Iain McCulloch

List of Publications by Year
in descending order

506 papers	54,162 citations	1070 116 h-index	1964 213 g-index
519 all docs	519 docs citations	519 times ranked	28459 citing authors

#	Article	IF	Citations
1	A strong regioregularity effect in self-organizing conjugated polymer films and high-efficiency polythiophene:fullerene solar cells. Nature Materials, 2006, 5, 197-203.	13.3	2,208
2	Liquid-crystalline semiconducting polymers with high charge-carrier mobility. Nature Materials, 2006, 5, 328-333.	13.3	2,001
3	Materials and Applications for Large Area Electronics: Solution-Based Approaches. Chemical Reviews, 2010, 110, 3-24.	23.0	1,646
4	Non-Fullerene Electron Acceptors for Use in Organic Solar Cells. Accounts of Chemical Research, 2015, 48, 2803-2812.	7.6	1,063
5	High-efficiency and air-stable P3HT-based polymer solar cells with a new non-fullerene acceptor. Nature Communications, 2016, 7, 11585.	5.8	1,053
6	Reducing the efficiencyâ€“stabilityâ€“cost gap of organic photovoltaics with highly efficient and stable small molecule acceptor ternary solar cells. Nature Materials, 2017, 16, 363-369.	13.3	921
7	Enhanced Mobility of Poly(3-hexylthiophene) Transistors by Spin-Coating from High-Boiling-Point Solvents. Chemistry of Materials, 2004, 16, 4772-4776.	3.2	878
8	Thieno[3,2-<i>b</i>]thiopheneâˆ'Diketopyrrolopyrrole-Containing Polymers for High-Performance Organic Field-Effect Transistors and Organic Photovoltaic Devices. Journal of the American Chemical Society, 2011, 133, 3272-3275.	6.6	854
9	Approaching disorder-free transport in high-mobility conjugated polymers. Nature, 2014, 515, 384-388.	13.7	844
10	Critical review of the molecular design progress in non-fullerene electron acceptors towards commercially viable organic solar cells. Chemical Society Reviews, 2019, 48, 1596-1625.	18.7	814
11	Recent Advances in the Development of Semiconducting DPPâ€Containing Polymers for Transistor Applications. Advanced Materials, 2013, 25, 1859-1880.	11.1	793
12	Charge Carrier Formation in Polythiophene/Fullerene Blend Films Studied by Transient Absorption Spectroscopy. Journal of the American Chemical Society, 2008, 130, 3030-3042.	6.6	602
13	Indacenodithiophene Semiconducting Polymers for High-Performance, Air-Stable Transistors. Journal of the American Chemical Society, 2010, 132, 11437-11439.	6.6	529
14	Highâ€Performance Ambipolar Diketopyrrolopyrroleâ€Thieno[3,2â€<i>b</i>]thiophene Copolymer Fieldâ€Effect Transistors with Balanced Hole and Electron Mobilities. Advanced Materials, 2012, 24, 647-652.	11.1	521
15	Influence of blend microstructure on bulk heterojunction organic photovoltaic performance. Chemical Society Reviews, 2011, 40, 1185-1199.	18.7	511
16	17% Efficient Organic Solar Cells Based on Liquid Exfoliated WS₂ as a Replacement for PEDOT:PSS. Advanced Materials, 2019, 31, e1902965.	11.1	500
17	Recent Progress in Highâ€Mobility Organic Transistors: A Reality Check. Advanced Materials, 2018, 30, e1801079.	11.1	498
18	Reduced voltage losses yield 10% efficient fullerene free organic solar cells with >1 V open circuit voltages. Energy and Environmental Science, 2016, 9, 3783-3793.	15.6	477

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19	Molecular origin of high field-effect mobility in an indacenodithiopheneâ€"benzothiadiazole copolymer. Nature Communications, 2013, 4, 2238.	5.8	456
20	A Rhodanine Flanked Nonfullerene Acceptor for Solution-Processed Organic Photovoltaics. Journal of the American Chemical Society, 2015, 137, 898-904.	6.6	446
21	The role of chemical design in the performance of organic semiconductors. Nature Reviews Chemistry, 2020, 4, 66-77.	13.8	444
22	Self-Assembled Monolayer Enables Hole Transport Layer-Free Organic Solar Cells with 18% Efficiency and Improved Operational Stability. ACS Energy Letters, 2020, 5, 2935-2944.	8.8	425
23	Semiconducting Thienothiophene Copolymers: Design, Synthesis, Morphology, and Performance in Thinâ€Film Organic Transistors. Advanced Materials, 2009, 21, 1091-1109.	11.1	412
24	Bimolecular Crystals of Fullerenes in Conjugated Polymers and the Implications of Molecular Mixing for Solar Cells. Advanced Functional Materials, 2009, 19, 1173-1179.	7.8	392
25	Molecular Packing of High-Mobility Diketo Pyrrolo-Pyrrole Polymer Semiconductors with Branched Alkyl Side Chains. Journal of the American Chemical Society, 2011, 133, 15073-15084.	6.6	381
26	Advances in Charge Carrier Mobilities of Semiconducting Polymers Used in Organic Transistors. Chemistry of Materials, 2014, 26, 647-663.	3.2	377
27	The role of the third component in ternary organic solar cells. Nature Reviews Materials, 2019, 4, 229-242.	23.3	370
28	Recombination Dynamics as a Key Determinant of Open Circuit Voltage in Organic Bulk Heterojunction Solar Cells: A Comparison of Four Different Donor Polymers. Advanced Materials, 2010, 22, 4987-4992.	11.1	368
29	Enhanced photocatalytic hydrogen evolution from organic semiconductor heterojunction nanoparticles. Nature Materials, 2020, 19, 559-565.	13.3	366
30	Controlling the mode of operation of organic transistors through side-chain engineering. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12017-12022.	3.3	364
31	Chalcogenophene Comonomer Comparison in Small Band Gap Diketopyrrolopyrrole-Based Conjugated Polymers for High-Performing Field-Effect Transistors and Organic Solar Cells. Journal of the American Chemical Society, 2015, 137, 1314-1321.	6.6	363
32	Conjugated Polymers in Bioelectronics. Accounts of Chemical Research, 2018, 51, 1368-1376.	7.6	361
33	X-ray Scattering Study of Thin Films of Poly(2,5-bis(3-alkylthiophen-2-yl)thieno[3,2-b]thiophene). Journal of the American Chemical Society, 2007, 129, 3226-3237.	6.6	351
34	Highâ€Performance Polymerâ€Small Molecule Blend Organic Transistors. Advanced Materials, 2009, 21, 1166-1171.	11.1	351
35	High operational and environmental stability of high-mobility conjugated polymer field-effect transistors through the use of molecular additives. Nature Materials, 2017, 16, 356-362.	13.3	345
36	Stable Polythiophene Semiconductors Incorporating Thieno[2,3-b]thiophene. Journal of the American Chemical Society, 2005, 127, 1078-1079.	6.6	343

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37	Regioregular poly(3-hexyl)selenophene: a low band gap organic hole transporting polymer. Chemical Communications, 2007, , 5061.	2.2	322
38	Critical Role of Side-Chain Attachment Density on the Order and Device Performance of Polythiophenes. Macromolecules, 2007, 40, 7960-7965.	2.2	321
39	Exploring the origin of high optical absorption in conjugated polymers. Nature Materials, 2016, 15, 746-753.	13.3	314
40	Chargeâ€Transport Anisotropy Due to Grain Boundaries in Directionally Crystallized Thin Films of Regioregular Poly(3â€hexylthiophene). Advanced Materials, 2009, 21, 1568-1572.	11.1	305
41	High Carrier Mobility Polythiophene Thin Films: Structure Determination by Experiment and Theory. Advanced Materials, 2007, 19, 833-837.	11.1	276
42	Molecular Design of Semiconducting Polymers for High-Performance Organic Electrochemical Transistors. Journal of the American Chemical Society, 2016, 138, 10252-10259.	6.6	270
43	Molecular-weight dependence of interchain polaron delocalization and exciton bandwidth in high-mobility conjugated polymers. Physical Review B, 2006, 74, .	1.1	262
44	Photocurrent Enhancement from Diketopyrrolopyrrole Polymer Solar Cells through Alkyl-Chain Branching Point Manipulation. Journal of the American Chemical Society, 2013, 135, 11537-11540.	6.6	258
45	Intrinsic efficiency limits in low-bandgap non-fullerene acceptor organic solar cells. Nature Materials, 2021, 20, 378-384.	13.3	257
46	The Effect of Poly(3â€hexylthiophene) Molecular Weight on Charge Transport and the Performance of Polymer:Fullerene Solar Cells. Advanced Functional Materials, 2008, 18, 2373-2380.	7.8	256
47	Design of Semiconducting Indacenodithiophene Polymers for High Performance Transistors and Solar Cells. Accounts of Chemical Research, 2012, 45, 714-722.	7.6	256
48	Tuning the Properties of Polymer Bulk Heterojunction Solar Cells by Adjusting Fullerene Size to Control Intercalation. Nano Letters, 2009, 9, 4153-4157.	4.5	243
49	N-type organic electrochemical transistors with stability in water. Nature Communications, 2016, 7, 13066.	5.8	242
50	Competition between the Charge Transfer State and the Singlet States of Donor or Acceptor Limiting the Efficiency in Polymer:Fullerene Solar Cells. Journal of the American Chemical Society, 2012, 134, 685-692.	6.6	238
51	Rapid single-molecule detection of COVID-19 and MERS antigens via nanobody-functionalized organic electrochemical transistors. Nature Biomedical Engineering, 2021, 5, 666-677.	11.6	235
52	A new thiophene substituted isoindigo based copolymer for high performance ambipolar transistors. Chemical Communications, 2012, 48, 3939.	2.2	225
53	Double doping of conjugated polymers with monomer molecular dopants. Nature Materials, 2019, 18, 149-155.	13.3	225
54	Undoped polythiophene field-effect transistors with mobility of 1cm2Vâˆ'1sâˆ'1. Applied Physics Letters, 2007, 91, .	1.5	223

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55	Dynamics of Threshold Voltage Shifts in Organic and Amorphous Silicon Fieldâ€Effect Transistors. Advanced Materials, 2007, 19, 2785-2789.	11.1	223
56	Enhanced n-Doping Efficiency of a Naphthalenediimide-Based Copolymer through Polar Side Chains for Organic Thermoelectrics. ACS Energy Letters, 2018, 3, 278-285.	8.8	220
57	Solutionâ€Processed Small Moleculeâ€Polymer Blend Organic Thinâ€Film Transistors with Hole Mobility Greater than 5 cm²/Vs. Advanced Materials, 2012, 24, 2441-2446.	11.1	219
58	Effect of Fluorination on the Properties of a Donorâ€"Acceptor Copolymer for Use in Photovoltaic Cells and Transistors. Chemistry of Materials, 2013, 25, 277-285.	3.2	218
59	The role of exciton lifetime for charge generation in organic solar cells at negligible energy-level offsets. Nature Energy, 2020, 5, 711-719.	19.8	214
60	Avoid the kinks when measuring mobility. Science, 2016, 352, 1521-1522.	6.0	213
61	A molecular interactionâ€"diffusion framework for predicting organic solar cell stability. Nature Materials, 2021, 20, 525-532.	13.3	212
62	Correlations between Mechanical and Electrical Properties of Polythiophenes. ACS Nano, 2010, 4, 7538-7544.	7.3	210
63	Long-range exciton diffusion in molecular non-fullerene acceptors. Nature Communications, 2020, 11, 5220.	5.8	204
64	High ambipolar and balanced carrier mobility in regioregular poly(3-hexylthiophene). Applied Physics Letters, 2004, 85, 3890-3892.	1.5	202
65	Solution-processed organic transistors based on semiconducting blends. Journal of Materials Chemistry, 2010, 20, 2562.	6.7	201
66	The Role of the Side Chain on the Performance of N-type Conjugated Polymers in Aqueous Electrolytes. Chemistry of Materials, 2018, 30, 2945-2953.	3.2	199
67	High performance ambient-air-stable FAPbI₃ perovskite solar cells with molecule-passivated Ruddlesdenâ€"Popper/3D heterostructured film. Energy and Environmental Science, 2018, 11, 3358-3366.	15.6	196
68	Burnâ€in Free Nonfullereneâ€Based Organic Solar Cells. Advanced Energy Materials, 2017, 7, 1700770.	10.2	191
69	Biofuel powered glucose detection in bodily fluids with an n-type conjugated polymer. Nature Materials, 2020, 19, 456-463.	13.3	187
70	Systematic Improvement in Charge Carrier Mobility of Air Stable Triarylamine Copolymers. Journal of the American Chemical Society, 2009, 131, 10814-10815.	6.6	186
71	Direct metabolite detection with an n-type accumulation mode organic electrochemical transistor. Science Advances, 2018, 4, eaat0911.	4.7	183
72	Side Chain Redistribution as a Strategy to Boost Organic Electrochemical Transistor Performance and Stability. Advanced Materials, 2020, 32, e2002748.	11.1	181

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73	On the Energetic Dependence of Charge Separation in Low-Band-Gap Polymer/Fullerene Blends. Journal of the American Chemical Society, 2012, 134, 18189-18192.	6.6	180
74	High Mobility Ambipolar Charge Transport in Polyselenophene Conjugated Polymers. Advanced Materials, 2010, 22, 2371-2375.	11.1	178
75	Silaindacenodithiopheneâ€Based Low Band Gap Polymers â€“ The Effect of Fluorine Substitution on Device Performances and Film Morphologies. Advanced Functional Materials, 2012, 22, 1663-1670.	7.8	177
76	An Efficient, â€œBurn inâ€•Free Organic Solar Cell Employing a Nonfullerene Electron Acceptor. Advanced Materials, 2017, 29, 1701156.	11.1	175
77	17.1% Efficient Singleâ€Junction Organic Solar Cells Enabled by nâ€Type Doping of the Bulkâ€Heterojunction. Advanced Science, 2020, 7, 1903419.	5.6	173
78	Electrolyte-gated transistors for enhanced performance bioelectronics. Nature Reviews Methods Primers, 2021, 1, .	11.8	172
79	The Bulk Heterojunction in Organic Photovoltaic, Photodetector, and Photocatalytic Applications. Advanced Materials, 2020, 32, e2001763.	11.1	168
80	Anisotropy of Charge Transport in a Uniaxially Aligned and Chainâ€Extended, Highâ€Mobility, Conjugated Polymer Semiconductor. Advanced Functional Materials, 2011, 21, 932-940.	7.8	166
81	Beyond the metal-insulator transition in polymer electrolyte gated polymer field-effect transistors. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 11834-11837.	3.3	165
82	Indacenodithiophene-<i>co</i>-benzothiadiazole Copolymers for High Performance Solar Cells or Transistors via Alkyl Chain Optimization. Macromolecules, 2011, 44, 6649-6652.	2.2	165
83	Robust nonfullerene solar cells approaching unity external quantum efficiency enabled by suppression of geminate recombination. Nature Communications, 2018, 9, 2059.	5.8	164
84	Generation of long-lived charges in organic semiconductor heterojunction nanoparticles for efficient photocatalytic hydrogen evolution. Nature Energy, 2022, 7, 340-351.	19.8	164
85	Controlling the Orientation of Terraced Nanoscale â€œRibbonsâ€•of a Poly(thiophene) Semiconductor. ACS Nano, 2009, 3, 780-787.	7.3	160
86	Analyzing the efficiency, stability and cost potential for fullerene-free organic photovoltaics in one figure of merit. Energy and Environmental Science, 2018, 11, 1355-1361.	15.6	157
87	P3HT: non-fullerene acceptor based large area, semi-transparent PV modules with power conversion efficiencies of 5%, processed by industrially scalable methods. Energy and Environmental Science, 2018, 11, 2225-2234.	15.6	157
88	Thiophene and Selenophene Copolymers Incorporating Fluorinated Phenylene Units in the Main Chain:â€‰ Synthesis, Characterization, and Application in Organic Field-Effect Transistors. Chemistry of Materials, 2005, 17, 6567-6578.	3.2	154
89	Studies of Highly Regioregular Poly(3â€hexylselenophene) for Photovoltaic Applications. Advanced Materials, 2007, 19, 4544-4547.	11.1	154
90	Influence of Molecular Weight Distribution on the Gelation of P3HT and Its Impact on the Photovoltaic Performance. Macromolecules, 2009, 42, 4661-4666.	2.2	153

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91	Electrochemical Doping in Electrolyte-Gated Polymer Transistors. Journal of the American Chemical Society, 2007, 129, 14367-14371.	6.6	145
92	Amorphous Tin Oxide as a Low-Temperature-Processed Electron-Transport Layer for Organic and Hybrid Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2017, 9, 11828-11836.	4.0	145
93	Delineation of Thermodynamic and Kinetic Factors that Control Stability in Non-fullerene Organic Solar Cells. Joule, 2019, 3, 1328-1348.	11.7	143
94	Influence of Water on the Performance of Organic Electrochemical Transistors. Chemistry of Materials, 2019, 31, 927-937.	3.2	140
95	Recent advances in high mobility donorâ€"acceptor semiconducting polymers. Journal of Materials Chemistry, 2012, 22, 14803.	6.7	138
96	The Effect of Residual Palladium Catalyst Contamination on the Photocatalytic Hydrogen Evolution Activity of Conjugated Polymers. Advanced Energy Materials, 2018, 8, 1802181.	10.2	138
97	Significant dependence of morphology and charge carrier mobility on substrate surface chemistry in high performance polythiophene semiconductor films. Applied Physics Letters, 2007, 90, 062117.	1.5	136
98	Correlating triplet yield, singlet oxygen generation and photochemical stability in polymer/fullerene blend films. Chemical Communications, 2013, 49, 1291.	2.2	136
99	Design and evaluation of conjugated polymers with polar side chains as electrode materials for electrochemical energy storage in aqueous electrolytes. Energy and Environmental Science, 2019, 12, 1349-1357.	15.6	136
100	High-Performance Perovskite Single-Junction and Textured Perovskite/Silicon Tandem Solar Cells via Slot-Die-Coating. ACS Energy Letters, 2020, 5, 3034-3040.	8.8	134
101	Fused electron deficient semiconducting polymers for air stable electron transport. Nature Communications, 2018, 9, 416.	5.8	133
102	Temperature-resilient solid-state organic artificial synapses for neuromorphic computing. Science Advances, 2020, 6, .	4.7	131
103	Balancing Ionic and Electronic Conduction for Highâ€Performance Organic Electrochemical Transistors. Advanced Functional Materials, 2020, 30, 1907657.	7.8	131
104	The Influence of Polymer Purification on Photovoltaic Device Performance of a Series of Indacenodithiophene Donor Polymers. Advanced Materials, 2013, 25, 2029-2034.	11.1	129
105	Acceptor Energy Level Control of Charge Photogeneration in Organic Donor/Acceptor Blends. Journal of the American Chemical Society, 2010, 132, 12919-12926.	6.6	128
106	Materials in Organic Electrochemical Transistors for Bioelectronic Applications: Past, Present, and Future. Advanced Functional Materials, 2019, 29, 1807033.	7.8	128
107	Organic photovoltaics: Crosslinking for optimal morphology and stability. Materials Today, 2015, 18, 425-435.	8.3	127
108	Silaindacenodithiophene Semiconducting Polymers for Efficient Solar Cells and High-Mobility Ambipolar Transistors. Chemistry of Materials, 2011, 23, 768-770.	3.2	126

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109	Use of Xâ€Ray Diffraction, Molecular Simulations, and Spectroscopy to Determine the Molecular Packing in a Polymerâ€Fullerene Bimolecular Crystal. Advanced Materials, 2012, 24, 6071-6079.	11.1	126
110	High Mobility Fieldâ€Effect Transistors with Versatile Processing from a Smallâ€Molecule Organic Semiconductor. Advanced Materials, 2013, 25, 4352-4357.	11.1	126
111	Exploiting Ternary Blends for Improved Photostability in High-Efficiency Organic Solar Cells. ACS Energy Letters, 2020, 5, 1371-1379.	8.8	126
112	Energetic Control of Redoxâ€Active Polymers toward Safe Organic Bioelectronic Materials. Advanced Materials, 2020, 32, e1908047.	11.1	124
113	n-Type organic semiconducting polymers: stability limitations, design considerations and applications. Journal of Materials Chemistry C, 2021, 9, 8099-8128.	2.7	123
114	Polymer Fieldâ€Effect Transistors Fabricated by the Sequential Gravure Printing of Polythiophene, Two Insulator Layers, and a Metal Ink Gate. Advanced Functional Materials, 2010, 20, 239-246.	7.8	122
115	Morphological Stability and Performance of Polymerâ€"Fullerene Solar Cells under Thermal Stress: The Impact of Photoinduced PC₆₀BM Oligomerization. ACS Nano, 2014, 8, 1297-1308.	7.3	122
116	The Effect of Interfacial Roughness on the Thin Film Morphology and Charge Transport of Highâ€Performance Polythiophenes. Advanced Functional Materials, 2008, 18, 742-750.	7.8	120
117	The Influence of Film Morphology in Highâ€Mobility Smallâ€Molecule:Polymer Blend Organic Transistors. Advanced Functional Materials, 2010, 20, 2330-2337.	7.8	120
118	Charge-Transfer State Dynamics Following Hole and Electron Transfer in Organic Photovoltaic Devices. Journal of Physical Chemistry Letters, 2013, 4, 209-215.	2.1	120
119	A Thieno[3,2â€<i>b</i>][1]benzothiophene Isoindigo Building Block for Additiveâ€•and Annealingâ€Free Highâ€Performance Polymer Solar Cells. Advanced Materials, 2015, 27, 4702-4707.	11.1	120
120	The Physics of Small Molecule Acceptors for Efficient and Stable Bulk Heterojunction Solar Cells. Advanced Energy Materials, 2018, 8, 1703298.	10.2	120
121	An Intrinsically Stretchable Highâ€Performance Polymer Semiconductor with Low Crystallinity. Advanced Functional Materials, 2019, 29, 1905340.	7.8	120
122	Concurrent cationic and anionic perovskite defect passivation enables 27.4% perovskite/silicon tandems with suppression of halide segregation. Joule, 2021, 5, 1566-1586.	11.7	119
123	Thin-Film Morphology of Inkjet-Printed Single-Droplet Organic Transistors Using Polarized Raman Spectroscopy: Effect of Blending TIPS-Pentacene with Insulating Polymer. ACS Nano, 2011, 5, 9824-9835.	7.3	118
124	Tracking Charge Transfer to Residual Metal Clusters in Conjugated Polymers for Photocatalytic Hydrogen Evolution. Journal of the American Chemical Society, 2020, 142, 14574-14587.	6.6	118
125	Recent advances in transistor performance of polythiophenes. Progress in Polymer Science, 2013, 38, 2053-2069.	11.8	117
126	A Novel Alkylated Indacenodithieno[3,2â€b]thiopheneâ€Based Polymer for Highâ€Performance Fieldâ€Effect Transistors. Advanced Materials, 2016, 28, 3922-3927.	11.1	117

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127	Influence of Molecular Design on the Field-Effect Transistor Characteristics of Terthiophene Polymers. Chemistry of Materials, 2005, 17, 1381-1385.	3.2	116
128	An electron beam evaporated TiO₂layer for high efficiency planar perovskite solar cells on flexible polyethylene terephthalate substrates. Journal of Materials Chemistry A, 2015, 3, 22824-22829.	5.2	116
129	Role of the Anion on the Transport and Structure of Organic Mixed Conductors. Advanced Functional Materials, 2019, 29, 1807034.	7.8	116
130	Molecular Basis of Mesophase Ordering in a Thiophene-Based Copolymer. Macromolecules, 2008, 41, 5709-5715.	2.2	114
131	Microwave-assisted synthesis of polythiophenes via the Stille coupling. Synthetic Metals, 2005, 148, 195-198.	2.1	113
132	Random benzotrithiophene-based donorâ€“acceptor copolymers for efficient organic photovoltaic devices. Chemical Communications, 2012, 48, 5832.	2.2	111
133	Singlet Exciton Lifetimes in Conjugated Polymer Films for Organic Solar Cells. Polymers, 2016, 8, 14.	2.0	111
134	Organic bulk heterojunction solar cells using poly(2,5-bis(3-tetradecyllthiophen-2-yl)thieno[3,2,-b]thiophene). Applied Physics Letters, 2008, 92, .	1.5	110
135	Doping of Conjugated Polythiophenes with Alkyl Silanes. Advanced Functional Materials, 2009, 19, 1906-1911.	7.8	107
136	Progress and Challenges in Commercialization of Organic Electronics. MRS Bulletin, 2008, 33, 653-662.	1.7	105
137	Polaron Localization at Interfaces in Highâ€Mobility Microcrystalline Conjugated Polymers. Advanced Materials, 2009, 21, 3759-3763.	11.1	105
138	Revealing Buried Interfaces to Understand the Origins of Threshold Voltage Shifts in Organic Fieldâ€Effect Transistors. Advanced Materials, 2010, 22, 5105-5109.	11.1	101
139	Modification of Indacenodithiophene-Based Polymers and Its Impact on Charge Carrier Mobility in Organic Thin-Film Transistors. Journal of the American Chemical Society, 2020, 142, 652-664.	6.6	101
140	Highly Efficient Patterning of Organic Singleâ€Crystal Transistors from the Solution Phase. Advanced Materials, 2008, 20, 4044-4048.	11.1	100
141	Polymerisable liquid crystalline organic semiconductors and their fabrication in organic field effect transistors. Journal of Materials Chemistry, 2003, 13, 2436.	6.7	99
142	Factors Governing Intercalation of Fullerenes and Other Small Molecules Between the Side Chains of Semiconducting Polymers Used in Solar Cells. Advanced Energy Materials, 2012, 2, 1208-1217.	10.2	97
143	Hybrid Alkylâ€“Ethylene Glycol Side Chains Enhance Substrate Adhesion and Operational Stability in Accumulation Mode Organic Electrochemical Transistors. Chemistry of Materials, 2019, 31, 9797-9806.	3.2	97
144	Lamination Method for the Study of Interfaces in Polymeric Thin Film Transistors. Journal of the American Chemical Society, 2004, 126, 13928-13929.	6.6	96

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145	Effect of the End Group of Regioregular Poly(3-hexylthiophene) Polymers on the Performance of Polymer/Fullerene Solar Cells. Journal of Physical Chemistry C, 2007, 111, 8137-8141.	1.5	96
146	Effect of Fluorination of 2,1,3-Benzothiadiazole. Journal of Organic Chemistry, 2015, 80, 5045-5048.	1.7	96
147	A simple and robust approach to reducing contact resistance in organic transistors. Nature Communications, 2018, 9, 5130.	5.8	96
148	Synthesis and Exciton Dynamics of Donor-Orthogonal Acceptor Conjugated Polymers: Reducing the Singletâ€"Triplet Energy Gap. Journal of the American Chemical Society, 2017, 139, 11073-11080.	6.6	95
149	Progress in Poly (3â€Hexylthiophene) Organic Solar Cells and the Influence of Its Molecular Weight on Device Performance. Advanced Energy Materials, 2018, 8, 1801001.	10.2	95
150	Twist and Degradeâ€"Impact of Molecular Structure on the Photostability of Nonfullerene Acceptors and Their Photovoltaic Blends. Advanced Energy Materials, 2019, 9, 1803755.	10.2	95
151	The first direct experimental comparison between the hugely contrasting properties of PEDOT and the all-sulfur analogue PEDTT by analogy with well-defined EDTTâ€"EDOT copolymers. Journal of Materials Chemistry, 2005, 15, 4783.	6.7	94
152	Ambipolar Field-Effect Transistors Based on Solution-Processable Blends of Thieno[2,3-b]thiophene Terthiophene Polymer and Methanofullerenes. Advanced Materials, 2005, 17, 2608-2612.	11.1	93
153	Understanding the Influence of Morphology on Poly(3-hexylselenothiophene):PCBM Solar Cells. Macromolecules, 2010, 43, 1169-1174.	2.2	92
154	Photovoltaic and field effect transistor performance of selenophene and thiophene diketopyrrolopyrrole co-polymers with dithienothiophene. Journal of Materials Chemistry, 2012, 22, 12817.	6.7	92
155	High-mobility, trap-free charge transport in conjugated polymer diodes. Nature Communications, 2019, 10, 2122.	5.8	92
156	Ethylene Glycol-Based Side Chain Length Engineering in Polythiophenes and its Impact on Organic Electrochemical Transistor Performance. Chemistry of Materials, 2020, 32, 6618-6628.	3.2	92
157	Photocatalysts Based on Organic Semiconductors with Tunable Energy Levels for Solar Fuel Applications. Advanced Energy Materials, 2020, 10, 2001935.	10.2	92
158	Side-chain tuning in conjugated polymer photocatalysts for improved hydrogen production from water. Energy and Environmental Science, 2020, 13, 1843-1855.	15.6	92
159	Overcoming efficiency and stability limits in water-processing nanoparticular organic photovoltaics by minimizing microstructure defects. Nature Communications, 2018, 9, 5335.	5.8	91
160	Visible and Nearâ€Infrared Imaging with Nonfullereneâ€Based Photodetectors. Advanced Materials Technologies, 2018, 3, 1800104.	3.0	90
161	Polyterthiophenes as Donors for Polymer Solar Cells. Advanced Functional Materials, 2007, 17, 1371-1376.	7.8	89
162	Highly Efficient and Reproducible Nonfullerene Solar Cells from Hydrocarbon Solvents. ACS Energy Letters, 2017, 2, 1494-1500.	8.8	89

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163	2,1,3â€Benzothiadiazoleâ€5,6â€Dicarboxylic Imide â€“ A Versatile Building Block for Additiveâ€•and Annealingâ€Free Processing of Organic Solar Cells with Efficiencies Exceeding 8%. Advanced Materials, 2015, 27, 948-953.	11.1	88
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