Iain McCulloch

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.

470 papers	43,251 citations	105 h-index	194 g-index
519 ext. papers	48,438 ext. citations	13.7 avg, IF	7.62 L-index

#	Paper	IF	Citations
470	Semiconducting Polymers for Neural Applications.. *Chemical Reviews*, **2022**,	68.1	14
469	Infrared Organic Photodetectors Employing Ultralow Bandgap Polymer and Non-Fullerene Acceptors for Biometric Monitoring.. *Small*, **2022**, e2200580	11	3
468	Synthetic Nuances to Maximize n-Type Organic Electrochemical Transistor and Thermoelectric Performance in Fused Lactam Polymers.. *Journal of the American Chemical Society*, **2022**,	16.4	9
467	Stretchable Redox-active Semiconducting Polymers for High-performance Organic Electrochemical Transistors.. *Advanced Materials*, **2022**, e2201178	24	3
466	Propylene and butylene glycol: new alternatives to ethylene glycol in conjugated polymers for bioelectronic applications.. *Materials Horizons*, **2021**,	14.4	4
465	Organic neuromorphic electronics for sensorimotor integration and learning in robotics. *Science Advances*, **2021**, 7, eabl5068	14.3	11
464	Chemical Design Rules for Non-Fullerene Acceptors in Organic Solar Cells (Adv. Energy Mater. 44/2021). *Advanced Energy Materials*, **2021**, 11, 2170175	21.8	0
463	Lactone Backbone Density in Rigid Electron-Deficient Semiconducting Polymers Enabling High n-type Organic Thermoelectric Performance. *Angewandte Chemie - International Edition*, **2021**,	16.4	4
462	High Current-density Organic Electrochemical Diodes Enabled by Asymmetric Active Layer Design. *Advanced Materials*, **2021**, e2107355	24	1
461	Electrolyte-gated transistors for enhanced performance bioelectronics.. *Nature Reviews Methods Primers*, **2021**, 1,		42
460	Co-delivery of NIR-II semiconducting polymer and pH-sensitive doxorubicin-conjugated prodrug for photothermal/chemotherapy. *Acta Biomaterialia*, **2021**,	10.8	3
459	Unraveling the Unconventional Order of a High-Mobility Indacenodithiophene-Benzothiadiazole Copolymer.. *ACS Macro Letters*, **2021**, 10, 1306-1314	6.6	2
458	Printed Memtransistor Utilizing a Hybrid Perovskite/Organic Heterojunction Channel. *ACS Applied Materials & Interfaces*, **2021**, 13, 51592-51601	9.5	4
457	Oligoethylene Glycol Side Chains Increase Charge Generation in Organic Semiconductor Nanoparticles for Enhanced Photocatalytic Hydrogen Evolution. *Advanced Materials*, **2021**, e2105007	24	6
456	n-Type Rigid Semiconducting Polymers Bearing Oligo(Ethylene Glycol) Side Chains for High-Performance Organic Electrochemical Transistors. *Angewandte Chemie - International Edition*, **2021**, 60, 9368-9373	16.4	35
455	High-Gain Chemically Gated Organic Electrochemical Transistor. *Advanced Functional Materials*, **2021**, 31, 2010868	15.6	21
454	Microfluidic Integrated Organic Electrochemical Transistor with a Nanoporous Membrane for Amyloid-Detection. *ACS Nano*, **2021**, 15, 8130-8141	16.7	18

453	Challenges to the Success of Commercial Organic Photovoltaic Products. *Advanced Energy Materials*, **2021**, 11, 2100056	21.8	26
452	Adjusting the energy of interfacial states in organic photovoltaics for maximum efficiency. *Nature Communications*, **2021**, 12, 1772	17.4	12
451	Mixed Conduction in an N-Type Organic Semiconductor in the Absence of Hydrophilic Side-Chains. *Advanced Functional Materials*, **2021**, 31, 2010165	15.6	36
450	Correlating Charge-Transfer State Lifetimes with Material Energetics in Polymer:Non-Fullerene Acceptor Organic Solar Cells. *Journal of the American Chemical Society*, **2021**, 143, 7599-7603	16.4	19
449	Charge transport physics of a unique class of rigid-rod conjugated polymers with fused-ring conjugated units linked by double carbon-carbon bonds. *Science Advances*, **2021**, 7,	14.3	7
448	Controlling Electrochemically Induced Volume Changes in Conjugated Polymers by Chemical Design: from Theory to Devices. *Advanced Functional Materials*, **2021**, 31, 2100723	15.6	13
447	Influence of alkyne spacers on the performance of thiophene-based donors in bulk-heterojunction organic photovoltaic cells. *Dyes and Pigments*, **2021**, 188, 109152	4.6	2
446	Suppressing bias stress degradation in high performance solution processed organic transistors operating in air. *Nature Communications*, **2021**, 12, 2352	17.4	11
445	Inkjet Printed Circuits with 2D Semiconductor Inks for High-Performance Electronics. *Advanced Electronic Materials*, **2021**, 7, 2100112	6.4	15
444	Rapid single-molecule detection of COVID-19 and MERS antigens via nanobody-functionalized organic electrochemical transistors. *Nature Biomedical Engineering*, **2021**, 5, 666-677	19	78
443	Impact of Acceptor Quadrupole Moment on Charge Generation and Recombination in Blends of IDT-Based Non-Fullerene Acceptors with PCE10 as Donor Polymer. *Advanced Energy Materials*, **2021**, 11, 2100839	21.8	6
442	Regiochemistry-Driven Organic Electrochemical Transistor Performance Enhancement in Ethylene Glycol-Functionalized Polythiophenes. *Journal of the American Chemical Society*, **2021**, 143, 11007-11018	16.4	22
441	Concurrent cationic and anionic perovskite defect passivation enables 27.4% perovskite/silicon tandems with suppression of halide segregation. *Joule*, **2021**, 5, 1566-1586	27.8	43
440	Elucidating the Role of Water-Related Traps in the Operation of Polymer Field-Effect Transistors. *Advanced Electronic Materials*, **2021**, 7, 2100393	6.4	2
439	Ternary organic photodetectors based on pseudo-binaries nonfullerene-based acceptors. *JPhys Materials*, **2021**, 4, 045001	4.2	2
438	Highly Deformed o-Carborane Functionalised Non-linear Polycyclic Aromatics with Exceptionally Long C-C Bonds. *Chemistry - A European Journal*, **2021**, 27, 1970-1975	4.8	3
437	Scaling-up perovskite solar cells on hydrophobic surfaces. *Nano Energy*, **2021**, 81, 105633	17.1	15
436	Linking Glass-Transition Behavior to Photophysical and Charge Transport Properties of High-Mobility Conjugated Polymers. *Advanced Functional Materials*, **2021**, 31, 2007359	15.6	11

435	Polaron Delocalization in Donor-Acceptor Polymers and its Impact on Organic Electrochemical Transistor Performance. *Angewandte Chemie - International Edition*, **2021**, 60, 7777-7785	16.4	41
434	Polaron Delocalization in Donor–Acceptor Polymers and its Impact on Organic Electrochemical Transistor Performance. *Angewandte Chemie*, **2021**, 133, 7856-7864	3.6	12
433	Acene Ring Size Optimization in Fused Lactam Polymers Enabling High n-Type Organic Thermoelectric Performance. *Journal of the American Chemical Society*, **2021**, 143, 260-268	16.4	30
432	Intrinsic efficiency limits in low-bandgap non-fullerene acceptor organic solar cells. *Nature Materials*, **2021**, 20, 378-384	27	108
431	N-Doping improves charge transport and morphology in the organic non-fullerene acceptor O-IDTBR. *Journal of Materials Chemistry C*, **2021**, 9, 4486-4495	7.1	5
430	Non-fullerene-based organic photodetectors for infrared communication. *Journal of Materials Chemistry C*, **2021**, 9, 2375-2380	7.1	12
429	Coupling molecular rigidity and flexibility on fused backbones for NIR-II photothermal conversion. *Chemical Science*, **2021**, 12, 5177-5184	9.4	9
428	Operation mechanism of organic electrochemical transistors as redox chemical transducers. *Journal of Materials Chemistry C*, **2021**, 9, 12148-12158	7.1	4
427	A molecular interaction-diffusion framework for predicting organic solar cell stability. *Nature Materials*, **2021**, 20, 525-532	27	71
426	Influence of Side Chains on the n-Type Organic Electrochemical Transistor Performance. *ACS Applied Materials & Interfaces*, **2021**, 13, 4253-4266	9.5	34
425	Microfluidics integrated n-type organic electrochemical transistor for metabolite sensing. *Sensors and Actuators B: Chemical*, **2021**, 329, 129251	8.5	8
424	n-Type Rigid Semiconducting Polymers Bearing Oligo(Ethylene Glycol) Side Chains for High-Performance Organic Electrochemical Transistors. *Angewandte Chemie*, **2021**, 133, 9454-9459	3.6	2
423	Non-fullerene acceptor photostability and its impact on organic solar cell lifetime. *Cell Reports Physical Science*, **2021**, 2, 100498	6.1	9
422	High-Efficiency Ion-Exchange Doping of Conducting Polymers. *Advanced Materials*, **2021**, e2102988	24	16
421	Ambipolar inverters based on cofacial vertical organic electrochemical transistor pairs for biosignal amplification. *Science Advances*, **2021**, 7, eabh1055	14.3	12
420	Design of experiment optimization of aligned polymer thermoelectrics doped by ion-exchange. *Applied Physics Letters*, **2021**, 119, 111903	3.4	3
419	A molecular design approach towards elastic and multifunctional polymer electronics. *Nature Communications*, **2021**, 12, 5701	17.4	14
418	The Effect of Alkyl Spacers on the Mixed Ionic-Electronic Conduction Properties of N-Type Polymers. *Advanced Functional Materials*, **2021**, 31, 2008718	15.6	33

417	n-Type organic semiconducting polymers: stability limitations, design considerations and applications. *Journal of Materials Chemistry C*, **2021**, 9, 8099-8128	7.1	28
416	Anisotropy of Charge Transport in a Uniaxially Aligned Fused Electron-Deficient Polymer Processed by Solution Shear Coating. *Advanced Materials*, **2020**, 32, e2000063	24	18
415	Metal-free polymerization: synthesis and properties of fused benzo[1,2-b:4,5-b?]bis[b]benzothiophene (BBBT) polymers. *Polymer Chemistry*, **2020**, 11, 3695-3700	4.9	4
414	Side-chain tuning in conjugated polymer photocatalysts for improved hydrogen production from water. *Energy and Environmental Science*, **2020**, 13, 1843-1855	35.4	51
413	Engineering Optically Switchable Transistors with Improved Performance by Controlling Interactions of Diarylethenes in Polymer Matrices. *Journal of the American Chemical Society*, **2020**, 142, 11050-11059	16.4	24
412	Water stable molecular n-doping produces organic electrochemical transistors with high transconductance and record stability. *Nature Communications*, **2020**, 11, 3004	17.4	51
411	Large-Area Uniform Polymer Transistor Arrays on Flexible Substrates: Towards High-Throughput Sensor Fabrication. *Advanced Materials Technologies*, **2020**, 5, 2000390	6.8	10
410	Correlating the Structural and Photophysical Properties of Ortho, Meta, and Para-Carboranyl□Anthracene Dyads. *Advanced Electronic Materials*, **2020**, 6, 2000312	6.4	7
409	Monitoring supported lipid bilayers with n-type organic electrochemical transistors. *Materials Horizons*, **2020**, 7, 2348-2358	14.4	21
408	Exploiting Ternary Blends for Improved Photostability in High-Efficiency Organic Solar Cells. *ACS Energy Letters*, **2020**, 5, 1371-1379	20.1	83
407	Pulse Oximetry Using Organic Optoelectronics under Ambient Light. *Advanced Materials Technologies*, **2020**, 5, 1901122	6.8	16
406	Temperature-resilient solid-state organic artificial synapses for neuromorphic computing. *Science Advances*, **2020**, 6,	14.3	67
405	Organic thin-film transistors with flame-annealed contacts. *Flexible and Printed Electronics*, **2020**, 5, 014015	3.1	3
404	Energetic Control of Redox-Active Polymers toward Safe Organic Bioelectronic Materials. *Advanced Materials*, **2020**, 32, e1908047	24	65
403	17.1% Efficient Single-Junction Organic Solar Cells Enabled by n-Type Doping of the Bulk-Heterojunction. *Advanced Science*, **2020**, 7, 1903419	13.6	110
402	Conjugated Polymers: Reversible Electronic Solid□Gel Switching of a Conjugated Polymer (Adv. Sci. 2/2020). *Advanced Science*, **2020**, 7, 2070009	13.6	78
401	Balancing Ionic and Electronic Conduction for High-Performance Organic Electrochemical Transistors. *Advanced Functional Materials*, **2020**, 30, 1907657	15.6	70
400	Influence of Polymer Aggregation and Liquid Immiscibility on Morphology Tuning by Varying Composition in PffBT4T-2DT/Nonfullerene Organic Solar Cells. *Advanced Energy Materials*, **2020**, 10, 1903248	21.8	18

399	Universal Spray-Deposition Process for Scalable, High-Performance, and Stable Organic Electrochemical Transistors. *ACS Applied Materials & Interfaces*, **2020**, 12, 20757-20764	9.5	26
398	Enhanced photocatalytic hydrogen evolution from organic semiconductor heterojunction nanoparticles. *Nature Materials*, **2020**, 19, 559-565	27	171
397	Reversible Electronic Solid-Gel Switching of a Conjugated Polymer. *Advanced Science*, **2020**, 7, 1901144	13.6	27
396	A universal solution processed interfacial bilayer enabling ohmic contact in organic and hybrid optoelectronic devices. *Energy and Environmental Science*, **2020**, 13, 268-276	35.4	26
395	Afterglow Effects as a Tool to Screen Emissive Nongeminate Charge Recombination Processes in Organic Photovoltaic Composites. *ACS Applied Materials & Interfaces*, **2020**, 12, 2695-2707	9.5	3
394	The role of chemical design in the performance of organic semiconductors. *Nature Reviews Chemistry*, **2020**, 4, 66-77	34.6	205
393	Biofuel powered glucose detection in bodily fluids with an n-type conjugated polymer. *Nature Materials*, **2020**, 19, 456-463	27	105
392	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	16.4	55
391	Low-Temperature Cross-Linking Benzocyclobutene Based Polymer Dielectric for Organic Thin Film Transistors on Plastic Substrates. *Journal of Organic Chemistry*, **2020**, 85, 277-283	4.2	5
390	Phototuning Selectively Hole and Electron Transport in Optically Switchable Ambipolar Transistors. *Advanced Functional Materials*, **2020**, 30, 1908944	15.6	18
389	Energetic Disorder and Activation Energy in Efficient Ternary Organic Solar Cells with Nonfullerene Acceptor Eh-IDTBR as the Third Component. *Solar Rrl*, **2020**, 4, 1900403	7.1	33
388	Slow charge transfer from pentacene triplet states at the Marcus optimum. *Nature Chemistry*, **2020**, 12, 63-70	17.6	18
387	Nonfullerene-Based Organic Photodetectors for Ultrahigh Sensitivity Visible Light Detection. *ACS Applied Materials & Interfaces*, **2020**, 12, 48836-48844	9.5	15
386	Organic Solar Cells: Exciton and Charge Carrier Dynamics in Highly Crystalline PTQ10:IDIC Organic Solar Cells (Adv. Energy Mater. 38/2020). *Advanced Energy Materials*, **2020**, 10, 2070158	21.8	0
385	Long-range exciton diffusion in molecular non-fullerene acceptors. *Nature Communications*, **2020**, 11, 5220	17.4	87
384	Exciton and Charge Carrier Dynamics in Highly Crystalline PTQ10:IDIC Organic Solar Cells. *Advanced Energy Materials*, **2020**, 10, 2001149	21.8	24
383	Effects of Fluorination on Fused Ring Electron Acceptor for Active Layer Morphology, Exciton Dissociation, and Charge Recombination in Organic Solar Cells. *ACS Applied Materials & Interfaces*, **2020**, 12, 56231-56239	9.5	8
382	Resolving Different Physical Origins toward Crystallite Imperfection in Semiconducting Polymers: Crystallite Size vs Paracrystallinity. *Journal of Physical Chemistry B*, **2020**, 124, 10529-10538	3.4	5

381	The Chemistry and Applications of Heteroisoindigo Units as Enabling Links for Semiconducting Materials. *Accounts of Chemical Research*, **2020**, 53, 2855-2868	24.3	24
380	Side Chain Redistribution as a Strategy to Boost Organic Electrochemical Transistor Performance and Stability. *Advanced Materials*, **2020**, 32, e2002748	24	88
379	The effect of aromatic ring size in electron deficient semiconducting polymers for n-type organic thermoelectrics. *Journal of Materials Chemistry C*, **2020**, 8, 15150-15157	7.1	15
378	Ethylene Glycol-Based Side Chain Length Engineering in Polythiophenes and its Impact on Organic Electrochemical Transistor Performance. *Chemistry of Materials*, **2020**, 32, 6618-6628	9.6	47
377	Hidden Perils of Lead in the Lab: Guidelines for Containing, Monitoring, and Decontaminating Lead in the Context of Perovskite Research. *Chemistry of Materials*, **2020**, 32, 7141-7149	9.6	2
376	Tracking Charge Transfer to Residual Metal Clusters in Conjugated Polymers for Photocatalytic Hydrogen Evolution. *Journal of the American Chemical Society*, **2020**, 142, 14574-14587	16.4	56
375	The Bulk Heterojunction in Organic Photovoltaic, Photodetector, and Photocatalytic Applications. *Advanced Materials*, **2020**, 32, e2001763	24	68
374	Thermally Induced Formation of HFTCNQ in FTCNQ-Doped Regioregular P3HT. *Journal of Physical Chemistry Letters*, **2020**, 11, 6586-6592	6.4	9
373	Low-Voltage, Dual-Gate Organic Transistors with High Sensitivity and Stability toward Electrostatic Biosensing. *ACS Applied Materials & Interfaces*, **2020**, 12, 40581-40589	9.5	12
372	Ion Coordination and Chelation in a Glycolated Polymer Semiconductor: Molecular Dynamics and X-ray Fluorescence Study. *Chemistry of Materials*, **2020**, 32, 7301-7308	9.6	9
371	High-Performance Perovskite Single-Junction and Textured Perovskite/Silicon Tandem Solar Cells via Slot-Die-Coating. *ACS Energy Letters*, **2020**, 5, 3034-3040	20.1	65
370	Photocatalysts Based on Organic Semiconductors with Tunable Energy Levels for Solar Fuel Applications. *Advanced Energy Materials*, **2020**, 10, 2001935	21.8	39
369	A Multilayered Electron Extracting System for Efficient Perovskite Solar Cells. *Advanced Functional Materials*, **2020**, 30, 2004273	15.6	8
368	Correlating the Phase Behavior with the Device Performance in Binary Poly-3-hexylthiophene: Nonfullerene Acceptor Blend Using Optical Probes of the Microstructure. *Chemistry of Materials*, **2020**, 32, 8294-8305	9.6	13
367	The role of exciton lifetime for charge generation in organic solar cells at negligible energy-level offsets. *Nature Energy*, **2020**, 5, 711-719	62.3	110
366	High-density polyethylene□n inert additive with stabilizing effects on organic field-effect transistors. *Journal of Materials Chemistry C*, **2020**, 8, 15406-15415	7.1	8
365	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	20.1	244
364	Use of the Phen-NaDPO:Sn(SCN)2 Blend as Electron Transport Layer Results to Consistent Efficiency Improvements in Organic and Hybrid Perovskite Solar Cells. *Advanced Functional Materials*, **2019**, 29, 1905810	15.6	30

363	Membrane-Free Detection of Metal Cations with an Organic Electrochemical Transistor. *Advanced Functional Materials*, **2019**, 29, 1904403	15.6	52
362	Nanoscale Ion-Doped Polymer Transistors. *Nano Letters*, **2019**, 19, 1712-1718	11.5	15
361	Solvent Engineering for High-Performance n-Type Organic Electrochemical Transistors. *Advanced Electronic Materials*, **2019**, 5, 1900249	6.4	29
360	End Group Tuning in AcceptorDonorAcceptor Nonfullerene Small Molecules for High Fill Factor Organic Solar Cells. *Advanced Functional Materials*, **2019**, 29, 1808429	15.6	33
359	Polaron spin dynamics in high-mobility polymeric semiconductors. *Nature Physics*, **2019**, 15, 814-822	16.2	27
358	Suppression of Recombination Losses in Polymer:Nonfullerene Acceptor Organic Solar Cells due to Aggregation Dependence of Acceptor Electron Affinity. *Advanced Energy Materials*, **2019**, 9, 1901254	21.8	42
357	Short contacts between chains enhancing luminescence quantum yields and carrier mobilities in conjugated copolymers. *Nature Communications*, **2019**, 10, 2614	17.4	29
356	High-mobility, trap-free charge transport in conjugated polymer diodes. *Nature Communications*, **2019**, 10, 2122	17.4	61
355	Charge carrier transport and nanomorphology control for efficient non-fullerene organic solar cells. *Materials Today Energy*, **2019**, 12, 398-407	7	20
354	Delineation of Thermodynamic and Kinetic Factors that Control Stability in Non-fullerene Organic Solar Cells. *Joule*, **2019**, 3, 1328-1348	27.8	74
353	P3HT Molecular Weight Determines the Performance of P3HT:O-IDTBR Solar Cells. *Solar Rrl*, **2019**, 3, 1900023	7.1	21
352	Highly selective chromoionophores for ratiometric Na+ sensing based on an oligoethyleneglycol bridged bithiophene detection unit. *Journal of Materials Chemistry C*, **2019**, 7, 5359-5365	7.1	7
351	New synthetic methodology paves the way to prepare electron deficient semiconducting mesopolymers with very high performance. *Science China Chemistry*, **2019**, 62, 885-886	7.9	
350	Long spin diffusion lengths in doped conjugated polymers due to enhanced exchange coupling. *Nature Electronics*, **2019**, 2, 98-107	28.4	36
349	The role of the third component in ternary organic solar cells. *Nature Reviews Materials*, **2019**, 4, 229-242	73.3	244
348	Investigation of the thermoelectric response in conducting polymers doped by solid-state diffusion. *Materials Today Physics*, **2019**, 8, 112-122	8	28
347	Toward Improved Environmental Stability of Polymer:Fullerene and Polymer:Nonfullerene Organic Solar Cells: A Common Energetic Origin of Light- and Oxygen-Induced Degradation. *ACS Energy Letters*, **2019**, 4, 846-852	20.1	49
346	The binding energy and dynamics of charge-transfer states in organic photovoltaics with low driving force for charge separation. *Journal of Chemical Physics*, **2019**, 150, 104704	3.9	26

345	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	35.4	74
344	Negligible Energy Loss During Charge Generation in Small-Molecule/Fullerene Bulk-Heterojunction Solar Cells Leads to Open-Circuit Voltage over 1.10 V. *ACS Applied Energy Materials*, **2019**, 2, 2717-2722	6.1	20
343	Twist and Degrade□Impact of Molecular Structure on the Photostability of Nonfullerene Acceptors and Their Photovoltaic Blends. *Advanced Energy Materials*, **2019**, 9, 1803755	21.8	62
342	Spectroscopic Investigation of the Effect of Microstructure and Energetic Offset on the Nature of Interfacial Charge Transfer States in Polymer: Fullerene Blends. *Journal of the American Chemical Society*, **2019**, 141, 4634-4643	16.4	26
341	Fused Pyrazine- and Carbazole-Containing Azaacenes: Synthesis and Properties. *ChemPlusChem*, **2019**, 84, 1257-1262	2.8	5
340	Impact of Nonfullerene Acceptor Side Chain Variation on Transistor Mobility. *Advanced Electronic Materials*, **2019**, 5, 1900344	6.4	30
339	On the Role of Contact Resistance and Electrode Modification in Organic Electrochemical Transistors. *Advanced Materials*, **2019**, 31, e1902291	24	31
338	Heavy-Metal-Free Flexible Hybrid Polymer-Nanocrystal Photodetectors Sensitive to 1.5 □m Wavelength. *ACS Applied Materials & Interfaces*, **2019**, 11, 42571-42579	9.5	6
337	The Effect of Ring Expansion in Thienobenzo[]indacenodithiophene Polymers for Organic Field-Effect Transistors. *Journal of the American Chemical Society*, **2019**, 141, 18806-18813	16.4	23
336	17% Efficient Organic Solar Cells Based on Liquid Exfoliated WS as a Replacement for PEDOT:PSS. *Advanced Materials*, **2019**, 31, e1902965	24	384
335	Hybrid Alkyl□Ethylene Glycol Side Chains Enhance Substrate Adhesion and Operational Stability in Accumulation Mode Organic Electrochemical Transistors. *Chemistry of Materials*, **2019**, 31, 9797-9806	9.6	51
334	Enhancing the Charge Extraction and Stability of Perovskite Solar Cells Using Strontium Titanate (SrTiO3) Electron Transport Layer. *ACS Applied Energy Materials*, **2019**, 2, 8090-8097	6.1	26
333	Carrier Extraction from Perovskite to Polymeric Charge Transport Layers Probed by Ultrafast Transient Absorption Spectroscopy. *Journal of Physical Chemistry Letters*, **2019**, 10, 6921-6928	6.4	11
332	An Intrinsically Stretchable High-Performance Polymer Semiconductor with Low Crystallinity. *Advanced Functional Materials*, **2019**, 29, 1905340	15.6	63
331	Excitation Wavelength-Dependent Internal Quantum Efficiencies in a P3HT/Nonfullerene Acceptor Solar Cell. *Journal of Physical Chemistry C*, **2019**, 123, 5826-5832	3.8	5
330	Role of the Anion on the Transport and Structure of Organic Mixed Conductors. *Advanced Functional Materials*, **2019**, 29, 1807034	15.6	68
329	Influence of Water on the Performance of Organic Electrochemical Transistors. *Chemistry of Materials*, **2019**, 31, 927-937	9.6	82
328	Double doping of conjugated polymers with monomer molecular dopants. *Nature Materials*, **2019**, 18, 149-155	27	146

327	Materials in Organic Electrochemical Transistors for Bioelectronic Applications: Past, Present, and Future. *Advanced Functional Materials*, **2019**, 29, 1807033	15.6	92
326	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	58.5	617
325	Redox-Stability of Alkoxy-BDT Copolymers and their Use for Organic Bioelectronic Devices. *Advanced Functional Materials*, **2018**, 28, 1706325	15.6	58
324	Alternative Thieno[3,2-b][1]benzothiophene Isoindigo Polymers for Solar Cell Applications. *Macromolecular Rapid Communications*, **2018**, 39, e1700820	4.8	8
323	The Role of the Side Chain on the Performance of N-type Conjugated Polymers in Aqueous Electrolytes. *Chemistry of Materials*, **2018**, 30, 2945-2953	9.6	124
322	Carrier Transport and Recombination in Efficient All-Small-Molecule Solar Cells with the Nonfullerene Acceptor IDTBR. *Advanced Energy Materials*, **2018**, 8, 1800264	21.8	52
321	The Physics of Small Molecule Acceptors for Efficient and Stable Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1703298	21.8	96
320	Fused electron deficient semiconducting polymers for air stable electron transport. *Nature Communications*, **2018**, 9, 416	17.4	91
319	A Thieno[2,3-b]pyridine-Flanked Diketopyrrolopyrrole Polymer as an n-Type Polymer Semiconductor for All-Polymer Solar Cells and Organic Field-Effect Transistors. *Macromolecules*, **2018**, 51, 71-79	5.5	44
318	Barbiturate end-capped non-fullerene acceptors for organic solar cells: tuning acceptor energetics to suppress geminate recombination losses. *Chemical Communications*, **2018**, 54, 2966-2969	5.8	23
317	Enhanced n-Doping Efficiency of a Naphthalenediimide-Based Copolymer through Polar Side Chains for Organic Thermoelectrics. *ACS Energy Letters*, **2018**, 3, 278-285	20.1	159
316	Lipid bilayer formation on organic electronic materials. *Journal of Materials Chemistry C*, **2018**, 6, 5218-5227	7.1	11
315	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	35.4	119
314	Direct metabolite detection with an n-type accumulation mode organic electrochemical transistor. *Science Advances*, **2018**, 4, eaat0911	14.3	114
313	Recent Progress in High-Mobility Organic Transistors: A Reality Check. *Advanced Materials*, **2018**, 30, e1801079	24	358
312	Performance Improvements in Conjugated Polymer Devices by Removal of Water-Induced Traps. *Advanced Materials*, **2018**, 30, e1801874	24	52
311	A Highly Crystalline Fused-Ring n-Type Small Molecule for Non-Fullerene Acceptor Based Organic Solar Cells and Field-Effect Transistors. *Advanced Functional Materials*, **2018**, 28, 1802895	15.6	63
310	Improving the Compatibility of Diketopyrrolopyrrole Semiconducting Polymers for Biological Interfacing by Lysine Attachment. *Chemistry of Materials*, **2018**, 30, 6164-6172	9.6	28

309	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	35.4	108
308	Conjugated Polymers in Bioelectronics. *Accounts of Chemical Research*, **2018**, 51, 1368-1376	24.3	235
307	Visible and Near-Infrared Imaging with Nonfullerene-Based Photodetectors. *Advanced Materials Technologies*, **2018**, 3, 1800104	6.8	60
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