

Tsz-Ki Lau

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Molecular insights of exceptionally photostable electron acceptors for organic photovoltaics. <i>Nature Communications</i> , 2021, 12, 3049.	12.8	97
2	Uncovering the out-of-plane nanomorphology of organic photovoltaic bulk heterojunction by GTSAXS. <i>Nature Communications</i> , 2021, 12, 6226.	12.8	23
3	A Nonfullerene Acceptor with Alkylthio and Dimethoxy Thiophene Groups Yielding High Performance Ternary Organic Solar Cells. <i>Solar Rrl</i> , 2020, 4, 1900353.	5.8	26
4	Effects of Fluorination Position on Fused Ring Electron Acceptors. <i>Small Structures</i> , 2020, 1, 2000006.	12.0	8
5	Adding a Third Component with Reduced Miscibility and Higher LUMO Level Enables Efficient Ternary Organic Solar Cells. <i>ACS Energy Letters</i> , 2020, 5, 2711-2720.	17.4	188
6	Ternary Blending Driven Molecular Reorientation of Non-Fullerene Acceptor IDIC with Backbone Order. <i>ACS Applied Energy Materials</i> , 2020, 3, 10814-10822.	5.1	15
7	A Novel Wide Bandgap Polymer with Deep Ionization Potential Enables Exceeding 16% Efficiency in Ternary Nonfullerene Polymer Solar Cells. <i>Advanced Functional Materials</i> , 2020, 30, 1910466.	14.9	50
8	Soft Porous Blade Printing of Nonfullerene Organic Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 25843-25852.	8.0	17
9	Asymmetric Electron Acceptors for High Efficiency and Low Energy Loss Organic Photovoltaics. <i>Advanced Materials</i> , 2020, 32, e2001160.	21.0	246
10	High Performance Nonfullerene Organic Solar Cells with Unusual Inverted Structure. <i>Solar Rrl</i> , 2020, 4, 2000115.	5.8	21
11	Roles of Acceptor Guests in Tuning the Organic Solar Cell Property Based on an Efficient Binary Material System with a Nearly Zero Hole-Transfer Driving Force. <i>Chemistry of Materials</i> , 2020, 32, 5182-5191.	6.7	22
12	An asymmetric small molecule acceptor for organic solar cells with a short circuit current density over 24 mA cm ⁻² . <i>Journal of Materials Chemistry A</i> , 2020, 8, 15984-15991.	10.3	37
13	Over 17% efficiency ternary organic solar cells enabled by two non-fullerene acceptors working in an alloy-like model. <i>Energy and Environmental Science</i> , 2020, 13, 635-645.	30.8	636
14	A 16.4% efficiency organic photovoltaic cell enabled using two donor polymers with their side-chains oriented differently by a ternary strategy. <i>Journal of Materials Chemistry A</i> , 2020, 8, 3676-3685.	10.3	48
15	16.7%-efficiency ternary blended organic photovoltaic cells with PCBM as the acceptor additive to increase the open-circuit voltage and phase purity. <i>Journal of Materials Chemistry A</i> , 2019, 7, 20713-20722.	10.3	266
16	Near-Infrared Nonfullerene Acceptors Based on Benzobis(thiazole) Unit for Efficient Organic Solar Cells with Low Energy Loss. <i>Small Methods</i> , 2019, 3, 1900531.	8.6	76
17	The synergy of host-guest nonfullerene acceptors enables 16%-efficiency polymer solar cells with increased open-circuit voltage and fill-factor. <i>Materials Horizons</i> , 2019, 6, 2094-2102.	12.2	73
18	Non-fullerene Acceptors with a Thieno[3,4-c]pyrrole-4,6-dione (TPD) Core for Efficient Organic Solar Cells. <i>Chinese Journal of Polymer Science (English Edition)</i> , 2019, 37, 1005-1014.	3.8	61

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19	A monothiophene unit incorporating both fluoro and ester substitution enabling high-performance donor polymers for non-fullerene solar cells with 16.4% efficiency. <i>Energy and Environmental Science</i> , 2019, 12, 3328-3337.	30.8	337
20	Combining Fused-Ring and Unfused-Core Electron Acceptors Enables Efficient Ternary Organic Solar Cells with Enhanced Fill Factor and Broad Compositional Tolerance. <i>Solar Rrl</i> , 2019, 3, 1900317.	5.8	28
21	A Trialkylsilylthienyl Chain-Substituted Small-Molecule Acceptor with Higher LUMO Level and Reduced Band Gap for Over 16% Efficiency Fullerene-Free Ternary Solar Cells. <i>Chemistry of Materials</i> , 2019, 31, 8908-8917.	6.7	55
22	Enhanced intramolecular charge transfer of unfused electron acceptors for efficient organic solar cells. <i>Materials Chemistry Frontiers</i> , 2019, 3, 513-519.	5.9	53
23	Realizing 8.6% Efficiency from Non-Halogenated Solvent Processed Additive Free All Polymer Solar Cells with a Quinoxaline Based Polymer. <i>Solar Rrl</i> , 2019, 3, 1800340.	5.8	20
24	Simply planarizing nonfused perylene diimide based acceptors toward promising non-fullerene solar cells. <i>Journal of Materials Chemistry C</i> , 2019, 7, 8092-8100.	5.5	17
25	Achieving efficient organic solar cells and broadband photodetectors via simple compositional tuning of ternary blends. <i>Nano Energy</i> , 2019, 63, 103807.	16.0	59
26	Design of wide-bandgap polymers with deeper ionization potential enables efficient ternary non-fullerene polymer solar cells with 13% efficiency. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14153-14162.	10.3	27
27	Simple non-fused electron acceptors for efficient and stable organic solar cells. <i>Nature Communications</i> , 2019, 10, 2152.	12.8	348
28	Charge carrier transport and nanomorphology control for efficient non-fullerene organic solar cells. <i>Materials Today Energy</i> , 2019, 12, 398-407.	4.7	23
29	Manipulating the Mixed-Perovskite Crystallization Pathway Unveiled by In Situ GIWAXS. <i>Advanced Materials</i> , 2019, 31, e1901284.	21.0	127
30	Fused Benzothiadiazole: A Building Block for n-Type Organic Acceptor to Achieve High-Performance Organic Solar Cells. <i>Advanced Materials</i> , 2019, 31, e1807577.	21.0	297
31	Fused thienobenzene-thienothiophene electron acceptors for organic solar cells. <i>Journal of Energy Chemistry</i> , 2019, 37, 58-65.	12.9	7
32	Single-Junction Organic Solar Cell with over 15% Efficiency Using Fused-Ring Acceptor with Electron-Deficient Core. <i>Joule</i> , 2019, 3, 1140-1151.	24.0	4,052
33	A non-fullerene acceptor enables efficient P3HT-based organic solar cells with small voltage loss and thickness insensitivity. <i>Chinese Chemical Letters</i> , 2019, 30, 1277-1281.	9.0	26
34	Influence of Bridging Groups on the Photovoltaic Properties of Wide-Bandgap Poly(BDTT- <i>i>alt</i>-BDD)s. <i>ACS Applied Materials & Interfaces</i>, 2019, 11, 1394-1401.</i>	8.0	13
35	Enhancing the Performance of Polymer Solar Cells via Core Engineering of NIR-Absorbing Electron Acceptors. <i>Advanced Materials</i> , 2018, 30, e1706571.	21.0	309
36	Medium-Bandgap Small-Molecule Donors Compatible with Both Fullerene and Nonfullerene Acceptors. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 9587-9594.	8.0	25

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37	A Medium Bandgap D-A Copolymer Based on 4-Alkyl-3,5-difluorophenyl Substituted Quinoxaline Unit for High Performance Solar Cells. <i>Macromolecules</i> , 2018, 51, 2838-2846.	4.8	47
38	A new random D-A copolymer based on two different benzotriazole units as co-acceptors for polymer solar cells. <i>Polymer</i> , 2018, 139, 123-129.	3.8	4
39	Fused-Ring Electron Acceptor ITIC-Ph: A Novel Stabilizer for Halide Perovskite Precursor Solution. <i>Advanced Energy Materials</i> , 2018, 8, 1703399.	19.5	112
40	An inverted planar solar cell with 13% efficiency and a sensitive visible light detector based on orientation regulated 2D perovskites. <i>Journal of Materials Chemistry A</i> , 2018, 6, 24633-24640.	10.3	38
41	Enhanced Charge Transfer between Fullerene and Non-Fullerene Acceptors Enables Highly Efficient Ternary Organic Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 42444-42452.	8.0	58
42	Nonhalogenated Solvent-Processed All-Polymer Solar Cells over 7.4% Efficiency from Quinoxaline-Based Polymers. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 41318-41325.	8.0	30
43	Modification of Mo Back Contact with MoO ₃ Layer and its Effect to Enhance the Performance of Cu ₂ ZnSnS ₄ Solar Cells. <i>Solar Rrl</i> , 2018, 2, 1800243.	5.8	28
44	Near-Infrared Electron Acceptors with Fluorinated Regioisomeric Backbone for Highly Efficient Polymer Solar Cells. <i>Advanced Materials</i> , 2018, 30, e1803769.	21.0	116
45	Guided Formation of Large Crystals of Organic and Perovskite Semiconductors by an Ultrasonicated Dispenser and Their Application as the Active Matrix of Photodetectors. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 39921-39932.	8.0	6
46	Dual-Accepting-Unit Design of Donor Material for All-Small-Molecule Organic Solar Cells with Efficiency Approaching 11%. <i>Chemistry of Materials</i> , 2018, 30, 8661-8668.	6.7	101
47	Enhancement of intra- and inter-molecular π -conjugated effects for a non-fullerene acceptor to achieve high-efficiency organic solar cells with an extended photoresponse range and optimized morphology. <i>Materials Chemistry Frontiers</i> , 2018, 2, 2006-2012.	5.9	46
48	Revealing the effects of molecular packing on the performances of polymer solar cells based on A-D-A type non-fullerene acceptors. <i>Journal of Materials Chemistry A</i> , 2018, 6, 12132-12141.	10.3	119
49	Enhancing the performance of non-fullerene organic solar cells via end group engineering of fused-ring electron acceptors. <i>Journal of Materials Chemistry A</i> , 2018, 6, 16638-16644.	10.3	47
50	A Near-Infrared Photoactive Morphology Modifier Leads to Significant Current Improvement and Energy Loss Mitigation for Ternary Organic Solar Cells. <i>Advanced Science</i> , 2018, 5, 1800755.	11.2	93
51	Realizing Small Energy Loss of 0.55 eV, High Open-Circuit Voltage >1 V and High Efficiency >10% in Fullerene-Free Polymer Solar Cells via Energy Driver. <i>Advanced Materials</i> , 2017, 29, 1605216.	21.0	230
52	Fused Nonacyclic Electron Acceptors for Efficient Polymer Solar Cells. <i>Journal of the American Chemical Society</i> , 2017, 139, 1336-1343.	18.7	813
53	High efficiency ternary organic solar cell with morphology-compatible polymers. <i>Journal of Materials Chemistry A</i> , 2017, 5, 11739-11745.	10.3	74
54	Rhodanine flanked indacenodithiophene as non-fullerene acceptor for efficient polymer solar cells. <i>Science China Chemistry</i> , 2017, 60, 257-263.	8.2	42

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55	Low-temperature solution-processed NiO _x films for air-stable perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 11071-11077.	10.3	113
56	Fused Hexacyclic Nonfullerene Acceptor with Strong Near-Infrared Absorption for Semitransparent Organic Solar Cells with 9.77% Efficiency. Advanced Materials, 2017, 29, 1701308.	21.0	364
57	New Route for Fabrication of High-Quality Zn(S,O) Buffer Layer at High Deposition Temperature on Cu(In,Ga)Se ₂ Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 651-655.	2.5	5
58	Boosting the photovoltaic thermal stability of fullerene bulk heterojunction solar cells through charge transfer interactions. Journal of Materials Chemistry A, 2017, 5, 23662-23670.	10.3	15
59	A Ladder-type Heteroheptacene 12 <i>H</i> -Dithieno[2,3- <i>b</i> :4,5]thieno[3,2- <i>b</i> :2,3- <i>h</i>]fluorene Based D-A Copolymer with Strong Intermolecular Interactions toward Efficient Polymer Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 35159-35168.	8.0	11
60	Constructing D-A copolymers based on thiophene-fused benzotriazole units containing different alkyl side-chains for non-fullerene polymer solar cells. Journal of Materials Chemistry C, 2017, 5, 8179-8186.	5.5	19
61	Enhancing Efficiency and Stability of Organic Solar Cells by UV Absorbent. Solar Rrl, 2017, 1, 1700148.	5.8	21
62	Molecular Lock: A Versatile Key to Enhance Efficiency and Stability of Organic Solar Cells. Advanced Materials, 2016, 28, 5822-5829.	21.0	134
63	Understanding Morphology Compatibility for High-Performance Ternary Organic Solar Cells. Chemistry of Materials, 2016, 28, 6186-6195.	6.7	150
64	A non-fullerene acceptor with a fully fused backbone for efficient polymer solar cells with a high open-circuit voltage. Journal of Materials Chemistry A, 2016, 4, 14983-14987.	10.3	97
65	A low-temperature formation path toward highly efficient Se-free Cu ₂ ZnSnS ₄ solar cells fabricated through sputtering and sulfurization. CrystEngComm, 2016, 18, 1070-1077.	2.6	37
66	A spirobifluorene and diketopyrrolopyrrole moieties based non-fullerene acceptor for efficient and thermally stable polymer solar cells with high open-circuit voltage. Energy and Environmental Science, 2016, 9, 604-610.	30.8	347
67	Improved photon-to-electron response of ternary blend organic solar cells with a low band gap polymer sensitizer and interfacial modification. Journal of Materials Chemistry A, 2016, 4, 1702-1707.	10.3	45
68	Ternary morphology facilitated thick-film organic solar cell. RSC Advances, 2015, 5, 88500-88507.	3.6	27