Ashraf Uddin

List of Publications by Year
in descending order

105 papers	5,866 citations	116194 36 h-index	87275 74 g-index
106 all docs	106 docs citations	106 times ranked	8629 citing authors

#	Article	IF	Citations
1	Recognizing Hand Gestures Using Solar Cells. IEEE Transactions on Mobile Computing, 2023, 22, 4223-4235.	3.9	2
2	Progress and Challenges of SnO₂ Electron Transport Layer for Perovskite Solar Cells: A Critical Review. Solar Rrl, 2022, 6, .	3.1	44
3	Organic solar cells. , 2022, , 25-55.		6
4	Defects and stability of perovskite solar cells: a critical analysis. Materials Chemistry Frontiers, 2022, 6, 400-417.	3.2	68
5	Increased Efficiency of Organic Solar Cells by Seeded Control of the Molecular Morphology in the Active Layer. Solar Rrl, 2022, 6, .	3.1	5
6	Solar Perovskite Technologies. , 2022, , .		1
7	Progress in Semitransparent Organic Solar Cells. Solar Rrl, 2021, 5, 2100041.	3.1	44
8	Ternary organic solar cells based on non-fullerene acceptors: A review. Organic Electronics, 2021, 90, 106063.	1.4	62
9	Stability Issues of Perovskite Solar Cells: A Critical Review. Energy Technology, 2021, 9, 2100560.	1.8	31
10	Thermal annealing dependent dielectric properties and energetic disorder in PffBT4T-2OD based organic solar cells. Materials Science in Semiconductor Processing, 2020, 105, 104750.	1.9	7
11	Tradeâ€Off between Exciton Dissociation and Carrier Recombination and Dielectric Properties in Y6â€Sensitized Nonfullerene Ternary Organic Solar Cells. Energy Technology, 2020, 8, 1900924.	1.8	32
12	Trendsetters in Highâ€Efficiency Organic Solar Cells: Toward 20% Power Conversion Efficiency. Solar Rrl, 2020, 4, 1900342.	3.1	66
13	Small molecular material as an interfacial layer in hybrid inverted structure perovskite solar cells. Materials Science in Semiconductor Processing, 2020, 108, 104908.	1.9	8
14	Interface Modification Enabled by Atomic Layer Deposited Ultraâ€Thin Titanium Oxide for Highâ€Efficiency and Semitransparent Organic Solar Cells. Solar Rrl, 2020, 4, 2000497.	3.1	15
15	Highâ€Efficiency Nonfullerene Organic Solar Cells Enabled by Atomic Layer Deposited Zirconiumâ€Doped Zinc Oxide. Solar Rrl, 2020, 4, 2000241.	3.1	18
16	Optimising Non-Patterned MoO3/Ag/MoO3 Anode for High-Performance Semi-Transparent Organic Solar Cells towards Window Applications. Nanomaterials, 2020, 10, 1759.	1.9	20
17	Balance between Energy Transfer and Exciton Separation in Ternary Organic Solar Cells with Two Conjugated Polymer Donors. ACS Applied Energy Materials, 2020, 3, 5792-5803.	2.5	27
18	The Air Effect in the Burnâ€In Thermal Degradation of Nonfullerene Organic Solar Cells. Energy Technology, 2020, 8, 1901401.	1.8	20

#	Article	IF	Citations
19	Progress in Stability of Organic Solar Cells. Advanced Science, 2020, 7, 1903259.	5.6	308
20	Thiocyanate assisted nucleation for high performance mix-cation perovskite solar cells with improved stability. Journal of Power Sources, 2020, 466, 228320.	4.0	29
21	Burn-In Degradation Mechanism Identified for Small Molecular Acceptor-Based High-Efficiency Nonfullerene Organic Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 27433-27442.	4.0	38
22	Semitransparent organic solar cells based on PffBT4T-2OD with a thick active layer and near neutral colour perception for window applications. Sustainable Energy and Fuels, 2019, 3, 2456-2463.	2.5	24
23	Solution-processed WO3 and water-free PEDOT:PSS composite for hole transport layer in conventional perovskite solar cell. Electrochimica Acta, 2019, 319, 349-358.	2.6	44
24	Optimisation of annealing temperature for low temperature processed inverted structure Caesium Formamidinium Lead Triiodide perovskite solar cells. Materials Science in Semiconductor Processing, 2019, 102, 104580.	1.9	17
25	SolarGest. , 2019, , .		45
26	Encapsulation of Organic and Perovskite Solar Cells: A Review. Coatings, 2019, 9, 65.	1.2	197
27	Progress in non-fullerene acceptor based organic solar cells. Solar Energy Materials and Solar Cells, 2019, 193, 22-65.	3.0	89
28	Comparative study of light- and thermal-induced degradation for both fullerene and non-fullerene-based organic solar cells. Sustainable Energy and Fuels, 2019, 3, 723-735.	2.5	36
29	Non-Fullerene-Derivative-Dependent Dielectric Properties in High-Performance Ternary Organic Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 1031-1039.	1.5	14
30	Comparative analysis of burn-in photo-degradation in non-fullerene COi8DFIC acceptor based high-efficiency ternary organic solar cells. Materials Chemistry Frontiers, 2019, 3, 1085-1096.	3.2	31
31	Degradation Mechanism Identified for the Fullerene and Non-fullerene based Organic Solar Cells under Ambient Condition. , 2019, , .		0
32	Surface Passivation on PEDOT:PSS in conventional perovskite solar cells. , 2019, , .		0
33	Low-temperature processed efficient and colourful semitransparent perovskite solar cells for building integration and tandem applications. Organic Electronics, 2019, 65, 401-411.	1.4	39
34	Passivation of interstitial and vacancy mediated trap-states for efficient and stable triple-cation perovskite solar cells. Journal of Power Sources, 2018, 383, 59-71.	4.0	40
35	Highly crystalline bilayer electron transport layer for efficient conjugated polymer solar cells. Current Applied Physics, 2018, 18, 505-511.	1.1	9
36	Effect of annealing dependent blend morphology and dielectric properties on the performance and stability of non-fullerene organic solar cells. Solar Energy Materials and Solar Cells, 2018, 176, 109-118.	3.0	60

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37	Data of chemical analysis and electrical properties of SnO2-TiO2 composite nanofibers. Data in Brief, 2018, 18, 860-863.	0.5	2
38	Cesium compounds as interface modifiers for stable and efficient perovskite solar cells. Solar Energy Materials and Solar Cells, 2018, 174, 172-186.	3.0	44
39	V2O5 -PEDOT: PSS bilayer as hole transport layer for highly efficient and stable perovskite solar cells. Organic Electronics, 2018, 53, 66-73.	1.4	63
40	Annealing induced microstructure engineering of antimony tri-selenide thin films. Materials Research Bulletin, 2018, 99, 232-238.	2.7	19
41	Bilayer SnO₂ as Electron Transport Layer for Highly Efficient Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 6027-6039.	2.5	88
42	Relationship Between the Diode Ideality Factor and the Carrier Recombination Resistance in Organic Solar Cells. IEEE Journal of Photovoltaics, 2018, 8, 1701-1709.	1.5	43
43	Effects of Hydroiodic Acid Concentration on the Properties of CsPbI₃ Perovskite Solar Cells. ACS Omega, 2018, 3, 11937-11944.	1.6	83
44	MoS2 incorporated hybrid hole transport layer for high performance and stable perovskite solar cells. Synthetic Metals, 2018, 246, 195-203.	2.1	49
45	Electrospun 3D composite nano-flowers for high performance triple-cation perovskite solar cells. Electrochimica Acta, 2018, 289, 459-473.	2.6	20
46	Realizing 11.3% efficiency in PffBT4T-2OD fullerene organic solar cells via superior charge extraction at interfaces. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	9
47	Optimization of conjugated polymer blend concentration for high performance organic solar cells. Journal of Materials Science: Materials in Electronics, 2018, 29, 16437-16445.	1.1	5
48	Enhanced electron transport enables over 12% efficiency by interface engineering of non-fullerene organic solar cells. Solar Energy Materials and Solar Cells, 2018, 187, 273-282.	3.0	35
49	Ternary blend organic solar cells with a non-fullerene acceptor as a third component to synergistically improve the efficiency. Organic Electronics, 2018, 62, 261-268.	1.4	25
50	Adsorbed carbon nanomaterials for surface and interface-engineered stable rubidium multi-cation perovskite solar cells. Nanoscale, 2018, 10, 773-790.	2.8	31
51	Perovskite Solar Cells. Materials and Energy, 2018, , 285-367.	2.5	1
52	Dopamine-Induced Growth of Au and Ag Nanoparticles on ITO Substrate and Their Application in PCPDTBT-Based Polymer Solar Cell. Plasmonics, 2017, 12, 345-351.	1.8	8
53	Optical modelling of P3HT:PC71BM semi-transparent organic solar cell. Optical and Quantum Electronics, 2017, 49, 1.	1.5	11
54	Controlled nucleation assisted restricted volume solvent annealing for stable perovskite solar cells. Solar Energy Materials and Solar Cells, 2017, 167, 70-86.	3.0	39

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55	Controlled Ostwald ripening mediated grain growth for smooth perovskite morphology and enhanced device performance. Solar Energy Materials and Solar Cells, 2017, 167, 87-101.	3.0	36
56	Photostability of plasma polymerized Î3-terpinene thin films for encapsulation of OPV. Scientific Reports, 2017, 7, 45599.	1.6	27
57	Interfacial engineering of electron transport layer using Caesium Iodide for efficient and stable organic solar cells. Applied Surface Science, 2017, 416, 834-844.	3.1	30
58	Organic solar cells with near 100% efficiency retention after initial burn-in loss and photo-degradation. Thin Solid Films, 2017, 636, 127-136.	0.8	13
59	Plasmonics in Organic and Perovskite Solar Cells: Optical and Electrical Effects. Advanced Optical Materials, 2017, 5, 1600698.	3.6	76
60	Dark carrier dynamics and electrical characteristics of organic solar cells integrated with Ag-SiO2 core-shell nanoparticles. Synthetic Metals, 2017, 223, 34-42.	2.1	4
61	High performance semitransparent organic solar cells with 5% PCE using non-patterned MoO 3 /Ag/MoO 3 anode. Current Applied Physics, 2017, 17, 298-305.	1.1	59
62	High-Efficiency Semitransparent Organic Solar Cells with Non-Fullerene Acceptor for Window Application. ACS Photonics, 2017, 4, 2327-2334.	3.2	95
63	Interfacial engineering of hole transport layers with metal and dielectric nanoparticles for efficient perovskite solar cells. Physical Chemistry Chemical Physics, 2017, 19, 25016-25024.	1.3	15
64	Solution-Processed Lithium-Doped ZnO Electron Transport Layer for Efficient Triple Cation (Rb, MA,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	4.0	70
65	Role of fullerene electron transport layer on the morphology and optoelectronic properties of perovskite solar cells. Organic Electronics, 2017, 50, 279-289.	1.4	34
66	Photo-degradation of high efficiency fullerene-free polymer solar cells. Nanoscale, 2017, 9, 18788-18797.	2.8	47
67	A high performance and low-cost hole transporting layer for efficient and stable perovskite solar cells. Physical Chemistry Chemical Physics, 2017, 19, 21033-21045.	1.3	19
68	Low temperature processed ZnO thin film as electron transport layer for efficient perovskite solar cells. Solar Energy Materials and Solar Cells, 2017, 159, 251-264.	3.0	106
69	Notice of Removal Sensitization of PTB7:PC71BM organic solar cells using Si-PCPDTBT. , 2017, , .		0
70	Perovskite Solar Cells: Progress and Advancements. Energies, 2016, 9, 861.	1.6	106
71	Effect of PCBM film thickness on the performance of inverted perovskite solar cells. , 2016, , .		2
72	Hysteresis and electrode polarization in normal and inverted hybrid perovskite solar cells. , 2016, , .		1

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73	Simultaneous enhancement in stability and efficiency of low-temperature processed perovskite solar cells. RSC Advances, 2016, 6, 86108-86125.	1.7	36
74	Optical modelling of semi-transparent OPV devices. , 2016, , .		1
75	Hysteresis in organic-inorganic hybrid perovskite solar cells. Solar Energy Materials and Solar Cells, 2016, 157, 476-509.	3.0	146
76	Single Vs Mixed Organic Cation for Low Temperature Processed Perovskite Solar Cells. Electrochimica Acta, 2016, 222, 1510-1521.	2.6	33
77	Enhanced stability of low temperature processed perovskite solar cells via augmented polaronic intensity of hole transporting layer. Physica Status Solidi - Rapid Research Letters, 2016, 10, 882-889.	1.2	15
78	Analysis of burn-in photo degradation in low bandgap polymer PTB7 using photothermal deflection spectroscopy. RSC Advances, 2016, 6, 103899-103904.	1.7	33
79	Effect of blend composition on ternary blend organic solar cells using a low band gap polymer. Synthetic Metals, 2016, 212, 142-153.	2.1	5
80	Stability of perovskite solar cells. Solar Energy Materials and Solar Cells, 2016, 147, 255-275.	3.0	726
81	Open circuit voltage of organic solar cells: an in-depth review. Energy and Environmental Science, 2016, 9, 391-410.	15.6	644
82	ZnO Tetrapods: Synthesis and Applications in Solar Cells. Nanomaterials and Nanotechnology, 2015, 5, 19.	1.2	34
83	Effects of blend composition on the morphology of Si-PCPDTBT:PC₇₁ BM bulk heterojunction organic solar cells. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1931-1940.	0.8	8
84	Effect of Blend Composition on Binary Organic Solar Cells Using a Low Band Gap Polymer. Journal of Nanoscience and Nanotechnology, 2015, 15, 2204-2211.	0.9	1
85	Metal oxide semiconducting interfacial layers for photovoltaic and photocatalytic applications. Materials for Renewable and Sustainable Energy, 2015, 4, 1.	1.5	82
86	Surface Plasmon Enhanced Organic Solar Cell with Different Silver Nanosphere Sizes. Journal of Nanoscience and Nanotechnology, 2014, 14, 5752-5760.	0.9	6
87	Surface Plasmonic Effects on Organic Solar Cells. Journal of Nanoscience and Nanotechnology, 2014, 14, 1099-1119.	0.9	35
88	Influence of bridging atom on the vertical phase separation of low band gap bulk heterojunction solar cells. Physica Status Solidi - Rapid Research Letters, 2014, 8, 904-907.	1.2	5
89	Optimisation of the solâ€“gel derived ZnO buffer layer for inverted structure bulk heterojunction organic solar cells using a low band gap polymer. Thin Solid Films, 2014, 566, 99-107.	0.8	29
90	Performance improvement of low bandgap polymer bulk heterojunction solar cells by incorporating P3HT. Organic Electronics, 2014, 15, 2837-2846.	1.4	20

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91	Enhancement of ternary blend organic solar cell efficiency using PTB7 as a sensitizer. Synthetic Metals, 2014, 192, 113-118.	2.1	38
92	Using hydrofluoric acid to reduce the contact resistance of screen-printed silicon solar cells â€“ Its recombination impact and a method to eliminate it. Solar Energy Materials and Solar Cells, 2013, 117, 537-543.	3.0	1
93	Effects of solvent additive on inverted structure PCPDTBT:PC₇₁ BM bulk heterojunction organic solar cells. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1785-1790.	0.8	12
94	Organicâ€”inorganic hybrid solar cells: A comparative review. Solar Energy Materials and Solar Cells, 2012, 107, 87-111.	3.0	550
95	Plasmon enhanced light absorption in bulk heterojunction organic solar cells. Physica Status Solidi - Rapid Research Letters, 2012, 6, 199-201.	1.2	15
96	Sheet resistance characterization of laser-doped lines on crystalline silicon wafers for photovoltaic applications. Solar Energy Materials and Solar Cells, 2011, 95, 974-980.	3.0	15
97	A method to characterize the sheet resistance of a laser doped line on crystalline silicon wafers for photovoltaic applications. Applied Physics Letters, 2011, 98, .	1.5	5
98	Growth of AlN films on Si (100) and Si (111) substrates by reactive magnetron sputtering. Surface and Coatings Technology, 2005, 198, 68-73.	2.2	124
99	Study of asymmetrical effects of silicon submicron transistors. Microelectronics Journal, 2004, 35, 641-645.	1.1	0
100	Investigation of Deep Levels and Residual Impurities in Sublimation-Grown SiC Substrates. Japanese Journal of Applied Physics, 1994, 33, L908-L911.	0.8	17
101	Observation of Deep Level in p-n Junction Diode of 6H:SiC. Japanese Journal of Applied Physics, 1993, 32, L1670-L1672.	0.8	4
102	Investigation of the Uniaxial Stress Effect on the Exciton System in Pure Silicon and Germanium. Japanese Journal of Applied Physics, 1989, 28, 2227-2233.	0.8	3
103	Photoluminescence and photoconductivity measurements on band-edge offsets in strained molecular-beam-epitaxy-grownInxGa1âˆ’xAs/GaAs quantum wells. Physical Review B, 1988, 37, 4032-4038.	1.1	109
104	Variation of the critical layer thickness with In content in strained InxGa1âˆ’xAsâ€GaAs quantum wells grown by molecular beam epitaxy. Applied Physics Letters, 1987, 51, 752-754.	1.5	247
105	Photovoltaic Devices. , 0, , 126-162.		0