Qiquan Qiao

List of Publications by Year
in descending order

248 papers	12,535 citations	22099 59 h-index	33814 99 g-index
251 all docs	251 docs citations	251 times ranked	14298 citing authors

#	Article	IF	Citations
1	Review on dye-sensitized solar cells (DSSCs): Advanced techniques and research trends. Renewable and Sustainable Energy Reviews, 2017, 68, 234-246.	8.2	882
2	Efficient tandem solar cells with solution-processed perovskite on textured crystalline silicon. Science, 2020, 367, 1135-1140.	6.0	525
3	Strategic review of secondary phases, defects and defect-complexes in kesterite CZTSâ€“Se solar cells. Energy and Environmental Science, 2015, 8, 3134-3159.	15.6	451
4	Fluorinated hybrid solid-electrolyte-interphase for dendrite-free lithium deposition. Nature Communications, 2020, 11, 93.	5.8	312
5	Electrospun Carbon Nanofibers as Low-Cost Counter Electrode for Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2010, 2, 3572-3577.	4.0	295
6	Conjugated polymerâ€“inorganic semiconductor hybrid solar cells. Energy and Environmental Science, 2011, 4, 2700.	15.6	278
7	Solar Charging Batteries: Advances, Challenges, and Opportunities. Joule, 2018, 2, 1217-1230.	11.7	229
8	Composite of TiO2 nanofibers and nanoparticles for dye-sensitized solar cells with significantly improved efficiency. Energy and Environmental Science, 2010, 3, 1507.	15.6	191
9	Dye-sensitized solar cells based on low cost nanoscale carbon/TiO2 composite counter electrode. Energy and Environmental Science, 2009, 2, 426.	15.6	190
10	A strategic review on processing routes towards highly efficient perovskite solar cells. Journal of Materials Chemistry A, 2018, 6, 2406-2431.	5.2	179
11	Flower-shaped lithium nitride as a protective layer via facile plasma activation for stable lithium metal anodes. Energy Storage Materials, 2019, 18, 389-396.	9.5	149
12	A Nonâ€Doped Phosphorescent Organic Lightâ€Emitting Device with Above 31% External Quantum Efficiency. Advanced Materials, 2014, 26, 8107-8113.	11.1	146
13	Fine-Tuning Semiconducting Polymer Self-Aggregation and Crystallinity Enables Optimal Morphology and High-Performance Printed All-Polymer Solar Cells. Journal of the American Chemical Society, 2020, 142, 392-406.	6.6	143
14	3D hierarchical FeSe2 microspheres: Controlled synthesis and applications in dye-sensitized solar cells. Nano Energy, 2015, 15, 205-215.	8.2	140
15	Hyperbranched Conjugated Polyelectrolyte Bilayers for Solar-Cell Applications. Journal of the American Chemical Society, 2007, 129, 8958-8959.	6.6	135
16	Highly Efficient Perovskite Solar Cell Photocharging of Lithium Ion Battery Using DCâ€“DC Booster. Advanced Energy Materials, 2017, 7, 1602105.	10.2	128
17	Ultrathin Bilayer of Graphite/SiO₂ as Solid Interface for Reviving Li Metal Anode. Advanced Energy Materials, 2019, 9, 1901486.	10.2	128
18	A review of polymer multijunction solar cells. Energy and Environmental Science, 2010, 3, 867.	15.6	127

#	Article	IF	Citations
19	Synergetic effect of spatially separated dual co-catalyst for accelerating multiple conversion reaction in advanced lithium sulfur batteries. Nano Energy, 2021, 81, 105621.	8.2	123
20	Dithieno[3,2-<i>b</i>:2â€²,3â€²-<i>d</i>]pyrrole-based hole transport materials for perovskite solar cells with efficiencies over 18%. Journal of Materials Chemistry A, 2018, 6, 7950-7958.	5.2	122
21	Water-soluble polythiopheneâˆ•nanocrystalline TiO2 solar cells. Applied Physics Letters, 2005, 86, 153501.	1.5	120
22	Improving Charge Carrier Delocalization in Perovskite Quantum Dots by Surface Passivation with Conductive Aromatic Ligands. ACS Energy Letters, 2018, 3, 2931-2939.	8.8	116
23	Solution-Processable Ionic Liquid as an Independent or Modifying Electron Transport Layer for High-Efficiency Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 34464-34473.	4.0	111
24	Carbon nanostructure counter electrodes for low cost and stable dye-sensitized solar cells. Nano Energy, 2014, 4, 157-175.	8.2	109
25	Ultrathin FeSe₂ Nanosheets: Controlled Synthesis and Application as a Heterogeneous Catalyst in Dyeâ€Sensitized Solar Cells. Chemistry - A European Journal, 2015, 21, 4085-4091.	1.7	108
26	Tin Selenide â€“ Multi-Walled Carbon Nanotubes Hybrid Anodes for High Performance Lithium-Ion Batteries. Electrochimica Acta, 2016, 211, 720-725.	2.6	105
27	Tailored PEDOT:PSS hole transport layer for higher performance in perovskite solar cells: Enhancement of electrical and optical properties with improved morphology. Journal of Energy Chemistry, 2020, 44, 41-50.	7.1	105
28	Femtosecond Time-Resolved Fluorescence Study of P3HT/PCBM Blend Films. Journal of Physical Chemistry C, 2010, 114, 14590-14600.	1.5	103
29	Phenylhydrazinium Iodide for Surface Passivation and Defects Suppression in Perovskite Solar Cells. Advanced Functional Materials, 2020, 30, 2000778.	7.8	103
30	Tuning Hole Transport Layer Using Urea for Highâ€Performance Perovskite Solar Cells. Advanced Functional Materials, 2019, 29, 1806740.	7.8	101
31	Crystallization of a perovskite film for higher performance solar cells by controlling water concentration in methyl ammonium iodide precursor solution. Nanoscale, 2016, 8, 2693-2703.	2.8	100
32	Solution processed pristine PDPP3T polymer as hole transport layer for efficient perovskite solar cells with slower degradation. Solar Energy Materials and Solar Cells, 2016, 145, 193-199.	3.0	96
33	High-Performance Lead-Free Solar Cells Based on Tin-Halide Perovskite Thin Films Functionalized by a Divalent Organic Cation. ACS Energy Letters, 2020, 5, 2223-2230.	8.8	96
34	Improving photovoltaic performance of carbon-based CsPbBr3 perovskite solar cells by interfacial engineering using P3HT interlayer. Journal of Power Sources, 2019, 432, 48-54.	4.0	94
35	Interfacial Study To Suppress Charge Carrier Recombination for High Efficiency Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 26445-26454.	4.0	90
36	Electrospun carbon nanofibers with surface-attached platinum nanoparticles as cost-effective and efficient counter electrode for dye-sensitized solar cells. Nano Energy, 2015, 11, 550-556.	8.2	88

#	Article	IF	Citations
37	Self-recovery in Li-metal hybrid lithium-ion batteries <i>via</i> WO₃ reduction. Nanoscale, 2018, 10, 15956-15966.	2.8	87
38	Inverted Currentâ€"Voltage Hysteresis in Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 2457-2460.	8.8	84
39	Influence of Nonfused Cores on the Photovoltaic Performance of Linear Triphenylamine-Based Hole-Transporting Materials for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 17883-17895.	4.0	83
40	A review on strategies addressing interface incompatibilities in inorganic all-solid-state lithium batteries. Sustainable Energy and Fuels, 2019, 3, 3279-3309.	2.5	83
41	One dimensional nanostructure/nanoparticle composites as photoanodes for dye-sensitized solar cells. Nanoscale, 2012, 4, 2826.	2.8	82
42	Electrolyte Effects on Electron Transport and Recombination at ZnO Nanorods for Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2010, 114, 17880-17888.	1.5	78
43	Triple junction polymer solar cells. Energy and Environmental Science, 2013, 6, 3150.	15.6	77
44	Catalytic cracking of non-edible sunflower oil over ZSM-5 for hydrocarbon bio-jet fuel. New Biotechnology, 2015, 32, 300-312.	2.4	77
45	Bias-Dependent Normal and Inverted <i>J</i>â€"<i>V</i> Hysteresis in Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 25604-25613.	4.0	77
46	Highâ€Efficiency Perovskite Solar Cells Enabled by Anatase TiO₂ Nanopyramid Arrays with an Oriented Electric Field. Angewandte Chemie - International Edition, 2020, 59, 11969-11976.	7.2	76
47	Nonconjugated Polymer Poly(vinylpyrrolidone) as an Efficient Interlayer Promoting Electron Transport for Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 32957-32964.	4.0	73
48	High efficiency perovskite solar cells using nitrogen-doped graphene/ZnO nanorod composite as an electron transport layer. Solar Energy, 2020, 197, 78-83.	2.9	73
49	Environmentally Friendly Plasma-Treated PEDOT:PSS as Electrodes for ITO-Free Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 35861-35870.	4.0	71
50	Dopingâ€Free Organic Lightâ€Emitting Diodes with Very High Power Efficiency, Simple Device Structure, and Superior Spectral Performance. Advanced Functional Materials, 2014, 24, 4746-4752.	7.8	70
51	A Review on Tailoring PEDOT:PSS Layer for Improved Performance of Perovskite Solar Cells. Proceedings of the Nature Research Society, 0, 2, .	0.0	70
52	Nickel incorporated carbon nanotube/nanofiber composites as counter electrodes for dye-sensitized solar cells. Nanoscale, 2012, 4, 5659.	2.8	69
53	Interplay of nanoscale domain purity and size on charge transport and recombination dynamics in polymer solar cells. Nanoscale, 2014, 6, 1011-1019.	2.8	69
54	Enhanced performance in dye-sensitized solar cells via carbon nanofibersâ€"platinum composite counter electrodes. Nanoscale, 2012, 4, 4726.	2.8	67

#	Article	IF	Citations
55	TiO2 coated urchin-like SnO2 microspheres for efficient dye-sensitized solar cells. Nano Research, 2014, 7, 1154-1163.	5.8	66
56	Graphene-beaded carbon nanofibers with incorporated Ni nanoparticles as efficient counter-electrode for dye-sensitized solar cells. Nano Energy, 2016, 22, 558-563.	8.2	66
57	The Role of Mottâ€“Schottky Heterojunctions in Agâ€“Ag₈SnS₆ as Counter Electrodes in Dyeâ€Sensitized Solar Cells. ChemSusChem, 2015, 8, 817-820.	3.6	64
58	Graphene Oxideâ€“Silver Nanowire Nanocomposites for Enhanced Sensing of Hg²⁺. ACS Applied Nano Materials, 2019, 2, 4842-4851.	2.4	62
59	Dye-sensitized solar cells based on spray-coated carbon nanofiber/TiO2 nanoparticle composite counter electrodes. Journal of Materials Chemistry A, 2014, 2, 11448.	5.2	61
60	Few-layered ReS₂ nanosheets vertically aligned on reduced graphene oxide for superior lithium and sodium storage. Journal of Materials Chemistry A, 2018, 6, 20267-20276.	5.2	61
61	Room temperature, air crystallized perovskite film for high performance solar cells. Journal of Materials Chemistry A, 2016, 4, 10231-10240.	5.2	60
62	Transparent MoS₂/PEDOT Composite Counter Electrodes for Bifacial Dye-Sensitized Solar Cells. ACS Omega, 2020, 5, 8687-8696.	1.6	60
63	Advanced strategies for the development of porous carbon as a Li host/current collector for lithium metal batteries. Energy Storage Materials, 2021, 41, 448-465.	9.5	60
64	Organic/Inorganic Polymer Solar Cells Using a Buffer Layer from All-Water-Solution Processing. Journal of Physical Chemistry C, 2008, 112, 9912-9916.	1.5	59
65	High-performance carbon electrode-based CsPbI2Br inorganic perovskite solar cell based on poly(3-hexylthiophene)-carbon nanotubes composite hole-transporting layer. Journal of Colloid and Interface Science, 2019, 555, 180-186.	5.0	58
66	Sulfiphilic FeP/rGO as a highly efficient sulfur host for propelling redox kinetics toward stable lithium-sulfur battery. Electrochimica Acta, 2020, 364, 137117.	2.6	58
67	Enhancing Charge Carrier Delocalization in Perovskite Quantum Dot Solids with Energetically Aligned Conjugated Capping Ligands. ACS Energy Letters, 2020, 5, 817-825.	8.8	58
68	Enhanced Lifetime of Polymer Solar Cells by Surface Passivation of Metal Oxide Buffer Layers. ACS Applied Materials & Interfaces, 2015, 7, 16093-16100.	4.0	57
69	Binder Free Hierarchical Mesoporous Carbon Foam for High Performance Lithium Ion Battery. Scientific Reports, 2017, 7, 1440.	1.6	56
70	Efficient Perovskite Solar Cells by Temperature Control in Single and Mixed Halide Precursor Solutions and Films. Journal of Physical Chemistry C, 2015, 119, 25747-25753.	1.5	55
71	Aromatic Alkylammonium Spacer Cations for Efficient Twoâ€Dimensional Perovskite Solar Cells with Enhanced Moisture and Thermal Stability. Solar Rrl, 2018, 2, 1700215.	3.1	55
72	Thermal Stability and Performance Enhancement of Perovskite Solar Cells Through Oxalic Acid-Induced Perovskite Formation. ACS Applied Energy Materials, 2020, 3, 2432-2439.	2.5	55

#	Article	IF	Citations
73	Higher efficiency perovskite solar cells using additives of LiI, LiTFSI and BMImI in the PbI₂ precursor. Sustainable Energy and Fuels, 2017, 1, 2162-2171.	2.5	53
74	A comparison of fluorine tin oxide and indium tin oxide as the transparent electrode for P3OT/TiO2 solar cells. Solar Energy Materials and Solar Cells, 2006, 90, 1034-1040.	3.0	52
75	Current advancements on charge selective contact interfacial layers and electrodes in flexible hybrid perovskite photovoltaics. Journal of Energy Chemistry, 2021, 54, 151-173.	7.1	51
76	Enhanced charge transport and photovoltaic performance of PBDTTT-C-T/PC70BM solar cells via UVâ€"ozone treatment. Nanoscale, 2013, 5, 10007.	2.8	49
77	A copper-clad lithiophilic current collector for dendrite-free lithium metal anodes. Journal of Materials Chemistry A, 2020, 8, 1911-1919.	5.2	49
78	Transient photocurrent and photovoltage studies on charge transport in dye sensitized solar cells made from the composites of TiO2 nanofibers and nanoparticles. Applied Physics Letters, 2011, 98, 082114.	1.5	48
79	Graphene-embedded carbon nanofibers decorated with Pt nanoneedles for high efficiency dye-sensitized solar cells. Journal of Materials Chemistry A, 2015, 3, 17721-17727.	5.2	47
80	An ethanolamine-functionalized fullerene as an efficient electron transport layer for high-efficiency inverted polymer solar cells. Journal of Materials Chemistry A, 2016, 4, 8072-8079.	5.2	47
81	Incorporation of plasmonic Au nanostars into photoanodes for high efficiency dye-sensitized solar cells. Journal of Materials Chemistry A, 2016, 4, 545-551.	5.2	47
82	New pyran dyes for dye-sensitized solar cells. Journal of Photochemistry and Photobiology A: Chemistry, 2011, 224, 116-122.	2.0	45
83	Electrospun carbon nano-felt derived from alkali lignin for cost-effective counter electrodes of dye-sensitized solar cells. RSC Advances, 2016, 6, 11481-11487.	1.7	45
84	Creation of oxygen vacancies to activate WO₃ for higher efficiency dye-sensitized solar cells. Sustainable Energy and Fuels, 2018, 2, 403-412.	2.5	45
85	Grain Boundary Defect Passivation of Triple Cation Mixed Halide Perovskite with Hydrazine-Based Aromatic Iodide for Efficiency Improvement. ACS Applied Materials & Interfaces, 2020, 12, 41312-41322.	4.0	45
86	Lead free CH3NH3SnI3 perovskite thin-film with p-type semiconducting nature and metal-like conductivity. AIP Advances, 2016, 6, .	0.6	43
87	Electrochemical Phosphate Sensors Using Silver Nanowires Treated Screen Printed Electrodes. IEEE Sensors Journal, 2018, 18, 3480-3485.	2.4	43
88	Hierarchical Nanosheet-Based MS₂ (M = Re, Mo, W) Nanotubes Prepared by Templating Sacrificial Te Nanowires with Superior Lithium and Sodium Storage Capacity. ACS Applied Materials & Interfaces, 2018, 10, 37445-37452.	4.0	43
89	Mitigating Open-Circuit Voltage Loss in Pbâ€"Sn Low-Bandgap Perovskite Solar Cells via Additive Engineering. ACS Applied Energy Materials, 2021, 4, 1731-1742.	2.5	43
90	Origin and alleviation of J-V hysteresis in perovskite solar cells: A short review. Catalysis Today, 2021, 374, 86-101.	2.2	42

#	Article	IF	Citations
91	Critical role of domain crystallinity, domain purity and domain interface sharpness for reduced bimolecular recombination in polymer solar cells. Nano Energy, 2015, 12, 457-467.	8.2	41
92	Oleamide as a self-assembled cathode buffer layer for polymer solar cells: the role of the terminal group on the function of the surfactant. Journal of Materials Chemistry, 2012, 22, 24067.	6.7	40
93	Low temperature efficient interconnecting layer for tandem polymer solar cells. Nano Energy, 2015, 11, 56-63.	8.2	40
94	Real time detection of Hg2+ ions using MoS2 functionalized AlGaN/GaN high electron mobility transistor for water quality monitoring. Sensors and Actuators B: Chemical, 2020, 309, 127832.	4.0	40
95	Vanadium oxide as new charge recombination blocking layer for high efficiency dye-sensitized solar cells. Nano Energy, 2015, 13, 368-375.	8.2	39
96	Additive assisted morphological optimization of photoactive layer in polymer solar cells. Solar Energy Materials and Solar Cells, 2018, 182, 246-254.	3.0	39
97	Polymer Solar Cells Processed Using Anisole as a Relatively Nontoxic Solvent. Energy Technology, 2014, 2, 269-274.	1.8	38
98	Efficient yellowâ€“green light-emitting cationic iridium complexes based on 1,10-phenanthroline derivatives containing oxadiazole-triphenylamine unit. Dyes and Pigments, 2014, 100, 79-86.	2.0	38
99	Nb2O5 as a new electron transport layer for double junction polymer solar cells. Physical Chemistry Chemical Physics, 2012, 14, 4682.	1.3	37
100	Activated graphene nanoplatelets as a counter electrode for dye-sensitized solar cells. Journal of Applied Physics, 2016, 119, .	1.1	37
101	Alternative benzodithiophene (BDT) based polymeric hole transport layer for efficient perovskite solar cells. Solar Energy Materials and Solar Cells, 2017, 168, 8-13.	3.0	37
102	Efficient Counter Electrode Manufactured from Ag₂S Nanocrystal Ink for Dyeâ€Sensitized Solar Cells. Chemistry - A European Journal, 2015, 21, 15153-15157.	1.7	36
103	Fabrication of PANI-coated ZnFe2O4 nanofibers with enhanced electrochemical performance for energy storage. Electrochimica Acta, 2018, 273, 282-288.	2.6	36
104	Improved performance of dye solar cells using nanocarbon as support for platinum nanoparticles in counter electrode. Nano Energy, 2014, 5, 116-121.	8.2	35
105	Efficient Ag₈GeS₆counter electrode prepared from nanocrystal ink for dye-sensitized solar cells. Journal of Materials Chemistry A, 2015, 3, 20359-20365.	5.2	35
106	Electrospun TiC/C nano-felt surface-decorated with Pt nanoparticles as highly efficient and cost-effective counter electrode for dye-sensitized solar cells. Nanoscale, 2013, 5, 11742.	2.8	34
107	Characteristics of SnO2 nanofiber/TiO2 nanoparticle composite for dye-sensitized solar cells. AIP Advances, 2015, 5, .	0.6	34
108	Kirkendall Growth of Hollow Mn₃O₄ Nanoparticles upon Galvanic Reaction of MnO with Cu²⁺ and Evaluation as Anode for Lithium-Ion Batteries. Journal of Physical Chemistry C, 2017, 121, 11089-11099.	1.5	34

#	Article	IF	Citations
109	Increased Efficiency for Perovskite Photovoltaics via Doping the PbI2Layer. Journal of Physical Chemistry C, 2016, 120, 24577-24582.	1.5	33
110	Recent Advances in Lithiophilic Porous Framework toward Dendrite-Free Lithium Metal Anode. Applied Sciences (Switzerland), 2020, 10, 4185.	1.3	33
111	A futuristic strategy to influence the solar cell performance using fixed and mobile dopants incorporated sulfonated polyaniline based buffer layer. Solar Energy Materials and Solar Cells, 2015, 141, 275-290.	3.0	32
112	Synergistically Enhanced Electrochemical Performance of Ni3S4â€“PtX (X = Fe, Ni) Heteronanorods as Heterogeneous Catalysts in Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 27607-27617.	4.0	32
113	Origin of enhanced carrier mobility and electrical conductivity in seed-layer assisted sputtered grown Al doped ZnO thin films. Thin Solid Films, 2020, 700, 137916.	0.8	32
114	Modifying Mesoporous TiO2 by Ammonium Sulfonate Boosts Performance of Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 12696-12705.	4.0	32
115	Hierarchical Cu7S4 nanotubes assembled by hexagonal nanoplates with high catalytic performance for quantum dot-sensitized solar cells. Journal of Power Sources, 2015, 299, 212-220.	4.0	31
116	Electrostatic nanoassembly of contact interfacial layer for enhanced photovoltaic performance in polymer solar cells. Solar Energy Materials and Solar Cells, 2016, 153, 148-163.	3.0	31
117	High-energy plasma activation of renewable carbon for enhanced capacitive performance of supercapacitor electrode. Electrochimica Acta, 2020, 362, 137148.	2.6	31
118	Rearâ€Illuminated Perovskite Photorechargeable Lithium Battery. Advanced Functional Materials, 2020, 30, 2001865.	7.8	31
119	Benzothiadiazole-based polymer for single and double junction solar cells with high open circuit voltage. Nanoscale, 2014, 6, 7093.	2.8	30
120	Kinetic Monte Carlo modeling on organic solar cells: Domain size, donor-acceptor ratio and thickness. Nano Energy, 2017, 35, 128-137.	8.2	30
121	Origin of high carrier mobility and low residual stress in RF superimposed DC sputtered Al doped ZnO thin film for next generation flexible devices. Applied Surface Science, 2018, 436, 477-485.	3.1	30
122	Improving Performance of Nonfullerene Organic Solar Cells over 13% by Employing Silver Nanowires-Doped PEDOT:PSS Composite Interface. ACS Applied Materials & Interfaces, 2019, 11, 42447-42454.	4.0	30
123	Gamma-radiated biochar carbon for improved supercapacitor performance. RSC Advances, 2020, 10, 29910-29917.	1.7	30
124	Temperature driven high-performance pseudocapacitor of carbon nano-onions supported urchin like structures of Î±-MnO2 nanorods. Electrochimica Acta, 2020, 354, 136626.	2.6	30
125	Dye-Sensitized Solar Cells Based on Porous Hollow Tin Oxide Nanofibers. IEEE Transactions on Electron Devices, 2015, 62, 2027-2032.	1.6	29
126	Synergistic engineering of hole transport materials in perovskite solar cells. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 928-941.	8.5	29

#	Article	IF	Citations
127	Carbon quantum dot additive engineering for efficient and stable carbon-based perovskite solar cells. Journal of Alloys and Compounds, 2021, 859, 157784.	2.8	29
128	Microstructure controlled synthesis of Ni, N-codoped CoP/carbon fiber hybrids with improving reaction kinetics for superior sodium storage. Journal of Materials Science and Technology, 2022, 99, 184-192.	5.6	29
129	Photovoltaic devices and characterization of a dodecyloxybenzothiadiazole-based copolymer. Physical Chemistry Chemical Physics, 2013, 15, 6856.	1.3	28
130	From binary to multicomponent photoactive layer: A promising complementary strategy to efficient hybrid solar cells. Nano Energy, 2015, 12, 686-697.	8.2	28
131	Electrochemical stability of lithium halide electrolyte with antiperovskite crystal structure. Electrochimica Acta, 2019, 306, 498-505.	2.6	28
132	Energy level alignment and nanoscale investigation of a-TiO2/Cu-Zn-Sn-S interface for alternative electron transport layer in earth abundant Cu-Zn-Sn-S solar cells. Journal of Applied Physics, 2019, 126, .	1.1	28
133	The donor-dependent methoxy effects on the performance of hole-transporting materials for perovskite solar cells. Journal of Energy Chemistry, 2020, 47, 10-17.	7.1	28
134	Linker effects on optoelectronic properties of alternate donorâ€“acceptor conjugated polymers. Energy and Environmental Science, 2011, 4, 4276.	15.6	27
135	Kelvin Probe Force Microscopic Imaging of the Energy Barrier and Energetically Favorable Offset of Interfaces in Double-Junction Organic Solar Cells. ACS Applied Materials & Interfaces, 2013, 5, 1279-1286.	4.0	27
136	<scp>l</scp>-Cysteine assisted-synthesis of 3D In₂S₃ for 3D CuInS₂ and its application in hybrid solar cells. RSC Advances, 2017, 7, 37578-37587.	1.7	27
137	Strategies for highâ€performance perovskite solar cells from materials, film engineering to carrier dynamics and photon management. InformaÄnÃ-MateriÃ¡ly, 2022, 4, .	8.5	27
138	Structural effects of core-modified porphyrins in dye-sensitized solar cells. Journal of Porphyrins and Phthalocyanines, 2009, 13, 903-909.	0.4	26
139	Understanding of morphology evolution in local aggregates and neighboring regions for organic photovoltaics. Physical Chemistry Chemical Physics, 2012, 14, 10168.	1.3	26
140	Activation of Passive Nanofillers in Composite Polymer Electrolyte for Higher Performance Lithiumâ€Ion Batteries. Advanced Sustainable Systems, 2017, 1, 1700043.	2.7	26
141	Nanoscale charge transport and local surface potential distribution to probe defect passivation in Ag doped Cu₂ZnSnS₄ absorbing layer. Nanotechnology, 2019, 30, 065706.	1.3	26
142	Exciton migration and charge transfer in chemically linked P3HTâ€“TiO₂nanorod composite. RSC Advances, 2012, 2, 854-862.	1.7	25
143	Transparent platinum counter electrode for efficient semi-transparent dye-sensitized solar cells. Thin Solid Films, 2014, 562, 578-584.	0.8	25
144	Nanoscale control of grain boundary potential barrier, dopant density and filled trap state density for higher efficiency perovskite solar cells. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 409-423.	8.5	25

#	Article	IF	Citations
145	Inorganic CsSnI₃ Perovskite Solar Cells: The Progress and Future Prospects. Solar Rrl, 2022, 6, 2100841.	3.1	25
146	Incorporation of <inline-formula> <tex-math notation="TeX">${m TiO}_{2}$ </tex-math></inline-formula> Nanoparticles Into <inline-formula> <tex-math notation="TeX">${m SnO}_{2}$ </tex-math></inline-formula> Nanofibers for Higher Efficiency Dye-Sensitized Solar Cells. IEEE Electron Device Letters, 2014, 35, 578-580.	2.2	21
147	Device and morphological engineering of organic solar cells for enhanced charge transport and photovoltaic performance. Journal of Photonics for Energy, 2015, 5, 057207.	0.8	21
148	Effect of TiO2 nanoparticles on newly synthesized phenothiazine derivative-CPTA dye and its applications as dye sensitized solar cell. Journal of Molecular Liquids, 2017, 244, 97-102.	2.3	21
149	Higher efficiency perovskite solar cells using 2 coreâ€"shell nanoparticles. Sustainable Energy and Fuels, 2018, 2, 2260-2267.	2.5	21
150	Nanoscale spatial mapping of charge carrier dynamics in perovskite solar cells. Nano Today, 2020, 33, 100874.	6.2	21
151	Two-dimensional transition metal dichalcogenides and their composites for lab-based sensing applications: Recent progress and future outlook. Sensors and Actuators A: Physical, 2021, 318, 112517.	2.0	21
152	Improved performance by morphology control via fullerenes in PBDT-TBT-alkoBT based organic solar cells. Journal of Materials Chemistry A, 2015, 3, 15307-15313.	5.2	20
153	Improving Photovoltaic Properties of P3HT:IC60BA through the Incorporation of Small Molecules. Polymers, 2018, 10, 121.	2.0	20
154	Grain Boundary Defect Passivation in Quadruple Cation Wideâ€Bandgap Perovskite Solar Cells. Solar Rrl, 2021, 5, 2000740.	3.1	19
155	Enhancing efficiency and stability of inverted structure perovskite solar cells with fullerene C60 doped PC61BM electron transport layer. Carbon, 2021, 180, 226-236.	5.4	19
156	Double junction polymer solar cells. Journal of Materials Chemistry A, 2014, 2, 10331-10349.	5.2	18
157	Investigation of the plasmonic effect in air-processed PbS/CdS coreâ€"shell quantum dot based solar cells. Journal of Materials Chemistry A, 2016, 4, 13071-13080.	5.2	18
158	Comparison of performance and optoelectronic processes in ZnO and TiO2 nanorod array-based hybrid solar cells. Applied Surface Science, 2018, 456, 124-132.	3.1	18
159	Understanding the modulation effect and surface chemistry in a heteroatom incorporated graphene-like matrix toward high-rate lithiumâ€"sulfur batteries. Nanoscale, 2021, 13, 14777-14784.	2.8	18
160	Synthesis and structure study of copolymers from thiadiazole fused indolocarbazole and dithienosilole. Polymer, 2013, 54, 223-229.	1.8	17
161	Origin of photogenerated carrier recombination at the metalâ€"active layer interface in polymer solar cells. Physical Chemistry Chemical Physics, 2015, 17, 27690-27697.	1.3	17
162	Sonochemical synthesis and high lithium storage properties of ordered Co/CMK-3 nanocomposites. Applied Surface Science, 2017, 400, 492-497.	3.1	17

#	Article	IF	Citations
163	Model compounds based on poly(p-phenylenevinyleneborane) and terthiophene: Investigating the pâ€“n junction in diblock copolymers. Polymer, 2013, 54, 3510-3520.	1.8	16
164	Improved Performance for Inverted Organic Photovoltaics via Spacer between Benzodithiophene and Benzothiazole in Polymers. Journal of Physical Chemistry C, 2015, 119, 18992-19000.	1.5	16
165	A Simple Cost-Effective Approach to Enhance Performance of Bifacial Dye-Sensitized Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 912-917.	1.5	16
166	Synthesis, modeling and photovoltaic properties of a benzothiadiazole based molecule for dye-sensitized solar cells. Journal of Materials Science: Materials in Electronics, 2016, 27, 4501-4507.	1.1	16
167	Photovoltaic performance and impedance spectroscopy of a purely organic dye and most common metallic dye based dye-sensitized solar cells. Journal of Materials Science: Materials in Electronics, 2017, 28, 6552-6559.	1.1	16
168	Hierarchical CuInS2 synthesized with the induction of histidine for polymer/CuInS2 solar cells. Materials Science in Semiconductor Processing, 2018, 76, 14-24.	1.9	16
169	Thermally Driven High-Rate Intercalated Pseudocapacitance of Flower-like Architecture of Ultrathin Few Layered Î´-MnO₂ Nanosheets on Carbon Nano-Onions. ACS Applied Energy Materials, 2020, 3, 11398-11409.	2.5	16
170	Solutionâ€Processed Compact Sb₂S₃ Thin Films by a Facile Oneâ€Step Deposition Method for Efficient Solar Cells. Solar Rrl, 2021, 5, 2100666.	3.1	16
171	Mitigating Interfacial Mismatch between Lithium Metal and Garnet-Type Solid Electrolyte by Depositing Metal Nitride Lithiophilic Interlayer. ACS Applied Energy Materials, 2022, 5, 648-657.	2.5	16
172	Urea-Treated Electrolytes for Higher Efficiency Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2017, 121, 21225-21230.	1.5	15
173	Tailoring the Grain Boundaries of Wideâ€Bandgap Perovskite Solar Cells by Molecular Engineering. Solar Rrl, 2020, 4, 2000384.	3.1	15
174	Highâ€Efficiency Perovskite Solar Cells Enabled by Anatase TiO₂ Nanopyramid Arrays with an Oriented Electric Field. Angewandte Chemie, 2020, 132, 12067-12074.	1.6	15
175	Development and characterization of a novel activated biochar-based polymer composite for biosensors. International Journal of Polymer Analysis and Characterization, 2021, 26, 544-560.	0.9	15
176	Tailoring Nanoscale Morphology of Polymer:Fullerene Blends Using Electrostatic Field. ACS Applied Materials & Interfaces, 2017, 9, 2678-2685.	4.0	14
177	Synthesis, Photophysical and Computational Study of Novel Coumarinâ€based Organic Dyes. Photochemistry and Photobiology, 2018, 94, 261-276.	1.3	14
178	Noncovalent phosphorylation of graphene oxide with improved hole transport in high-efficiency polymer solar cells. Nanoscale, 2018, 10, 14840-14846.	2.8	14
179	Morphological Evolution and Its Impacts on Performance of Polymer Solar Cells. IEEE Transactions on Electron Devices, 2015, 62, 1284-1290.	1.6	13
180	Plasmonic silver nanowires for higher efficiency dye-sensitized solar cells. Materials Today Energy, 2017, 5, 237-242.	2.5	13

#	Article	IF	Citations
181	Internet of Things Based Weather-Soil Sensor Station for Precision Agriculture. , 2019, , .		13
182	Unraveling urea pre-treatment correlated to activate Er2(WO4)3 as an efficient and stable counter electrode for dye-sensitized solar cells. Electrochimica Acta, 2020, 333, 135540.	2.6	13
183	Effects of polymer crystallinity on non-fullerene acceptor based organic solar cell photostability. Journal of Materials Chemistry C, 2020, 8, 16092-16099.	2.7	13
184	Polymer Photovoltaic Performance and Degradation on Spray and Spin Coated Electron Transport Layer and Active Layer. IEEE Transactions on Electron Devices, 2013, 60, 2372-2378.	1.6	12
185	Enhanced Performance of PDPP3T/${m PC}_{60}{m BM}$ Solar Cells Using High Boiling Solvent and UV - Ozone Treatment. IEEE Transactions on Electron Devices, 2013, 60, 1763-1768.	1.6	12
186	Investigation of novel anthracene-bridged carbazoles as sensitizers and Co-sensitizers for dye-sensitized solar cells. International Journal of Energy Research, 2015, 39, 1335-1344.	2.2	12
187	Fe_{1â€x}Co_xS₂ Solid Solutions with Tunable Energy Structures to Enhance the Performance of Triiodide Reduction in Dyeâ€Sensitized Solar Cells. ChemNanoMat, 2018, 4, 1043-1047.	1.5	12
188	Metallic 1T Phase Tungsten Disulfide Microflowers for Trace Level Detection of Hg²⁺ Ions. Advanced Sustainable Systems, 2020, 4, 2000068.	2.7	12
189	Modeling of interfacial and bulk charge transfer in dye-sensitized solar cells. Cogent Engineering, 2017, 4, 1287231.	1.1	12
190	Biofuel production using Pd/Zn synergistically catalyzed hydrodeoxygenation applied at bio oil extracted in biomass pyrolysis process. International Journal of Energy Research, 2016, 40, 1724-1730.	2.2	11
191	Reduced hysteresis in perovskite solar cells using metal oxide/organic hybrid hole transport layer with generated interfacial dipoles. Electrochimica Acta, 2020, 354, 136660.	2.6	11
192	Evaluation of Counter Electrodes Composed by Carbon Nanofibers and Nanoparticles in Dye-Sensitized Solar Cells. IEEE Transactions on Electron Devices, 2013, 60, 3883-3887.	1.6	10
193	Using interlayer step-wise triplet transfer to achieve an efficient white organic light-emitting diode with high color-stability. Applied Physics Letters, 2014, 104, 193303.	1.5	10
194	An efficient dual-emissive-layer white organic light emitting-diode: Insight into device working mechanism and origin of color-shift. Organic Electronics, 2015, 19, 157-162.	1.4	10
195	Shelf life stability comparison in air for solution processed pristine PDPP3T polymer and doped spiro-OMeTAD as hole transport layer for perovskite solar cell. Data in Brief, 2016, 7, 139-142.	0.5	10
196	Perovskite solar cells with embedded homojunction via nonuniform metal ion doping. Cell Reports Physical Science, 2021, 2, 100415.	2.8	10
197	Sb2S3 Thickness-Related Photocurrent and Optoelectronic Processes in TiO2/Sb2S3/P3HT Planar Hybrid Solar Cells. Nanoscale Research Letters, 2019, 14, 325.	3.1	10
198	Rapid and Low-Temperature Processing of Mesoporous and Nanocrystalline TiO₂ Film Using Microwave Irradiation. ACS Applied Energy Materials, 2018, 1, 6288-6294.	2.5	9

#	Article	IF	Citations
199	Employing PCBTDPP as an Efficient Donor Polymer for High Performance Ternary Polymer Solar Cells. Polymers, 2019, 11, 1423.	2.0	9
200	Improved Performance of Carbon Electrode Perovskite Solar Cells Using Urea Treatment in Twoâ€Step Processing. ChemNanoMat, 2020, 6, 806-815.	1.5	9
201	Interface Modification of Inverted Structure PSBTBT:PC₇₀BM Solar Cells for Improved Performance. IEEE Journal of Photovoltaics, 2015, 5, 1659-1664.	1.5	8
202	Optimization of Interconnecting Layers for Double- and Triple-Junction Polymer Solar Cells. IEEE Journal of Photovoltaics, 2015, 5, 1674-1679.	1.5	8
203	Versatile Role of Solvent Additive for Tailoring Morphology in Polymer Solar Cells for Efficient Charge Transport. Journal of Nanoscience and Nanotechnology, 2015, 15, 7040-7044.	0.9	8
204	Enhanced catalytic property of transparent PEDOT counter electrodes for bifacial dye sensitized solar cells. Materials Today Communications, 2020, 25, 101313.	0.9	8
205	Interface Engineering of Pbâ€“Sn Lowâ€Bandgap Perovskite Solar Cells for Improved Efficiency and Stability. Solar Rrl, 2022, 6, .	3.1	8
206	Synergistic Approach toward Erbium-Passivated Triple-Anion Organic-Free Perovskite Solar Cells with Excellent Performance for Agrivoltaics Application. ACS Applied Materials & Interfaces, 2022, 14, 6894-6905.	4.0	8
207	Frequency control of isolated micro-grid using a droop control approach. , 2016, , .		7
208	Effect of Synthesis Temperature, UV-Ozone Treatment, and Nanowire Diameter on the Failure of Silver Nanowire Electrodes. IEEE Journal of Photovoltaics, 2016, 6, 1549-1553.	1.5	7
209	Efficient CsF interlayer for high and low bandgap polymer solar cell. AIP Advances, 2018, 8, 025018.	0.6	7
210	Solution-processed all-oxide bulk heterojunction solar cells based on CuO nanaorod array and TiO2nanocrystals. Nanotechnology, 2018, 29, 215403.	1.3	7
211	Photovoltaic Counter Electrodes: An Alternative Approach to Extend Light Absorption Spectra and Enhance Performance of Dyeâ€Sensitized Solar Cells. ChemPlusChem, 2019, 84, 241-246.	1.3	7
212	Effect of antisolvent treatment on PbI2 films for high performance carbon-based perovskite solar cells. Materials Letters, 2020, 275, 128157.	1.3	7
213	Seed-mediated direct growth of CdSe nanoclusters on substrates. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	6
214	Polymer Photovoltaics With Top Metal Electrode Deposited by Solution-Processing. IEEE Transactions on Electron Devices, 2014, 61, 2957-2962.	1.6	6
215	Managing Charge and Exciton Transporting Behavior in White Organic Lightâ€Emitting Devices for High Power Efficiency and Superior Color Stability. Advanced Electronic Materials, 2015, 1, 1400040.	2.6	6
216	Functionalized carboxylate deposition of triphenylamine-based organic dyes for efficient dye-sensitized solar cells. RSC Advances, 2018, 8, 31943-31949.	1.7	6

#	Article	IF	Citations
217	Step-by-Step Heating of Dye Solution for Efficient Solar Energy Harvesting in Dye-Sensitized Solar Cells. Journal of Electronic Materials, 2018, 47, 4737-4741.	1.0	6
218	Engineering Cu2ZnSnS4 grain boundaries for enhanced photovoltage generation at the Cu2ZnSnS4/TiO2 heterojunction: A nanoscale investigation using Kelvin probe force microscopy. Journal of Applied Physics, 2021, 130, .	1.1	6
219	Ring-protected small molecules for organic photovoltaics. Proceedings of SPIE, 2013, , .	0.8	5
220	Beyond Metal Oxides: Introducing Lowâ€Temperature Solutionâ€Processed Ultrathin Layered Double Hydroxide Nanosheets into Polymer Solar Cells Toward Improved Electron Transport. Solar Rrl, 2019, 3, 1800299.	3.1	5
221	Direct growth of CdSe nanorods on ITO substrates by co-anchoring of ZnO nanoparticles and ethylenediamine. Journal of Nanoparticle Research, 2012, 14, 1.	0.8	4
222	Highly efficient electron transport based on double-layered PC61BM in inverted perovskite solar cells. Organic Electronics, 2022, 100, 106391.	1.4	4
223	Van der Waals Epitaxial Growth for High Performance Organicâ€Free Perovskite Solar Cell: Experimental and Theoretical Insights. Advanced Materials Interfaces, 2022, 9, .	1.9	4
224	Regioregularity and solar cell device performance of poly(3â€dodecylthienylenevinylene). Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 917-922.	2.4	3
225	Influence of Nanoscale Morphology on Performance of Inverted Structure Metallated Conjugated Polymer Solar Cells. IEEE Transactions on Electron Devices, 2015, 62, 3029-3033.	1.6	3
226	An oligothiophene chromophore with a macrocyclic side chain: synthesis, morphology, charge transport, and photovoltaic performance. RSC Advances, 2016, 6, 102043-102056.	1.7	3
227	Beyond Metal Oxides: Introducing Low-Temperature Solution-Processed Ultrathin Layered Double Hydroxide Nanosheets into Polymer Solar Cells Toward Improved Electron Transport (Solar RRL) Tj ETQq1 1 0.784314 rgBT /Overlock 10	1.4	3
228	Kinetic Monte Carlo Simulation of Perovskite Solar Cells to Probe Film Coverage and Thickness. Advanced Energy and Sustainability Research, 2021, 2, 2000068.	2.8	3
229	Photoelectrochemical Application and Charge Transport Dynamics of a Water-Stable Organicâ€"Inorganic Halide (C₆H₄NH₂CuCl₂I) Film in Aqueous Solution. ACS Applied Materials & Interfaces, 2021, 13, 44274-44283.	4.0	3
230	Influence of the UV-induced fiber loss on the distributed feedback fiber lasers. Optics and Laser Technology, 2003, 35, 309-313.	2.2	2
231	Experimental and computational studies of 4H-cyclopenta[2,1-b:3,4-bâ€²]dithiophen-4-one (CPDTO)-oligomers. Polymer, 2014, 55, 4677-4683.	1.8	2
232			

#	Article	IF	Citations
235	Roles of Organic Ligands in Ambient Stability of Layered Halide Perovskites. ACS Applied Materials & Interfaces, 2022, 14, 33085-33093.	4.0	2
236	Carbon Nanoparticles for Counter Electrode Catalyst in Dye-Sensitized Solar Cells. Materials Research Society Symposia Proceedings, 2008, 1102, 1.	0.1	1
237	Organic Electronics: Dopingâ€Free Organic Lightâ€Emitting Diodes with Very High Power Efficiency, Simple Device Structure, and Superior Spectral Performance (Adv. Funct. Mater. 30/2014). Advanced Functional Materials, 2014, 24, 4722-4722.	7.8	1
238	Engineering of ambient processing conditions to control solvent induced intermediate phase in mixed halide organic-inorganic perovskite (CH<inf>3</inf>NH<inf>3</inf>PbI<inf>3âˆ’x</inf>Cl<inf>x</inf>) film for efficient planar perovskite solar cells. , 2016, , .		1
239	Functionalized Carboxylate Deposition for rapid sensitization of dye-sensitized solar cells. Solar Energy, 2016, 126, 128-136.	2.9	1
240	SnO2 Nanoparticles Embedded Biochar as Anode Material in Lithium Ion Batteries. , 2019, , .		1
241	Modeling of Charge Transfer in Mesoscopic Perovskite Solar Cells by Considering a Trapassisted Interface. , 2019, , .		1
242	Energy transfer processes in new conjugated polymer/6,6-phenyl-C<inf>61</inf>-butyric acid methyl ester systems for photovoltaic applications. , 2009, , .		0
243	PbS quantum dots embedded TiO<inf>2</inf> nanofibers for dye-sensitized solar cells. , 2009, , .		0
244	In-situ polymerized poly(3-hexylthiophene) and TiO<inf>2</inf> nanocomposites for organic solar cells. , 2010, , .		0
245	Capacity Revival of Tungsten trioxide Anode Material in Lithium-Ion Battery. , 2019, , .		0
246	PCM and the thermal model in battery design. , 2019, , .		0
247	The Role of Ex Situ Solid Electrolyte Interphase in Lithium Metal Batteries. , 2021, , 479-511.		0
248	Advanced Coupling of Energy Storage and Photovoltaics. , 2019, , 317-350.		0