Peter Chen

List of Publications by Year
in descending order

100 papers	10,358 citations	81743 39 h-index	42291 92 g-index
101 all docs	101 docs citations	101 times ranked	11706 citing authors

#	Article	IF	Citations
1	CH₃NH₃PbI₃ Perovskite/Fullerene Planarâ€Heterojunction Hybrid Solar Cells. Advanced Materials, 2013, 25, 3727-3732.	11.1	1,352
2	Fabrication of screen-printing pastes from TiO2 powders for dye-sensitised solar cells. Progress in Photovoltaics: Research and Applications, 2007, 15, 603-612.	4.4	938
3	Nickel Oxide Electrode Interlayer in CH₃NH₃PbI₃ Perovskite/PCBM Planarâ€Heterojunction Hybrid Solar Cells. Advanced Materials, 2014, 26, 4107-4113.	11.1	646
4	Application of Highly Ordered TiO₂ Nanotube Arrays in Flexible Dye-Sensitized Solar Cells. ACS Nano, 2008, 2, 1113-1116.	7.3	630
5	Efficient CdSe Quantum Dot-Sensitized Solar Cells Prepared by an Improved Successive Ionic Layer Adsorption and Reaction Process. Nano Letters, 2009, 9, 4221-4227.	4.5	612
6	PbS and CdS Quantum Dotâ€Sensitized Solidâ€State Solar Cells: â€œOld Concepts, New Resultsâ€• Advanced Functional Materials, 2009, 19, 2735-2742.	7.8	458
7	Electron Transport and Recombination in Solid-State Dye Solar Cell with Spiro-OMeTAD as Hole Conductor. Journal of the American Chemical Society, 2009, 131, 558-562.	6.6	424
8	p-type Mesoscopic Nickel Oxide/Organometallic Perovskite Heterojunction Solar Cells. Scientific Reports, 2014, 4, 4756.	1.6	371
9	CdSe Quantum Dot-Sensitized Solar Cells Exceeding Efficiency 1% at Full-Sun Intensity. Journal of Physical Chemistry C, 2008, 112, 11600-11608.	1.5	339
10	Low-Temperature Sputtered Nickel Oxide Compact Thin Film as Effective Electron Blocking Layer for Mesoscopic NiO/CH₃NH₃PbI₃ Perovskite Heterojunction Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 11851-11858.	4.0	319
11	Recent Developments in Solidâ€State Dyeâ€Sensitized Solar Cells. ChemSusChem, 2008, 1, 699-707.	3.6	286
12	Regenerative PbS and CdS Quantum Dot Sensitized Solar Cells with a Cobalt Complex as Hole Mediator. Langmuir, 2009, 25, 7602-7608.	1.6	270
13	The 2,2,6,6â€Tetramethylâ€1â€piperidinyloxy Radical: An Efficient, Iodineâ€Free Redox Mediator for Dyeâ€Sensitized Solar Cells. Advanced Functional Materials, 2008, 18, 341-346.	7.8	254
14	The Influence of Charge Transport and Recombination on the Performance of Dyeâ€Sensitized Solar Cells. ChemPhysChem, 2009, 10, 290-299.	1.0	253
15	Charge collection and pore filling in solid-state dye-sensitized solar cells. Nanotechnology, 2008, 19, 424003.	1.3	238
16	High Open-Circuit Voltage Solid-State Dye-Sensitized Solar Cells with Organic Dye. Nano Letters, 2009, 9, 2487-2492.	4.5	228
17	A Review of Inorganic Hole Transport Materials for Perovskite Solar Cells. Advanced Materials Interfaces, 2018, 5, 1800882.	1.9	200
18	Highly Efficient 2D/3D Hybrid Perovskite Solar Cells via Lowâ€Pressure Vaporâ€Assisted Solution Process. Advanced Materials, 2018, 30, e1801401.	11.1	154

#	Article	IF	Citations
19	NiO<i>_x</i> Electrode Interlayer and CH₃NH₂/CH₃NH₃PbBr₃ Interface Treatment to Markedly Advance Hybrid Perovskiteâ€Based Lightâ€Emitting Diodes. Advanced Materials, 2016, 28, 8687-8694.	11.1	147
20	Inorganic p-type contact materials for perovskite-based solar cells. Journal of Materials Chemistry A, 2015, 3, 9011-9019.	5.2	143
21	Leadâ€Free Double Perovskites for Perovskite Solar Cells. Solar Rrl, 2020, 4, 1900306.	3.1	127
22	Ultrafast Dynamics of Hole Injection and Recombination in Organometal Halide Perovskite Using Nickel Oxide as p-Type Contact Electrode. Journal of Physical Chemistry Letters, 2016, 7, 1096-1101.	2.1	97
23	Novel spiro-based hole transporting materials for efficient perovskite solar cells. Chemical Communications, 2015, 51, 15518-15521.	2.2	88
24	Zinc Porphyrinâ€"Ethynylaniline Conjugates as Novel Hole-Transporting Materials for Perovskite Solar Cells with Power Conversion Efficiency of 16.6%. ACS Energy Letters, 2016, 1, 956-962.	8.8	87
25	High voltage and efficient bilayer heterojunction solar cells based on an organicâ€"inorganic hybrid perovskite absorber with a low-cost flexible substrate. Physical Chemistry Chemical Physics, 2014, 16, 6033-6040.	1.3	86
26	Inorganic p-Type Semiconductors: Their Applications and Progress in Dye-Sensitized Solar Cells and Perovskite Solar Cells. Energies, 2016, 9, 331.	1.6	69
27	Synthesis and Structureâ€"Property Correlation in Shapeâ€Controlled ZnO Nanoparticles Prepared by Chemical Vapor Synthesis and their Application in Dyeâ€Sensitized Solar Cells. Advanced Functional Materials, 2009, 19, 875-886.	7.8	67
28	Surface modifications of CdS/CdSe co-sensitized TiO2 photoelectrodes for solid-state quantum-dot-sensitized solar cells. Journal of Materials Chemistry, 2011, 21, 17534.	6.7	62
29	Porphyrin Dimers as Hole-Transporting Layers for High-Efficiency and Stable Perovskite Solar Cells. ACS Energy Letters, 2018, 3, 1620-1626.	8.8	62
30	Femtosecond Excitonic Relaxation Dynamics of Perovskite on Mesoporous Films of Al₂O₃ and NiO Nanoparticles. Angewandte Chemie - International Edition, 2014, 53, 9339-9342.	7.2	57
31	Oxidized Ni/Au Transparent Electrode in Efficient CH₃NH₃PbI₃ Perovskite/Fullerene Planar Heterojunction Hybrid Solar Cells. Advanced Materials, 2016, 28, 3290-3297.	11.1	57
32	Mixed Cation Thiocyanate-Based Pseudohalide Perovskite Solar Cells with High Efficiency and Stability. ACS Applied Materials & Interfaces, 2017, 9, 2403-2409.	4.0	57
33	Pseudoâ€Halide Perovskite Solar Cells. Advanced Energy Materials, 2021, 11, 2100818.	10.2	56
34	Lowâ€Pressure Hybrid Chemical Vapor Growth for Efficient Perovskite Solar Cells and Largeâ€Area Module. Advanced Materials Interfaces, 2016, 3, 1500849.	1.9	51
35	Performance Characterization of Dye-Sensitized Photovoltaics under Indoor Lighting. Journal of Physical Chemistry Letters, 2017, 8, 1824-1830.	2.1	51
36	Synergistic Reinforcement of Builtâ€In Electric Fields for Highly Efficient and Stable Perovskite Photovoltaics. Advanced Functional Materials, 2020, 30, 1909755.	7.8	47

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37	Energy Harvesting Under Dim-Light Condition With Dye-Sensitized and Perovskite Solar Cells. Frontiers in Chemistry, 2019, 7, 209.	1.8	44
38	Highly stable perovskite solar cells with all-inorganic selective contacts from microwave-synthesized oxide nanoparticles. Journal of Materials Chemistry A, 2017, 5, 25485-25493.	5.2	41
39	Conversion efficiency improvement of inverted CH3NH3PbI3 perovskite solar cells with room temperature sputtered ZnO by adding the C60 interlayer. Applied Physics Letters, 2015, 107, .	1.5	40
40	Solid-state dye-sensitized solar cells using TiO2 nanotube arrays on FTO glass. Journal of Materials Chemistry, 2009, 19, 5325.	6.7	39
41	Automatic Inverse Design of High-Performance Beam-Steering Metasurfaces via Genetic-type Tree Optimization. Nano Letters, 2021, 21, 4981-4989.	4.5	39
42	Microwave-assisted synthesis of titanium dioxide nanocrystalline for efficient dye-sensitized and perovskite solar cells. Solar Energy, 2015, 120, 345-356.	2.9	37
43	Functional p-Type, Polymerized Organic Electrode Interlayer in CH₃NH₃PbI₃ Perovskite/Fullerene Planar Heterojunction Hybrid Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 24973-24981.	4.0	36
44	Over 8% efficient CsSnI₃-based mesoporous perovskite solar cells enabled by two-step thermal annealing and surface cationic coordination dual treatment. Journal of Materials Chemistry A, 2022, 10, 3642-3649.	5.2	35
45	Research Update: Hybrid organic-inorganic perovskite (HOIP) thin films and solar cells by vapor phase reaction. APL Materials, 2016, 4, .	2.2	33
46	Cu/Cu2O nanocomposite films as a p-type modified layer for efficient perovskite solar cells. Scientific Reports, 2018, 8, 7646.	1.6	33
47	Femtosecond Excitonic Relaxation Dynamics of Perovskite on Mesoporous Films of Al2O3and NiO Nanoparticles. Angewandte Chemie, 2014, 126, 9493-9496.	1.6	31
48	Halide perovskite for lowâ€power consumption neuromorphic devices. EcoMat, 2021, 3, e12142.	6.8	31
49	Lowâ€Pressure Vaporâ€Assisted Solution Process for Thiocyanateâ€Based Pseudohalide Perovskite Solar Cells. ChemSusChem, 2016, 9, 2620-2627.	3.6	30
50	Clean and time-effective synthesis of anatase TiO 2 nanocrystalline by microwave-assisted solvothermal method for dye-sensitized solar cells. Journal of Power Sources, 2014, 247, 444-451.	4.0	24
51	p-Type dye-sensitized solar cell based on nickel oxide photocathode with or without Li doping. Journal of Alloys and Compounds, 2014, 584, 142-147.	2.8	24
52	Facile one-pot synthesis of Cu2ZnSnS4 quaternary nanoparticles using a microwave-assisted method. CrystEngComm, 2013, 15, 9863.	1.3	22
53	Lead antimony sulfide (Pb5Sb8S17) solid-state quantum dot-sensitized solar cells with an efficiency of over 4%. Journal of Power Sources, 2016, 312, 86-92.	4.0	21
54	Perovskite-based solar cells with inorganic inverted hybrid planar heterojunction structure. AIP Advances, 2018, 8, .	0.6	20

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55	Characteristics of TiNi alloy thin films. Thin Solid Films, 2001, 398-399, 597-601.	0.8	19
56	Robust and Recyclable Substrate Template with an Ultrathin Nanoporous Counter Electrode for Organic-Hole-Conductor-Free Monolithic Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 41845-41854.	4.0	19
57	Facile fabrication method of small-sized crystal silicon solar cells for ubiquitous applications and tandem device with perovskite solar cells. Materials Today Energy, 2018, 7, 190-198.	2.5	19
58	Plasma Surface Treatments of TiO2 Photoelectrodes for Use in Dye-Sensitized Solar Cells. Journal of the Electrochemical Society, 2011, 158, K101.	1.3	18
59	Non-color distortion for visible light transmitted tandem solid state dye-sensitized solar cells. Renewable Energy, 2013, 59, 136-140.	4.3	18
60	Improve Hole Collection by Interfacial Chemical Redox Reaction at a Mesoscopic NiO/CH₃NH₃PbI₃ Heterojunction for Efficient Photovoltaic Cells. Advanced Materials Interfaces, 2016, 3, 1600135.	1.9	18
61	Bifacial transparent solid-state dye-sensitized solar cell with sputtered indium-tin-oxide counter electrode. Solar Energy, 2012, 86, 1967-1972.	2.9	17
62	The utilization of IZO transparent conductive oxide for tandem and substrate type perovskite solar cells. Journal Physics D: Applied Physics, 2018, 51, 424002.	1.3	17
63	Microwave-Assisted Hydrothermal Synthesis of TiO₂Mesoporous Beads Having C and/or N Doping for Use in High Efficiency All-Plastic Flexible Dye-Sensitized Solar Cells. Journal of the Electrochemical Society, 2013, 160, H160-H165.	1.3	16
64	Efficient CH3NH3PbI3 perovskite/fullerene planar heterojunction hybrid solar cells with oxidized Ni/Au/Cu transparent electrode. Applied Physics Letters, 2018, 112, .	1.5	16
65	The Cu/Cu₂O nanocomposite as a p-type transparent-conductive-oxide for efficient bifacial-illuminated perovskite solar cells. Journal of Materials Chemistry C, 2018, 6, 6280-6286.	2.7	16
66	Recent progress in inorganic tin perovskite solar cells. Materials Today Energy, 2022, 23, 100891.	2.5	16
67	Microwave-assisted hydrothermal synthesis of TiO2 spheres with efficient photovoltaic performance for dye-sensitized solar cells. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	15
68	Effects of microwave condition on the formation and characteristics of TiO2 submicron-sized beads and its use in all-plastic flexible dye-sensitized solar cells. Solar Energy Materials and Solar Cells, 2016, 144, 7-13.	3.0	15
69	Extension lifetime for dye-sensitized solar cells through multiple dye adsorption/desorption process. Journal of Power Sources, 2013, 225, 257-262.	4.0	14
70	Segregation-free bromine-doped perovskite solar cells for IoT applications. RSC Advances, 2019, 9, 32833-32838.	1.7	13
71	Hemispherical Cesium Lead Bromide Perovskite Single-Mode Microlasers with High-Quality Factors and Strong Purcell Enhancement. ACS Applied Materials & Interfaces, 2021, 13, 13556-13564.	4.0	11
72	One- and Two-Photon Excited Photoluminescence and Suppression of Thermal Quenching of CsSnBr₃ Microsquare and Micropyramid. ACS Nano, 2021, 15, 19613-19620.	7.3	11

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73	Dependence of compositions and crystallization behaviors of dc-sputtered TiNi thin films on the deposition conditions. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 2382-2387.	0.9	10
74	Ultra-Thin TiO2 Layers for Enhancing the Conversion Efficiency of Flexible Dye-Sensitized Solar Cells. Journal of the Electrochemical Society, 2011, 158, H1252.	1.3	10
75	The use of sputter deposited TiN thin film as a surface conducting layer on the counter electrode of flexible plastic dye-sensitized solar cells. Surface and Coatings Technology, 2013, 231, 140-143.	2.2	10
76	Porphyrinâ€Based Simple and Practical Dopantâ€Free Holeâ€Transporting Materials for Efficient Perovskite Solar Cells Using TiO₂ Semiconductors. Solar Rrl, 2020, 4, 2000119.	3.1	9
77	Double-side operable perovskite photodetector using Cu/Cu₂O as a hole transport layer. Optics Express, 2019, 27, 24900.	1.7	9
78	Clean and flexible synthesis of TiO2 nanocrystallites for dye-sensitized and perovskite solar cells. Solar Energy Materials and Solar Cells, 2017, 159, 336-344.	3.0	8
79	Low-temperature growth of uniform ultrathin TiO2 blocking layer for efficient perovskite solar cell. Organic Electronics, 2019, 75, 105379.	1.4	6
80	Characterize and Retard the Impact of the Biasâ€Induced Mobile Ions in CH₃NH₃PbBr₃ Perovskite Lightâ€Emitting Diodes. Advanced Optical Materials, 2022, 10, .	3.6	5
81	A novel porous Ti/TiN/Ti thin film as a working electrode for back-contact, monolithic and non-TCO dye-sensitized solar cells. Sustainable Energy and Fuels, 2017, 1, 851-858.	2.5	4
82	Improved conversion efficiency of perovskite solar cells converted from thermally deposited lead iodide with dimethyl sulfoxide-treated poly(3,4-ethylenedioxythiophene) poly(styrene sulfonate). Organic Electronics, 2019, 73, 266-272.	1.4	4
83	High-Performance Perovskite-Based Light-Emitting Diodes from the Conversion of Amorphous Spin-Coated Lead Bromide with Phenethylamine Doping. ACS Omega, 2020, 5, 8697-8706.	1.6	4
84	Effects of Choline Chloride in Lead Bromide Layer and Methylammonium Bromide Precursor on Perovskite Conversion and Optoelectronic Properties of Perovskite-Based Light-Emitting Diodes. ACS Applied Electronic Materials, 2021, 3, 2035-2043.	2.0	4
85	Effect of the Large-Size A-Site Cation on the Crystal Growth and Phase Distribution of 2D/3D Mixed Perovskite Films via a Low-Pressure Vapor-Assisted Solution Process. Journal of Physical Chemistry C, 0, , .	1.5	4
86	The Effects of Solvent on Doctorâ€Bladed Perovskite Light Absorber under Ambient Process Condition for Multipleâ€Cation Mixed Halide Perovskites. Energy Technology, 2021, 9, .	1.8	3
87	Investigation of the mechanism of a facile method for ammonia treatment to effectively tune the morphology and conductivity of PEDOT:PSS films. Organic Electronics, 2021, 91, 106081.	1.4	3
88	Conversion efficiency enhancement of methylammonium lead triiodide perovskite solar cells converted from thermally deposited lead iodide via thin methylammonium iodide interlayer. Organic Electronics, 2020, 82, 105713.	1.4	2
89	Back-contact perovskite solar cells. Semiconductor Science and Technology, 2021, 36, 083001.	1.0	2
90	Formamide iodide: a new cation additive for inhibiting Î´-phase formation of formamidinium lead iodide perovskite. Materials Advances, 2021, 2, 2272-2277.	2.6	2

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91	Observation of strain-induced phonon mode splitting in the tetragonal hybrid halide perovskite. Japanese Journal of Applied Physics, 2017, 56, 110307.	0.8	1
92	P-Type and Inorganic Hole Transporting Materials for Perovskite Solar Cells. Series on Chemistry, Energy and the Environment, 2017, , 63-109.	0.3	1
93	The Photovoltaics and Nonlinear optical properties of 2D/3D Hybrid Perovskite. , 0, , .		1
94	The Influence of Particle Sizes on the Optical Characteristics of Nanocrystalline TiO2 Films for Dye-Sensitized Solar Cells. Materials Research Society Symposia Proceedings, 2008, 1101, 1.	0.1	0
95	Microwave-assisted synthesis of nanocrystalline TiO₂for dye-sensitized solar cells. Proceedings of SPIE, 2012, , .	0.8	0
96	Low-pressure hybrid chemical vapor deposition for efficient perovskite solar cells and module. , 2016, , .		0
97	Mapping Highly Efficient Mixed-cation Pseudohalide-perovskite Solar Cells with a Scanning Transmission X-ray Microscope. Microscopy and Microanalysis, 2018, 24, 462-463.	0.2	0
98	Cooling dynamics of electrons in MAPbBr3 probed in the deep-UV. EPJ Web of Conferences, 2019, 205, 05020.	0.1	0
99	Functional inorganic selective contact layers for perovskite solar cell application. , 0, , .		0
100	Pseudohalide Perovskite Solar Cells. , 0, , .		0