2.9	32
14	Binder-solvent effects on low temperature-processed carbon-based, hole-transport layer free perovskite solar cells. Materials Chemistry and Physics, 2020, 256, 123594.	4.0	28
15	Carbon nano-onion-powered optically transparent and economical dye-sensitized solar cells. Nanoscale, 2020, 12, 20621-20630.	5.6	18
16	Additive engineering of 4, 4â€²-Bis (N-carbazolyl)-1, 1â€²-biphenyl (CBP) molecules for defects passivation and moisture stability of hybrid perovskite layer. Solar Energy, 2020, 211, 1084-1091.	6.1	6
17	Conventional or Microwave Sintering: A Comprehensive Investigation to Achieve Efficient Clean Energy Harvesting. Energies, 2020, 13, 6208.	3.1	2
18	Earlyâ€stage identification of encapsulants photobleaching and discoloration in crystalline silicon photovoltaic module laminates. Progress in Photovoltaics: Research and Applications, 2020, 28, 767-778.	8.1	15

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19	Investigation of newly developed thermoplastic polyolefin encapsulant principle properties for the c-Si PV module application. Materials Chemistry and Physics, 2020, 243, 122660.	4.0	23
20	Platinum and Transparent Conducting Oxide Free Graphene-CNT Composite Based Counter-Electrodes for Dye-Sensitized Solar Cells. Surface Engineering and Applied Electrochemistry, 2019, 55, 472-480.	0.8	3
21	Multipodal formation of Tio2 nanotubes using anodization. AIP Conference Proceedings, 2019, , .	0.4	2
22	A simple method to fabricate metal doped TiO2 nanotubes. Chemical Physics, 2019, 523, 198-204.	1.9	18
23	Radiative and conductive thermal annealing of hybrid organic-inorganic perovskite layer. Solar Energy Materials and Solar Cells, 2019, 195, 353-357.	6.2	9
24	Determination of Crystallinity, Composition, and Thermal stability of Ethylene Vinyl Acetate Encapsulant used for PV Module Lamination. , 2019, , .		3
25	Correlating the Hot Spots and Power Degradation seen in crystalline silicon modules in All India Survey of PV Module Reliability 2018. , 2019, , .		0
26	Determination of Crystallinity and Thermal Stability of Newly Developed Thermoplastic Polyolefin Encapsulant for the c-Si PV Module Application. , 2019, , .		2
27	Hole transport layer free stable perovskite solar cell with low temperature processed carbon electrodes. , 2019, , .		4
28	Newly developed thermoplastic polyolefin encapsulantâ€“A potential candidate for crystalline silicon photovoltaic modules encapsulation. Solar Energy, 2019, 194, 581-588.	6.1	46
29	Electronic band structure and carrier concentration of formamidiniumâ€“cesium mixed cation lead mixed halide hybrid perovskites. Applied Physics Letters, 2018, 112, .	3.3	54
30	Enhanced photovoltaic performance of a dye sensitized solar cell with Cu/N Co-doped TiO2 nanoparticles. Journal of Materials Science: Materials in Electronics, 2018, 29, 6274-6282.	2.2	25
31	Electrolyte pH dependent controlled growth of co-electrodeposited CZT films for application in CZTS based thin film solar cells. Journal of Materials Science: Materials in Electronics, 2018, 29, 4065-4074.	2.2	15
32	Few layers graphene based conductive composite inks for Pt free stainless steel counter electrodes for DSSC. Solar Energy, 2018, 169, 67-74.	6.1	28
33	Titania Nanobelts as a Scattering Layer with Cu2ZnSnS4 as a Counter Electrode for DSSC with Improved Efficiency. Materials Today: Proceedings, 2018, 5, 23351-23357.	1.8	5
34	Stability study of co-electrodeposited CZTS counter electrode for dye sensitized solar cells. Solar Energy, 2018, 176, 325-333.	6.1	20
35	Lead free, air stable perovskite derivative Cs2SnI6 as HTM in DSSCs employing TiO2 nanotubes as photoanode. Materials Research Bulletin, 2018, 108, 113-119.	5.2	24
36	Novel High Pressure Exfoliated Graphene-Based Semitransparent Stable DSSCs for Building Integrated Photovoltaics. ACS Applied Energy Materials, 2018, 1, 2512-2519.	5.1	22

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37	Novel high-pressure airless spray exfoliation method for graphene nanoplatelets as a stable counter electrode in DSSC. Electrochimica Acta, 2018, 285, 86-93.	5.2	33
38	Cu2ZnSnSe4 QDs sensitized electrospun porous TiO2 nanofibers as photoanode for high performance QDSC. Solar Energy, 2018, 171, 571-579.	6.1	34
39	Water-Based High Shear Exfoliated Graphene-Based Semi-Transparent Stable Dye-Sensitized Solar Cells for Solar Power Window Application. IEEE Journal of Photovoltaics, 2018, 8, 1252-1258.	2.5	16
40	Synthesis and characterization of carbon based counter electrode for dye sensitized solar cells (DSSCs) using sugar free as a carbon material. Solar Energy, 2017, 144, 215-220.	6.1	68
41	High efficiency dye sensitized solar cell made by carbon derived from sucrose. Optical Materials, 2017, 64, 401-405.	3.6	25
42	Sb2S3 Nanorods Based Electrochemical Catalyst for Triiodide Reduction in Dye-Sensitized Solar Cells. Journal of Electronic Materials, 2017, 46, 1926-1930.	2.2	11
43	Effect of annealing atmosphere on quaternary chalcogenide-based counter electrodes in dye-sensitized solar cell performance: synthesis of Cu₂FeSnS₄ and Cu₂CdSnS₄ nanoparticles by thermal decomposition process. RSC Advances, 2017, 7, 15139-15148.	3.6	28
44	One-dimensional TiO2 nanostructured photoanode for dye-sensitized solar cells by hydrothermal synthesis. Journal of Materials Science: Materials in Electronics, 2017, 28, 11528-11533.	2.2	11
45	Experimental evaluation of room temperature crystallization and phase evolution of hybrid perovskite materials. CrystEngComm, 2017, 19, 3834-3843.	2.6	43
46	Influence of TiCl4 precursor in hydrothermal synthesis of TiO2 nanostructures. AIP Conference Proceedings, 2017, , .	0.4	1
47	Synthesis of dendritic-flowers of wurtzite Cu2ZnSnS4 via solvothermal process. AIP Conference Proceedings, 2017, , .	0.4	0
48	Liquid phase high shear exfoliated graphene nanoplatelets as counter electrode material for dye-sensitized solar cells. Journal of Colloid and Interface Science, 2017, 499, 9-16.	9.4	34
49	TiO 2 colloid-based compact layers for hybrid lead halide perovskite solar cells. Applied Materials Today, 2017, 7, 112-119.	4.3	24
50	Tetragonal nanostructured zirconia modified hematite mesoporous composite for efficient adsorption of toxic cations from wastewater. Journal of Environmental Chemical Engineering, 2017, 5, 5285-5292.	6.7	6
51	Influence of dipping cycles on physical, optical, and electrical properties of Cu2NiSnS4: Direct solution dip coating for photovoltaic applications. Journal of Alloys and Compounds, 2017, 725, 510-518.	5.5	36
52	Electrochemical Method To Prepare Graphene Quantum Dots and Graphene Oxide Quantum Dots. ACS Omega, 2017, 2, 8343-8353.	3.5	213
53	Electrochemical Synthesis of Novel Zn-Doped TiO2 Nanotube/ZnO Nanoflake Heterostructure with Enhanced DSSC Efficiency. Nano-Micro Letters, 2016, 8, 381-387.	27.0	23
54	Combinatorial Chemical Bath Deposition of CdS Contacts for Chalcogenide Photovoltaics. ACS Combinatorial Science, 2016, 18, 583-589.	3.8	23

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55	Effect of solvent, reaction time on morphology of Cu2ZnSnS4 (CZTS) nanoparticles and its application in Dye Sensitized Solar Cells. Materials Today: Proceedings, 2016, 3, 1778-1784.	1.8	14
56	Cu2ZnSnS4/CNT composites as Pt free counter electrodes for dye sensitized solar cells with improved efficiency. Materials Today: Proceedings, 2016, 3, 1808-1814.	1.8	9
57	Alternative quaternary chalcopyrite sulfides (Cu2FeSnS4 and Cu2CoSnS4) as electrocatalyst materials for counter electrodes in dye-sensitized solar cells. Journal of Power Sources, 2016, 305, 134-143.	7.8	92
58	Electrospun TiC embedded CNFs as a low cost platinum-free counter electrode for dye-sensitized solar cell. Materials Research Bulletin, 2016, 75, 83-90.	5.2	38
59	Facile Synthesis of Cu₂ZnSnS₄ Nanoparticles by Thermal Decomposition Process and Application in Dye-Sensitized Solar Cells. Advanced Science Letters, 2016, 22, 1026-1028.	0.2	2
60	Synthesis and Photoresponse of Cu2CoSnS4 (CCoTS) Nanoparticles. Advanced Science Letters, 2016, 22, 1067-1070.	0.2	1
61	Synthesis and Characterization of Cu2NiSnS4 Nanoparticles for Photovoltaic Applications. Advanced Science Letters, 2016, 22, 1038-1041.	0.2	1
62	Fabrication Of Cost Effective Pt And FTO-Free Counter Electrode For ZnO Based Dye Sensitized Solar Cell Using Thermally Decomposed Cu2ZnSnS4 Nanoparticles. Advanced Materials Letters, 2016, 7, 861-865.	0.6	0
63	Palladium and platinum-palladium bi-layer based counter electrode for dye-sensitized solar cells with modified photoanode. AIP Conference Proceedings, 2015, , .	0.4	1
64	Synthesis and characterization of magnetic semiconducting Cu2CoSnS4 nanoparticles. AIP Conference Proceedings, 2015, , .	0.4	4
65	A novel cost effective fabrication technique for highly preferential oriented TiO₂ nanotubes. Nanoscale, 2015, 7, 20386-20390.	5.6	28
66	Solution processed Cu2NiSnS4 nanoparticles: Potential absorber material for thin film solar cells. , 2015, , .		3
67	Study of structural, optical and electrical properties of solution processed Cu2CoSnS4 absorber layer for thin film solar cells. , 2015, , .		1
68	Tin Incorporation in AgInSe₂ Thin Films: Influence on Conductivity. Journal of Physical Chemistry C, 2015, 119, 5727-5733.	3.1	13
69	Graphene quantum dots decorated electrospun TiO2 nanofibers as an effective photoanode for dye sensitized solar cells. Solar Energy Materials and Solar Cells, 2015, 143, 250-259.	6.2	90
70	Low temperature fabrication and characterization of wurtzite structured ZnS quantum dots by chemical spray pyrolysis. Journal of Analytical and Applied Pyrolysis, 2015, 115, 96-102.	5.5	18
71	Mechanism of titania nanograss formation during anodization. Chemical Physics Letters, 2015, 626, 15-19.	2.6	15
72	Mechanism of Formation of Faceted Titania Nanoparticles from Anodized Titania Nanotubes. Journal of Physical Chemistry C, 2015, 119, 9574-9579.	3.1	4

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73	Low-temperature synthesis of Cu₂CoSnS₄ nanoparticles by thermal decomposition of metal precursors and the study of its structural, optical and electrical properties for photovoltaic applications. RSC Advances, 2015, 5, 96928-96933.	3.6	56
74	A simple route to making counter electrode for dye sensitized solar cells (DSSCs) using sucrose as carbon precursor. Journal of Colloid and Interface Science, 2015, 459, 146-150.	9.4	40
75	RF Sputtered Iridium (Ir) Film as a Counter Electrode for Dye-Sensitized Solar Cells. Journal of Electronic Materials, 2015, 44, 4400-4404.	2.2	9
76	Fabrication of low cost Cu<inf>2</inf>CdSnS<inf>4</inf> based counter electrode for dye sensitized solar cells. , 2014, , .		1
77	Synthesis of Cu2ZnSnS4 nanoparticles by solution based solid state reaction process and its application in dye sensitized solar cell as counter electrode. , 2014, , .		1
78	Low Temperature Synthesis and Characterization of Cu2ZnSnS4 (CZTS) Nanoparticle by Solution Based Solid State Reaction Method. Energy Procedia, 2014, 57, 73-78.	1.8	12
79	Synthesis of highly crystalline ‘particle in tube’ TiO<inf>2</inf> nanostructures and its application in dye sensitized solar cells. , 2014, , .		0
80	Anomalous magnetic behavior in nanocomposite materials of reduced graphene oxide-Ni/NiFe2O4. Applied Physics Letters, 2014, 105, .	3.3	22
81	Fabrication of dye sensitized solar cells with cost-effective quaternary sulfide counter electrode. , 2014, , .		1
82	Study of optimization of Zn salt concentration in co-electrodeposited Cu<inf>2</inf>ZnSnS<inf>4</inf> (CZTS) thin films. , 2014, , .		0
83	Synthesis of Cu2NiSnS4 nanoparticles by hot injection method for photovoltaic applications. Materials Letters, 2014, 137, 440-443.	2.6	62
84	Single step synthesis of chalcogenide nanoparticles Cu2ZnSnS4, Cu2FeSnS4 by thermal decomposition of metal precursors. Materials Chemistry and Physics, 2014, 147, 371-374.	4.0	45
85	Simple electrochemical synthesis of black metal oxides for enhanced visible light absorption. Materials Letters, 2014, 130, 131-134.	2.6	2
86	Dye Sensitized Solar Cells: A Review. Transactions of the Indian Ceramic Society, 2012, 71, 1-16.	1.0	97
87	Mechanism of structural transformation in bismuth titanate. Applied Physics Letters, 2005, 86, 182902.	3.3	14
88	Effect of Nanograss and Annealing Temperature on TiO₂ Nanotubes Based Dye Sensitized Solar Cells. Materials Science Forum, 0, 771, 103-113.	0.3	8