

Sai-Wing Tsang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

117 papers	6,037 citations	41 h-index	75 g-index
127 ext. papers	6,651 ext. citations	9.8 avg, IF	5.84 L-index

#	Paper	IF	Citations
117	Record-high near-band-edge optical nonlinearities and two-level model correction of poled polymers by spectroscopic electromodulation and ellipsometry. <i>Science China Chemistry</i> , 2022 , 65, 584	7.9	1
116	Direct Observation of the Charge Transfer States from a Non-Fullerene Organic Solar Cell with a Small Driving Force. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 10595-10602	6.4	4
115	Highly Efficient Sky-Blue Perovskite Light-Emitting Diode Via Suppressing Nonradiative Energy Loss. <i>Chemistry of Materials</i> , 2021 , 33, 4154-4162	9.6	15
114	Two-Step Chemical Vapor Deposition-Synthesized Lead-Free All-Inorganic CsSbBr Perovskite Microplates for Optoelectronic Applications. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 35930-35940	9.5	4
113	Suppressing Ion Migration across Perovskite Grain Boundaries by Polymer Additives. <i>Advanced Functional Materials</i> , 2021 , 31, 2006802	15.6	33
112	Revealing the Degradation and Self-Healing Mechanisms in Perovskite Solar Cells by Sub-Bandgap External Quantum Efficiency Spectroscopy. <i>Advanced Materials</i> , 2021 , 33, e2006170	24	32
111	23.1: Invited Paper: High efficiency and Stability of Ink-jet Printed Quantum Dot Light Emitting Diodes via Dual Ionic Surface Passivation. <i>Digest of Technical Papers SID International Symposium</i> , 2021 , 52, 145-145	0.5	
110	Flexibility of Room-Temperature-Synthesized Amorphous CdO-InO Alloy Films and Their Application as Transparent Conductors in Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 43795-43805	9.5	1
109	Efficient Perovskite White Light-Emitting Diode Based on an Interfacial Charge-Confinement Structure. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 44991-45000	9.5	3
108	Trilayer organic narrowband photodetector with electrically-switchable spectral range and color sensing ability. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 3814-3819	7.1	4
107	High efficiency and stability of ink-jet printed quantum dot light emitting diodes. <i>Nature Communications</i> , 2020 , 11, 1646	17.4	57
106	Positive Aging Effect of ZnO Nanoparticles Induced by Surface Stabilization. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 5863-5870	6.4	8
105	FA-Assistant Iodide Coordination in Organic-Inorganic Wide-Bandgap Perovskite with Mixed Halides. <i>Small</i> , 2020 , 16, e1907226	11	22
104	Effects of Hydrogen Bonds between Polymeric Hole-Transporting Material and Organic Cation Spacer on Morphology of Quasi-Two-Dimensional Perovskite Grains and Their Performance in Light-Emitting Diodes. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 9440-9447	9.5	7
103	A Family of Small Molecular Materials Enabling Consistently Lower Recombination Losses in Organic Photovoltaic Devices. <i>Solar Rrl</i> , 2020 , 4, 2000245	7.1	2
102	Improving the conductivity of sol-gel derived NiOx with a mixed oxide composite to realize over 80% fill factor in inverted planar perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 9578-9586	13	31
101	Porous and Intercrossed Pbl-Csl Nanorod Scaffold for Inverted Planar FA-Cs Mixed-Cation Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 6126-6135	9.5	20

100	Impact of surface dipole in NiOx on the crystallization and photovoltaic performance of organometal halide perovskite solar cells. <i>Nano Energy</i> , 2019 , 61, 496-504	17.1	60
99	Progress in air-processed perovskite solar cells: from crystallization to photovoltaic performance. <i>Materials Horizons</i> , 2019 , 6, 1611-1624	14.4	61
98	The Role of Diammonium Cation on the Structural and Optoelectronic Properties in 3D Cesium Formamidinium Mixed-Cation Perovskite Solar Cells. <i>Solar Rrl</i> , 2019 , 3, 1900140	7.1	11
97	Charge transfer-induced photoluminescence in ZnO nanoparticles. <i>Nanoscale</i> , 2019 , 11, 8736-8743	7.7	26
96	Revealing the crystallization process and realizing uniform 1.8 eV MA-based wide-bandgap mixed-halide perovskites via solution engineering. <i>Nano Research</i> , 2019 , 12, 1033-1039	10	26
95	Rational Design of Dopant-Free Coplanar D-ED Hole-Transporting Materials for High-Performance Perovskite Solar Cells with Fill Factor Exceeding 80%. <i>Advanced Energy Materials</i> , 2019 , 9, 1901268	21.8	52
94	Synergistic Effect of Pseudo-Halide Thiocyanate Anion and Cesium Cation on Realizing High-Performance Pinhole-Free MA-Based Wide-Band Gap Perovskites. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 25909-25916	9.5	14
93	Origin of Subthreshold Turn-On in Quantum-Dot Light-Emitting Diodes. <i>ACS Nano</i> , 2019 , 13, 8229-8236	16.7	17
92	44.4: Invited Paper: Study on the Degradation Mechanisms of Quantum-Dot Light-Emitting Diodes. <i>Digest of Technical Papers SID International Symposium</i> , 2019 , 50, 491-491	0.5	
91	A generalized Stark effect electromodulation model for extracting excitonic properties in organic semiconductors. <i>Nature Communications</i> , 2019 , 10, 5089	17.4	5
90	On the degradation mechanisms of quantum-dot light-emitting diodes. <i>Nature Communications</i> , 2019 , 10, 765	17.4	89
89	Balanced Electric Field Dependent Mobilities: A Key to Access High Fill Factors in Organic Bulk Heterojunction Solar Cells. <i>Solar Rrl</i> , 2018 , 2, 1700239	7.1	38
88	Sub-Band Gap Turn-On Near-Infrared-to-Visible Up-Conversion Device Enabled by an Organic-Inorganic Hybrid Perovskite Photovoltaic Absorber. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 15920-15925	9.5	19
87	Direct observation of cation-exchange in liquid-to-solid phase transformation in FA1-xMAxPbI3 based perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 9081-9088	13	29
86	Evidence on Enhanced Exciton Polarizability in Donor/Acceptor Bulk Heterojunction Organic Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 7256-7262	9.5	3
85	Room-Temperature Red-Green-Blue Whispering-Gallery Mode Lasing and White-Light Emission from Cesium Lead Halide Perovskite (CsPbX3, X = Cl, Br, I) Microstructures. <i>Advanced Optical Materials</i> , 2018 , 6, 1700993	8.1	33
84	Solution processable small molecule based organic light-emitting devices prepared by dip-coating method. <i>Organic Electronics</i> , 2018 , 55, 1-5	3.5	8
83	Enhanced performance of perovskite solar cells based on vertical TiO2 nanotube arrays with full filling of CH3NH3PbI3. <i>Applied Surface Science</i> , 2018 , 451, 250-257	6.7	24

82	Air-processed mixed-cation Cs _{0.15} FA _{0.85} PbI ₃ planar perovskite solar cells derived from a PbI ₂ /CsI/FAI intermediate complex. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 7731-7740	13	57
81	Vertical Organic-Inorganic Hybrid Perovskite Schottky Junction Transistors. <i>Advanced Electronic Materials</i> , 2018 , 4, 1800039	6.4	12
80	Porphyrin-based thick-film bulk-heterojunction solar cells for indoor light harvesting. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 9111-9118	7.1	55
79	Novel Series of Quasi-2D Ruddlesden-Popper Perovskites Based on Short-Chained Spacer Cation for Enhanced Photodetection. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 19019-19026	9.5	58
78	Impact of Nonfullerene Molecular Architecture on Charge Generation, Transport, and Morphology in PTB7-Th-Based Organic Solar Cells. <i>Advanced Functional Materials</i> , 2018 , 28, 1802702	15.6	37
77	Comparison of processing windows and electronic properties between CH ₃ NH ₃ PbI ₃ perovskite fabricated by one-step and two-step solution processes. <i>Organic Electronics</i> , 2018 , 63, 159-165	3.5	20
76	Using Ultralow Dosages of Electron Acceptor to Reveal the Early Stage Donor-Acceptor Electronic Interactions in Bulk Heterojunction Blends. <i>Advanced Energy Materials</i> , 2017 , 7, 1602360	21.8	54
75	Enhanced Self-Assembly of Crystalline, Large-Area, and Periodicity-Tunable TiO Nanotube Arrays on Various Substrates. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 6265-6272	9.5	10
74	Naphthalene diimide-difluorobenzene-based polymer acceptors for all-polymer solar cells. <i>Chemical Communications</i> , 2017 , 53, 3249-3252	5.8	26
73	Graphene oxide as an efficient hole-transporting material for high-performance perovskite solar cells with enhanced stability. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 9852-9858	13	76
72	Ultraviolet-ozone surface modification for non-wetting hole transport materials based inverted planar perovskite solar cells with efficiency exceeding 18%. <i>Journal of Power Sources</i> , 2017 , 360, 157-165	8.9	86
71	Interface design for high-efficiency non-fullerene polymer solar cells. <i>Energy and Environmental Science</i> , 2017 , 10, 1784-1791	35.4	149
70	Direct Free Carrier Photogeneration in Single Layer and Stacked Organic Photovoltaic Devices. <i>Advanced Materials</i> , 2017 , 29, 1606909	24	19
69	Thick-Film High-Performance Bulk-Heterojunction Solar Cells Retaining 90% PCEs of the Optimized Thin Film Cells. <i>Advanced Electronic Materials</i> , 2017 , 3, 1700007	6.4	29
68	Broadband Ce(III)-Sensitized Quantum Cutting in Core-Shell Nanoparticles: Mechanistic Investigation and Photovoltaic Application. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 5099-5104	6.4	21
67	Boosting the photovoltaic thermal stability of fullerene bulk heterojunction solar cells through charge transfer interactions. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 23662-23670	13	13
66	18% High-Efficiency Air-Processed Perovskite Solar Cells Made in a Humid Atmosphere of 70% RH. <i>Solar Rrl</i> , 2017 , 1, 1700097	7.1	75
65	Bulk-heterojunction solar cells with enriched polymer contents. <i>Organic Electronics</i> , 2017 , 40, 1-7	3.5	17

64	Low temperature fabrication of formamidinium based perovskite solar cells with enhanced performance by chlorine incorporation. <i>Organic Electronics</i> , 2016 , 38, 144-149	3.5	8
63	On the Study of Exciton Binding Energy with Direct Charge Generation in Photovoltaic Polymers. <i>Advanced Electronic Materials</i> , 2016 , 2, 1600200	6.4	32
62	The detrimental effect of excess mobile ions in planar CH ₃ NH ₃ PbI ₃ perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 12748-12755	13	42
61	Charge-Transfer State Energy and Its Relationship with Open-Circuit Voltage in an Organic Photovoltaic Device. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 14059-14068	3.8	25
60	Spectroscopic study on the impact of methylammonium iodide loading time on the electronic properties in perovskite thin films. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 561-567	13	42
59	Efficient ternary bulk heterojunction solar cells with PCDTBT as hole-cascade material. <i>Nano Energy</i> , 2016 , 19, 476-485	17.1	30
58	Locking the morphology with a green, fast and efficient physical cross-linking approach for organic electronic applications. <i>Organic Electronics</i> , 2016 , 28, 53-58	3.5	2
57	Probing Bulk Transport, Interfacial Disorders, and Molecular Orientations of Amorphous Semiconductors in a Thin-Film Transistor Configuration. <i>Advanced Electronic Materials</i> , 2016 , 2, 1500273	6.4	5
56	Evidence of Molecular Structure Dependent Charge Transfer between Isoindigo-Based Polymers and Fullerene. <i>Chemistry of Materials</i> , 2016 , 28, 2433-2440	9.6	29
55	Probing the Energy Level Alignment and the Correlation with Open-Circuit Voltage in Solution-Processed Polymeric Bulk Heterojunction Photovoltaic Devices. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 7283-90	9.5	12
54	Evidence of Delocalization in Charge-Transfer State Manifold for Donor:Acceptor Organic Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 21798-805	9.5	10
53	Effects of graphene defect on electronic structures of its interface with organic semiconductor. <i>Applied Physics Letters</i> , 2015 , 106, 133502	3.4	5
52	Ag Nanoparticles on Boron Doped Multi-walled Carbon Nanotubes as a Synergistic Catalysts for Oxygen Reduction Reaction in Alkaline Media. <i>Electrochimica Acta</i> , 2015 , 174, 919-924	6.7	21
51	Chlorine Incorporation for Enhanced Performance of Planar Perovskite Solar Cell Based on Lead Acetate Precursor. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 23110-6	9.5	102
50	Decomposition of Organometal Halide Perovskite Films on Zinc Oxide Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 19986-93	9.5	235
49	Simple fabrication of perovskite solar cells using lead acetate as lead source at low temperature. <i>Organic Electronics</i> , 2015 , 27, 12-17	3.5	31
48	Low Temperature Sonochemical Synthesis of Morphology Variable MoO ₃ Nanostructures for Performance Enhanced Lithium Ion Battery Applications. <i>Electrochimica Acta</i> , 2015 , 185, 83-89	6.7	22
47	Impact of Solvent Additive on Carrier Transport in Polymer:Fullerene Bulk Heterojunction Photovoltaic Cells. <i>Advanced Materials Interfaces</i> , 2015 , 2, 1500166	4.6	41

46	Enhanced Performance of Polymeric Bulk Heterojunction Solar Cells via Molecular Doping with TFSA. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 13415-21	9.5	23
45	TFSA doped interlayer for efficient organic solar cells. <i>Organic Electronics</i> , 2014 , 15, 3702-3709	3.5	6
44	Dielectric effect on the photovoltage loss in organic photovoltaic cells. <i>Advanced Materials</i> , 2014 , 26, 6125-31	24	83
43	Batch-to-Batch Variation of Polymeric Photovoltaic Materials: its Origin and Impacts on Charge Carrier Transport and Device Performances. <i>Advanced Energy Materials</i> , 2014 , 4, 1400768	21.8	56
42	Enhanced efficiency of organic solar cells by mixed orthogonal solvents. <i>Organic Electronics</i> , 2014 , 15, 2007-2013	3.5	10
41	Investigation of the Role of the Acceptor Molecule in Bulk Heterojunction Photovoltaic Cells Using Impedance Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 13798-13804	3.8	12
40	Charge transport study of semiconducting polymers and their bulk heterojunction blends by capacitance measurements. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013 , 51, 649-658	2.6	14
39	Properties of interlayer for organic photovoltaics. <i>Materials Today</i> , 2013 , 16, 424-432	21.8	136
38	Energy level alignment and sub-bandgap charge generation in polymer:fullerene bulk heterojunction solar cells. <i>Advanced Materials</i> , 2013 , 25, 2434-9	24	32
37	Solution-Processed Nickel Oxide Hole Transport Layers in High Efficiency Polymer Photovoltaic Cells. <i>Advanced Functional Materials</i> , 2013 , 23, 2993-3001	15.6	395
36	Loss Mechanisms in Thick-Film Low-Bandgap Polymer Solar Cells. <i>Advanced Energy Materials</i> , 2013 , 3, 909-916	21.8	48
35	Energy Level Alignment and Sub-Bandgap Charge Generation in Polymer:Fullerene Bulk Heterojunction Solar Cells (Adv. Mater. 17/2013). <i>Advanced Materials</i> , 2013 , 25, 2433-2433	24	1
34	High-efficiency inverted solar cells based on a low bandgap polymer with excellent air stability. <i>Solar Energy Materials and Solar Cells</i> , 2012 , 96, 155-159	6.4	77
33	Charge injection and transport studies of poly(2,7-carbazole) copolymer PCDTBT and their relationship to solar cell performance. <i>Organic Electronics</i> , 2012 , 13, 850-855	3.5	38
32	Inverted Polymer Solar Cells. <i>IEEE Photonics Journal</i> , 2012 , 4, 625-628	1.8	6
31	Metal oxides for interface engineering in polymer solar cells. <i>Journal of Materials Chemistry</i> , 2012 , 22, 24202		301
30	High-efficiency inverted dithienogermolethienopyrrolodione-based polymer solar cells. <i>Nature Photonics</i> , 2012 , 6, 115-120	33.9	874
29	Hole transfer from PbS nanocrystal quantum dots to polymers and efficient hybrid solar cells utilizing infrared photons. <i>Organic Electronics</i> , 2012 , 13, 2773-2780	3.5	41

28	Origin of Enhanced Hole Injection in Inverted Organic Devices with Electron Accepting Interlayer. <i>Advanced Functional Materials</i> , 2012 , 22, 3261-3266	15.6	68
27	Inverted Polymer Solar Cells with Reduced Interface Recombination. <i>Advanced Energy Materials</i> , 2012 , 2, 1333-1337	21.8	187
26	Infrared colloidal lead chalcogenide nanocrystals: synthesis, properties, and photovoltaic applications. <i>Nanoscale</i> , 2012 , 4, 2187-201	7.7	94
25	Development of a new benzo(1,2-b:4,5-b')dithiophene-based copolymer with conjugated dithienylbenzothiadiazole-vinylene side chains for efficient solar cells. <i>Chemical Communications</i> , 2011 , 47, 9381-3	5.8	62
24	Impact of the Growth Conditions of Colloidal PbS Nanocrystals on Photovoltaic Device Performance. <i>Chemistry of Materials</i> , 2011 , 23, 1805-1810	9.6	54
23	Morphology control in polycarbazole based bulk heterojunction solar cells and its impact on device performance. <i>Applied Physics Letters</i> , 2011 , 98, 253301	3.4	130
22	Alternating Copolymers of Cyclopenta[2,1-b;3,4-b']dithiophene and Thieno[3,4-c]pyrrole-4,6-dione for High-Performance Polymer Solar Cells. <i>Advanced Functional Materials</i> , 2011 , 21, 3331-3336	15.6	109
21	Naphthodithiophene-2,1,3-benzothiadiazole copolymers for bulk heterojunction solar cells. <i>Chemical Communications</i> , 2011 , 47, 9471-3	5.8	44
20	Alkyl Side Chain Impact on the Charge Transport and Photovoltaic Properties of Benzodithiophene and Diketopyrrolopyrrole-Based Copolymers. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 18002-18009	3.8	88
19	Bulk heterojunction solar cells based on a new low-band-gap polymer: Morphology and performance. <i>Organic Electronics</i> , 2011 , 12, 1211-1215	3.5	30
18	Temperature dependence of carrier injection across organic heterojunctions. <i>Journal of Applied Physics</i> , 2011 , 109, 023711	2.5	10
17	Impact of interfacial dipole on carrier transport in bulk heterojunction poly(3-hexylthiophene) and [6,6]-phenyl C61-butyric acid methyl ester blends. <i>Applied Physics Letters</i> , 2010 , 97, 153306	3.4	4
16	Self-organized phase segregation between inorganic nanocrystals and PC61BM for hybrid high-efficiency bulk heterojunction photovoltaic cells. <i>Applied Physics Letters</i> , 2010 , 96, 243104	3.4	18
15	Aluminum doped zinc oxide for organic photovoltaics. <i>Applied Physics Letters</i> , 2009 , 94, 213301	3.4	109
14	Highly efficient cross-linked PbS nanocrystal/C60 hybrid heterojunction photovoltaic cells. <i>Applied Physics Letters</i> , 2009 , 95, 183505	3.4	44
13	Abnormal charge injection behavior at metal-organic interfaces. <i>Physical Review B</i> , 2008 , 78,	3.3	17
12	Charge-carrier induced barrier-height reduction at organic heterojunction. <i>Physical Review B</i> , 2008 , 78,	3.3	26
11	Donor-Acceptor Oligothiophenes as Low Optical Gap Chromophores for Photovoltaic Applications. <i>Advanced Materials</i> , 2008 , 20, 4810-4815	24	71

10	Hole transport in molecularly doped naphthyl diamine. <i>Journal of Applied Physics</i> , 2007 , 102, 093705	2.5	36
9	Engineering carrier transport across organic heterojunctions by interface doping. <i>Applied Physics Letters</i> , 2007 , 90, 132115	3.4	25
8	Direct determination of carrier mobilities of OLED materials by admittance spectroscopy 2006 , 6333, 214		3
7	Nearly ohmic injection contacts from PEDOT:PSS to phenylamine compounds with high ionization potentials 2006 ,		10
6	Application of admittance spectroscopy to evaluate carrier mobility in organic charge transport materials. <i>Journal of Applied Physics</i> , 2006 , 99, 013706	2.5	191
5	Polymeric conducting anode for small organic transporting molecules in dark injection experiments. <i>Journal of Applied Physics</i> , 2006 , 100, 063708	2.5	69
4	PEDOT:PSS polymeric conducting anode for admittance spectroscopy. <i>Organic Electronics</i> , 2006 , 7, 474-479	3.9	45
3	Photoelectric effect and transport properties of a single CdS nanoribbon. <i>Ultramicroscopy</i> , 2005 , 105, 275-280	3.1	16
2	Homogeneous Grain Boundary Passivation in Wide-Bandgap Perovskite Films Enables Fabrication of Monolithic Perovskite/Organic Tandem Solar Cells with over 21% Efficiency. <i>Advanced Functional Materials</i> , 2112126	15.6	8
1	Amorphous CdO-In ₂ O ₃ Electrode for Perovskite-Based Bifacial and Tandem Photovoltaic Technologies with High Energy Production. <i>Solar Rrl</i> , 2100809	7.1	0