Corey R Grice

List of Publications by Year
in descending order

73 papers	6,123 citations	101543 36 h-index	123424 61 g-index
75 all docs	75 docs citations	75 times ranked	7704 citing authors

#	Article	IF	Citations
1	Leadâ€Free Inverted Planar Formamidinium Tin Triiodide Perovskite Solar Cells Achieving Power Conversion Efficiencies up to 6.22%. Advanced Materials, 2016, 28, 9333-9340.	21.0	636
2	Low-bandgap mixed tinâ€“lead iodide perovskite absorbers with long carrier lifetimes for all-perovskite tandem solar cells. Nature Energy, 2017, 2, .	39.5	634
3	Efficient two-terminal all-perovskite tandem solar cells enabled by high-quality low-bandgap absorber layers. Nature Energy, 2018, 3, 1093-1100.	39.5	422
4	Fabrication of Efficient Low-Bandgap Perovskite Solar Cells by Combining Formamidinium Tin Iodide with Methylammonium Lead Iodide. Journal of the American Chemical Society, 2016, 138, 12360-12363.	13.7	362
5	Low-temperature plasma-enhanced atomic layer deposition of tin oxide electron selective layers for highly efficient planar perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 12080-12087.	10.3	210
6	Cooperative tin oxide fullerene electron selective layers for high-performance planar perovskite solar cells. Journal of Materials Chemistry A, 2016, 4, 14276-14283.	10.3	204
7	A layered Na_{1âˆ’x}Ni_yFe_{1âˆ’y}O₂double oxide oxygen evolution reaction electrocatalyst for highly efficient water-splitting. Energy and Environmental Science, 2017, 10, 121-128.	30.8	201
8	Understanding and Eliminating Hysteresis for Highly Efficient Planar Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700414.	19.5	190
9	Synergistic Effects of Lead Thiocyanate Additive and Solvent Annealing on the Performance of Wide-Bandgap Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 1177-1182.	17.4	190
10	Effects of annealing temperature of tin oxide electron selective layers on the performance of perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 24163-24168.	10.3	186
11	Improving the Performance of Formamidinium and Cesium Lead Triiodide Perovskite Solar Cells using Lead Thiocyanate Additives. ChemSusChem, 2016, 9, 3288-3297.	6.8	178
12	Compositional and morphological engineering of mixed cation perovskite films for highly efficient planar and flexible solar cells with reduced hysteresis. Nano Energy, 2017, 35, 223-232.	16.0	162
13	Efficient fully-vacuum-processed perovskite solar cells using copper phthalocyanine as hole selective layers. Journal of Materials Chemistry A, 2015, 3, 23888-23894.	10.3	161
14	Water Vapor Treatment of Low-Temperature Deposited SnO₂ Electron Selective Layers for Efficient Flexible Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 2118-2124.	17.4	161
15	Metalâ€“Organic Framework-Derived CoWP@C Composite Nanowire Electrocatalyst for Efficient Water Splitting. ACS Energy Letters, 2018, 3, 1434-1442.	17.4	141
16	Stable and efficient CdS/Sb2Se3 solar cells prepared by scalable close space sublimation. Nano Energy, 2018, 49, 346-353.	16.0	130
17	Annealing-free efficient vacuum-deposited planar perovskite solar cells with evaporated fullerenes as electron-selective layers. Nano Energy, 2016, 19, 88-97.	16.0	125
18	Self-Powered All-Inorganic Perovskite Microcrystal Photodetectors with High Detectivity. Journal of Physical Chemistry Letters, 2018, 9, 2043-2048.	4.6	123

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19	Thermally evaporated methylammonium tin triiodide thin films for lead-free perovskite solar cell fabrication. RSC Advances, 2016, 6, 90248-90254.	3.6	114
20	Self-powered CsPbBr3 nanowire photodetector with a vertical structure. Nano Energy, 2018, 53, 880-886.	16.0	104
21	Oxygenated CdS Buffer Layers Enabling High Openâ€Circuit Voltages in Earthâ€Abundant Cu₂BaSnS₄ Thinâ€Film Solar Cells. Advanced Energy Materials, 2017, 7, 1601803.	19.5	102
22	Efficient planar perovskite solar cells using room-temperature vacuum-processed C₆₀ electron selective layers. Journal of Materials Chemistry A, 2015, 3, 17971-17976.	10.3	100
23	One-step facile synthesis of a simple carbazole-cored hole transport material for high-performance perovskite solar cells. Nano Energy, 2017, 40, 163-169.	16.0	89
24	Probing the origins of photodegradation in organicâ€“inorganic metal halide perovskites with time-resolved mass spectrometry. Sustainable Energy and Fuels, 2018, 2, 2460-2467.	4.9	84
25	Bandgap Engineering of Barium Bismuth Niobate Double Perovskite for Photoelectrochemical Water Oxidation. Advanced Energy Materials, 2017, 7, 1602260.	19.5	67
26	Thin film solar cells based on the heterojunction of colloidal PbS quantum dots with CdS. Solar Energy Materials and Solar Cells, 2013, 117, 476-482.	6.2	64
27	Barium Bismuth Niobate Double Perovskite/Tungsten Oxide Nanosheet Photoanode for Highâ€Performance Photoelectrochemical Water Splitting. Advanced Energy Materials, 2018, 8, 1701655.	19.5	62
28	Eliminating S-Kink To Maximize the Performance of MgZnO/CdTe Solar Cells. ACS Applied Energy Materials, 2019, 2, 2896-2903.	5.1	60
29	Binary hole transport materials blending to linearly tune HOMO level for high efficiency and stable perovskite solar cells. Nano Energy, 2018, 51, 680-687.	16.0	59
30	Cu-based quaternary chalcogenide Cu₂BaSnS₄ thin films acting as hole transport layers in inverted perovskite CH₃NH₃PbI₃ solar cells. Journal of Materials Chemistry A, 2017, 5, 2920-2928.	10.3	57
31	Pressure-Assisted Annealing Strategy for High-Performance Self-Powered All-Inorganic Perovskite Microcrystal Photodetectors. Journal of Physical Chemistry Letters, 2018, 9, 4714-4719.	4.6	50
32	A new metalâ€“organic open framework enabling facile synthesis of carbon encapsulated transition metal phosphide/sulfide nanoparticle electrocatalysts. Journal of Materials Chemistry A, 2019, 7, 7168-7178.	10.3	50
33	Ga-doped ZnO nanorod scaffold for high-performance, hole-transport-layer-free, self-powered CH3NH3PbI3 perovskite photodetectors. Solar Energy Materials and Solar Cells, 2019, 193, 246-252.	6.2	46
34	Single-Phase, Antibacterial Trimagnesium Phosphate Hydrate Coatings on Polyetheretherketone (PEEK) Implants by Rapid Microwave Irradiation Technique. ACS Biomaterials Science and Engineering, 2018, 4, 2767-2783.	5.2	44
35	Cost-effective hole transporting material for stable and efficient perovskite solar cells with fill factors up to 82%. Journal of Materials Chemistry A, 2017, 5, 23319-23327.	10.3	40
36	Solutionâ€Processed Highâ€Quality Cesium Lead Bromine Perovskite Photodetectors with High Detectivity for Application in Visible Light Communication. Advanced Optical Materials, 2020, 8, 1901735.	7.3	38

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37	Solutionâ€processed copper (I) thiocyanate (CuSCN) for highly efficient CdSe/CdTe thinâ€film solar cells. Progress in Photovoltaics: Research and Applications, 2019, 27, 665-672.	8.1	37
38	Maximize CdTe solar cell performance through copper activation engineering. Nano Energy, 2020, 73, 104835.	16.0	35
39	Spectroscopic ellipsometry determination of optical and electrical properties of aluminum doped zinc oxide. Applied Surface Science, 2017, 421, 852-858.	6.1	32
40	A New Hole Transport Material for Efficient Perovskite Solar Cells With Reduced Device Cost. Solar Rrl, 2018, 2, 1700175.	5.8	31
41	The Effects of Hydrogen Iodide Back Surface Treatment on CdTe Solar Cells. Solar Rrl, 2019, 3, 1800304.	5.8	29
42	Effect of Water Density on Methanol Oxidation Kinetics in Supercritical Water. Journal of Physical Chemistry A, 2006, 110, 3627-3632.	2.5	27
43	Synergistic effects of thiocyanate additive and cesium cations on improving the performance and initial illumination stability of efficient perovskite solar cells. Sustainable Energy and Fuels, 2018, 2, 2435-2441.	4.9	27
44	The effects of high temperature processing on the structural and optical properties of oxygenated CdS window layers in CdTe solar cells. Journal of Applied Physics, 2014, 116, 044506.	2.5	26
45	Influences of buffer material and fabrication atmosphere on the electrical properties of CdTe solar cells. Progress in Photovoltaics: Research and Applications, 2019, 27, 1115-1123.	8.1	24
46	Operando X-ray absorption and infrared fuel cell spectroscopy. Electrochimica Acta, 2011, 56, 8827-8832.	5.2	22
47	Tracking the maximum power point of hysteretic perovskite solar cells using a predictive algorithm. Journal of Materials Chemistry C, 2017, 5, 10152-10157.	5.5	18
48	Electrical and optical characterization of CdTe solar cells with CdS and CdSe buffersâ€”A comparative study. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2018, 36, 052904.	1.2	17
49	Back-Surface Passivation of CdTe Solar Cells Using Solution-Processed Oxidized Aluminum. ACS Applied Materials & Interfaces, 2020, 12, 51337-51343.	8.0	15
50	Effects of Cu Precursor on the Performance of Efficient CdTe Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 38432-38440.	8.0	15
51	Evidence of electric-field-accelerated growth of tin whiskers. MRS Communications, 2015, 5, 619-622.	1.8	13
52	Optical and electrical properties of H2 plasma-treated ZnO films prepared by atomic layer deposition using supercycles. Materials Science in Semiconductor Processing, 2018, 84, 91-100.	4.0	12
53	Effects of oxygen partial pressure, deposition temperature, and annealing on the optical response of CdS:O thin films as studied by spectroscopic ellipsometry. Journal of Applied Physics, 2016, 120, .	2.5	9
54	Morphological and optical properties of low temperature processed SnO₂ :F. Physica Status Solidi (B): Basic Research, 2017, 254, 1700102.	1.5	9

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55	Double Coating for the Enhancement of the Performance in a MA_{0.7}FA_{0.3}PbBr₃ Photodetector. ACS Photonics, 2018, 5, 2100-2105.	6.6	9
56	High temperature CSS processed CdTe solar cells on commercial SnO2:F/SnO2 coated soda-lime glass substrates. Journal of Materials Science: Materials in Electronics, 2015, 26, 4708-4715.	2.2	8
57	Fabrication of optically smooth Sn thin films. Thin Solid Films, 2016, 616, 311-315.	1.8	8
58	Low Temperature Photoluminescence Spectroscopy of Defect and Interband Transitions in CdSexTe1-x Thin Films. MRS Advances, 2018, 3, 3293-3299.	0.9	8
59	Optical Properties of and Alloys and Their Application for CdTe Photovoltaics. , 2017, , .		6
60	n-i-p Nanocrystalline Hydrogenated Silicon Solar Cells with RF-Magnetron Sputtered Absorbers. Materials, 2019, 12, 1699.	2.9	6
61	Parametric Optical Property Database for CdSe1â^'xSx Alloys. Electronic Materials Letters, 2019, 15, 500-504.	2.2	6
62	Low temperature synthesis of nanocrystalline V2O5 using the non-hydrolytic solâ€"gel method. Journal of Sol-Gel Science and Technology, 2019, 89, 663-671.	2.4	5
63	ZnTe Back Buffer Layer to Enhance the Efficiency of CdS/CdTe Solar Cells. , 2019, , .		5
64	Characterization of CdS/CdSe window layers in CdTe thin film solar cells. , 2016, , .		4
65	CdTe solar cells using combined ZnS/CdS window layers. , 2014, , .		3
66	Effect of deposition temperature on reactively sputtered CdS:O. , 2014, , .		3
67	RF-sputtered Cd<inf>2</inf>SnO<inf>4</inf> for flexible glass CdTe solar cells. , 2016, , .		3
68	Get rid of S-kink in MZO/CdTe Solar Cells by Performing CdCl₂ Annealing without Oxygen. , 2019, , .		2
69	A Versatile Optical Model Applied to CdTe and CdSe<inf>1â€"y</inf> Te<inf>y</inf> Alloys: Sensitivity to Film Composition and Relative Defect Density. , 2018, , .		1
70	Defect Analysis in CSS and Sputtered CdSexTe1-x Thin Films. , 2019, , .		1
71	Effects of Fabrication Atmosphere on Bulk and Back Interface Defects of CdTe Solar Cells with CdS and MgZnO Buffers. , 2019, , .		1
72	Evolution of the optical response of sputtered CdS:O as a function of temperature. , 2015, , .		0

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73	Characterizing recombination in CdTe-based solar cells by the temperature and excitation dependence of open-circuit voltage and photoluminescence. , 2017, , .		0