Peter Chen

List of Publications by Citations

92 papers	9,104 citations	35 h-index	95 g-index
101 ext. papers	9,725 ext. citations	7.9 avg, IF	5.91 L-index

#	Paper	IF	Citations
92	CH3NH3PbI3 perovskite/fullerene planar-heterojunction hybrid solar cells. *Advanced Materials*, **2013**, 25, 3727-32	24	1189
91	Fabrication of screen-printing pastes from TiO2 powders for dye-sensitised solar cells. *Progress in Photovoltaics: Research and Applications*, **2007**, 15, 603-612	6.8	870
90	Application of highly ordered TiO2 nanotube arrays in flexible dye-sensitized solar cells. *ACS Nano*, **2008**, 2, 1113-6	16.7	590
89	Nickel oxide electrode interlayer in CH3 NH3 PbI3 perovskite/PCBM planar-heterojunction hybrid solar cells. *Advanced Materials*, **2014**, 26, 4107-13	24	588
88	Efficient CdSe quantum dot-sensitized solar cells prepared by an improved successive ionic layer adsorption and reaction process. *Nano Letters*, **2009**, 9, 4221-7	11.5	587
87	PbS and CdS Quantum Dot-Sensitized Solid-State Solar Cells: "Old Concepts, New Results" *Advanced Functional Materials*, **2009**, 19, 2735-2742	15.6	433
86	Electron transport and recombination in solid-state dye solar cell with spiro-OMeTAD as hole conductor. *Journal of the American Chemical Society*, **2009**, 131, 558-62	16.4	386
85	p-type Mesoscopic nickel oxide/organometallic perovskite heterojunction solar cells. *Scientific Reports*, **2014**, 4, 4756	4.9	333
84	CdSe Quantum Dot-Sensitized Solar Cells Exceeding Efficiency 1% at Full-Sun Intensity. *Journal of Physical Chemistry C*, **2008**, 112, 11600-11608	3.8	328
83	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, 11851-8	9.5	270
82	Recent developments in solid-state dye-sensitized solar cells. *ChemSusChem*, **2008**, 1, 699-707	8.3	268
81	Regenerative PbS and CdS quantum dot sensitized solar cells with a cobalt complex as hole mediator. *Langmuir*, **2009**, 25, 7602-8	4	262
80	The influence of charge transport and recombination on the performance of dye-sensitized solar cells. *ChemPhysChem*, **2009**, 10, 290-9	3.2	248
79	The 2,2,6,6-Tetramethyl-1-piperidinyloxy Radical: An Efficient, Iodine- Free Redox Mediator for Dye-Sensitized Solar Cells. *Advanced Functional Materials*, **2008**, 18, 341-346	15.6	238
78	Charge collection and pore filling in solid-state dye-sensitized solar cells. *Nanotechnology*, **2008**, 19, 424003	3.4	232
77	High open-circuit voltage solid-state dye-sensitized solar cells with organic dye. *Nano Letters*, **2009**, 9, 2487-92	11.5	220
76	NiO Electrode Interlayer and CH NH /CH NH PbBr Interface Treatment to Markedly Advance Hybrid Perovskite-Based Light-Emitting Diodes. *Advanced Materials*, **2016**, 28, 8687-8694	24	134

75	Inorganic p-type contact materials for perovskite-based solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 9011-9019	13	133
74	A Review of Inorganic Hole Transport Materials for Perovskite Solar Cells. *Advanced Materials Interfaces*, **2018**, 5, 1800882	4.6	122
73	Highly Efficient 2D/3D Hybrid Perovskite Solar Cells via Low-Pressure Vapor-Assisted Solution Process. *Advanced Materials*, **2018**, 30, e1801401	24	106
72	High voltage and efficient bilayer heterojunction solar cells based on an organic-inorganic hybrid perovskite absorber with a low-cost flexible substrate. *Physical Chemistry Chemical Physics*, **2014**, 16, 6033-40	3.6	79
71	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, 1096-101	6.4	78
70	Novel spiro-based hole transporting materials for efficient perovskite solar cells. *Chemical Communications*, **2015**, 51, 15518-21	5.8	76
69	Zinc Porphyrin–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	20.1	73
68	Synthesis and Structure–Property Correlation in Shape-Controlled ZnO Nanoparticles Prepared by Chemical Vapor Synthesis and their Application in Dye-Sensitized Solar Cells. *Advanced Functional Materials*, **2009**, 19, 875-886	15.6	67
67	Lead-Free Double Perovskites for Perovskite Solar Cells. *Solar Rrl*, **2020**, 4, 1900306	7.1	64
66	Surface modifications of CdS/CdSe co-sensitized TiO2 photoelectrodes for solid-state quantum-dot-sensitized solar cells. *Journal of Materials Chemistry*, **2011**, 21, 17534		61
65	Inorganic p-Type Semiconductors: Their Applications and Progress in Dye-Sensitized Solar Cells and Perovskite Solar Cells. *Energies*, **2016**, 9, 331	3.1	57
64	Femtosecond excitonic relaxation dynamics of perovskite on mesoporous films of Al□□ and NiO nanoparticles. *Angewandte Chemie - International Edition*, **2014**, 53, 9339-42	16.4	54
63	Oxidized Ni/Au Transparent Electrode in Efficient CH3 NH3 PbI3 Perovskite/Fullerene Planar Heterojunction Hybrid Solar Cells. *Advanced Materials*, **2016**, 28, 3290-7	24	50
62	Mixed Cation Thiocyanate-Based Pseudohalide Perovskite Solar Cells with High Efficiency and Stability. *ACS Applied Materials & Interfaces*, **2017**, 9, 2403-2409	9.5	49
61	Porphyrin Dimers as Hole-Transporting Layers for High-Efficiency and Stable Perovskite Solar Cells. *ACS Energy Letters*, **2018**, 3, 1620-1626	20.1	44
60	Performance Characterization of Dye-Sensitized Photovoltaics under Indoor Lighting. *Journal of Physical Chemistry Letters*, **2017**, 8, 1824-1830	6.4	43
59	Solid-state dye-sensitized solar cells using TiO2nanotube arrays on FTO glass. *Journal of Materials Chemistry*, **2009**, 19, 5325		39
58	Low-Pressure Hybrid Chemical Vapor Growth for Efficient Perovskite Solar Cells and Large-Area Module. *Advanced Materials Interfaces*, **2016**, 3, 1500849	4.6	37

57	Highly stable perovskite solar cells with all-inorganic selective contacts from microwave-synthesized oxide nanoparticles. *Journal of Materials Chemistry A*, **2017**, 5, 25485-25493	13	35
56	Conversion efficiency improvement of inverted CH3NH3PbI3 perovskite solar cells with room temperature sputtered ZnO by adding the C60 interlayer. *Applied Physics Letters*, **2015**, 107, 253301	3.4	34
55	Energy Harvesting Under Dim-Light Condition With Dye-Sensitized and Perovskite Solar Cells. *Frontiers in Chemistry*, **2019**, 7, 209	5	32
54	Functional p-Type, Polymerized Organic Electrode Interlayer in CH□NH□PbI□Perovskite/Fullerene Planar Heterojunction Hybrid Solar Cells. *ACS Applied Materials & Interfaces*, **2015**, 7, 24973-81	9.5	30
53	Synergistic Reinforcement of Built-In Electric Fields for Highly Efficient and Stable Perovskite Photovoltaics. *Advanced Functional Materials*, **2020**, 30, 1909755	15.6	29
52	Femtosecond Excitonic Relaxation Dynamics of Perovskite on Mesoporous Films of Al2O3 and NiO Nanoparticles. *Angewandte Chemie*, **2014**, 126, 9493-9496	3.6	29
51	Microwave-assisted synthesis of titanium dioxide nanocrystalline for efficient dye-sensitized and perovskite solar cells. *Solar Energy*, **2015**, 120, 345-356	6.8	28
50	Low-Pressure Vapor-Assisted Solution Process for Thiocyanate-Based Pseudohalide Perovskite Solar Cells. *ChemSusChem*, **2016**, 9, 2620-2627	8.3	26
49	Research Update: Hybrid organic-inorganic perovskite (HOIP) thin films and solar cells by vapor phase reaction. *APL Materials*, **2016**, 4, 091509	5.7	26
48	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	5.7	21
47	Facile one-pot synthesis of Cu2ZnSnS4 quaternary nanoparticles using a microwave-assisted method. *CrystEngComm*, **2013**, 15, 9863	3.3	20
46	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	8.9	19
45	Cu/CuO nanocomposite films as a p-type modified layer for efficient perovskite solar cells. *Scientific Reports*, **2018**, 8, 7646	4.9	19
44	Characteristics of TiNi alloy thin films. *Thin Solid Films*, **2001**, 398-399, 597-601	2.2	18
43	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	8.9	17
42	Plasma Surface Treatments of TiO2 Photoelectrodes for Use in Dye-Sensitized Solar Cells. *Journal of the Electrochemical Society*, **2011**, 158, K101	3.9	17
41	Pseudo-Halide Perovskite Solar Cells. *Advanced Energy Materials*, **2021**, 11, 2100818	21.8	16
40	Perovskite-based solar cells with inorganic inverted hybrid planar heterojunction structure. *AIP Advances*, **2018**, 8, 015109	1.5	15

39	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	7	15
38	Microwave-assisted hydrothermal synthesis of TiO2 spheres with efficient photovoltaic performance for dye-sensitized solar cells. *Journal of Nanoparticle Research*, **2013**, 15, 1	2.3	15
37	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	3.9	15
36	Bifacial transparent solid-state dye-sensitized solar cell with sputtered indium-tin-oxide counter electrode. *Solar Energy*, **2012**, 86, 1967-1972	6.8	14
35	Improve Hole Collection by Interfacial Chemical Redox Reaction at a Mesoscopic NiO/CH3NH3PbI3 Heterojunction for Efficient Photovoltaic Cells. *Advanced Materials Interfaces*, **2016**, 3, 1600135	4.6	14
34	Non-color distortion for visible light transmitted tandem solid state dye-sensitized solar cells. *Renewable Energy*, **2013**, 59, 136-140	8.1	13
33	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	6.4	12
32	Extension lifetime for dye-sensitized solar cells through multiple dye adsorption/desorption process. *Journal of Power Sources*, **2013**, 225, 257-262	8.9	12
31	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	9.5	12
30	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	7.1	11
29	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	4.4	10
28	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	2.9	10
27	Efficient CH3NH3PbI3 perovskite/fullerene planar heterojunction hybrid solar cells with oxidized Ni/Au/Cu transparent electrode. *Applied Physics Letters*, **2018**, 112, 071103	3.4	9
26	The utilization of IZO transparent conductive oxide for tandem and substrate type perovskite solar cells. *Journal Physics D: Applied Physics*, **2018**, 51, 424002	3	9
25	Ultra-Thin TiO2 Layers for Enhancing the Conversion Efficiency of Flexible Dye-Sensitized Solar Cells. *Journal of the Electrochemical Society*, **2011**, 158, H1252	3.9	9
24	Hemispherical Cesium Lead Bromide Perovskite Single-Mode Microlasers with High-Quality Factors and Strong Purcell Enhancement. *ACS Applied Materials & Interfaces*, **2021**, 13, 13556-13564	9.5	8
23	Automatic Inverse Design of High-Performance Beam-Steering Metasurfaces via Genetic-type Tree Optimization. *Nano Letters*, **2021**, 21, 4981-4989	11.5	8
22	Clean and flexible synthesis of TiO2 nanocrystallites for dye-sensitized and perovskite solar cells. *Solar Energy Materials and Solar Cells*, **2017**, 159, 336-344	6.4	7

21	Double-side operable perovskite photodetector using Cu/CuO as a hole transport layer. *Optics Express*, **2019**, 27, 24900-24913	3.3	6
20	Recent progress in inorganic tin perovskite solar cells. *Materials Today Energy*, **2021**, 23, 100891	7	5
19	Segregation-free bromine-doped perovskite solar cells for IoT applications.. *RSC Advances*, **2019**, 9, 32833-32838	3.7	5
18	Halide perovskite for low-power consumption neuromorphic devices. *EcoMat*,e12142	9.4	5
17	Low-temperature growth of uniform ultrathin TiO2 blocking layer for efficient perovskite solar cell. *Organic Electronics*, **2019**, 75, 105379	3.5	4
16	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	3.5	3
15	Porphyrin-Based Simple and Practical Dopant-Free Hole-Transporting Materials for Efficient Perovskite Solar Cells Using TiO2 Semiconductors. *Solar Rrl*, **2020**, 4, 2000119	7.1	3
14	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	5.8	3
13	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	4	3
12	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	3.9	3
11	Formamide iodide: a new cation additive for inhibiting □phase formation of formamidinium lead iodide perovskite. *Materials Advances*, **2021**, 2, 2272-2277	3.3	2
10	Observation of strain-induced phonon mode splitting in the tetragonal hybrid halide perovskite. *Japanese Journal of Applied Physics*, **2017**, 56, 110307	1.4	1
9	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	3.5	1
8	P-Type and Inorganic Hole Transporting Materials for Perovskite Solar Cells. *Series on Chemistry, Energy and the Environment*, **2017**, 63-109	0.2	1
7	The Effects of Solvent on Doctor-Bladed Perovskite Light Absorber under Ambient Process Condition for Multiple-Cation Mixed Halide Perovskites. *Energy Technology*, **2021**, 9, 2000792	3.5	1
6	Characterize and Retard the Impact of the Bias-Induced Mobile Ions in CH 3 NH 3 PbBr 3 Perovskite Light-Emitting Diodes. *Advanced Optical Materials*, **2022**, 10, 2101439	8.1	1
5	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	3.5	0
4	Back-contact perovskite solar cells. *Semiconductor Science and Technology*, **2021**, 36, 083001	1.8	0

List of Publications

3	Cooling dynamics of electrons in MAPbBr3 probed in the deep-UV. *EPJ Web of Conferences*, **2019**, 205, 05020	0.3
2	Mapping Highly Efficient Mixed-cation Pseudohalide-perovskite Solar Cells with a Scanning Transmission X-ray Microscope. *Microscopy and Microanalysis*, **2018**, 24, 462-463	0.5
1	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	