Michael D Mcgehee

List of Publications by Year in Descending Order

259 papers	50,821 citations	113 h-index	224 g-index
285 ext. papers	55,871 ext. citations	17.4 avg, IF	7.92 L-index

#	Paper	IF	Citations
259	Consensus statement: Standardized reporting of power-producing luminescent solar concentrator performance. *Joule*, **2022**, 6, 8-15	27.8	14
258	Perovskite-Based Multijunction Solar Cells **2022**, 433-453		0
257	Polymer inhibitors enable >900 cm2 dynamic windows based on reversible metal electrodeposition with high solar modulation. *Nature Energy*, **2021**, 6, 546-554	62.3	23
256	Temperature Coefficients of Perovskite Photovoltaics for Energy Yield Calculations. *ACS Energy Letters*, **2021**, 6, 2038-2047	20.1	11
255	Investigation of the Selectivity of Carrier Transport Layers in Wide-Bandgap Perovskite Solar Cells. *Solar Rrl*, **2021**, 5, 2100107	7.1	5
254	Device Performance of Emerging Photovoltaic Materials (Version 1). *Advanced Energy Materials*, **2021**, 11, 2002774	21.8	56
253	Incorporating Electrochemical Halide Oxidation into Drift-Diffusion Models to Explain Performance Losses in Perovskite Solar Cells under Prolonged Reverse Bias. *Advanced Energy Materials*, **2021**, 11, 2002614	21.8	15
252	Choose Your Own Adventure: Fabrication of Monolithic All-Perovskite Tandem Photovoltaics. *Advanced Materials*, **2020**, 32, e2003312	24	23
251	Electrolyte for Improved Durability of Dynamic Windows Based on Reversible Metal Electrodeposition. *Joule*, **2020**, 4, 1501-1513	27.8	21
250	The Molybdenum Oxide Interface Limits the High-Temperature Operational Stability of Unencapsulated Perovskite Solar Cells. *ACS Energy Letters*, **2020**, 5, 2349-2360	20.1	31
249	Improving Low-Bandgap Tin Lead Perovskite Solar Cells via Contact Engineering and Gas Quench Processing. *ACS Energy Letters*, **2020**, 5, 1215-1223	20.1	43
248	Triple-halide wide-band gap perovskites with suppressed phase segregation for efficient tandems. *Science*, **2020**, 367, 1097-1104	33.3	366
247	Overcoming Redox Reactions at Perovskite-Nickel Oxide Interfaces to Boost Voltages in Perovskite Solar Cells. *Joule*, **2020**, 4, 1759-1775	27.8	121
246	Interfacing Low-Temperature Atomic Layer Deposited TiO2 Electron Transport Layers with Metal Electrodes. *Advanced Materials Interfaces*, **2020**, 7, 1902054	4.6	5
245	CsI-Antisolvent Adduct Formation in All-Inorganic Metal Halide Perovskites. *Advanced Energy Materials*, **2020**, 10, 1903365	21.8	35
244	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. *Nature Energy*, **2020**, 5, 35-49	62.3	369
243	Structural Origins of Light-Induced Phase Segregation in Organic-Inorganic Halide Perovskite Photovoltaic Materials. *Matter*, **2020**, 2, 207-219	12.7	77

242	Mobile Ion Concentration Measurement and Open-Access Band Diagram Simulation Platform for Halide Perovskite Solar Cells. *Joule*, **2020**, 4, 109-127	27.8	72
241	Learning from existing photovoltaic technologies to identify alternative perovskite module designs. *Energy and Environmental Science*, **2020**, 13, 3393-3403	35.4	18
240	Enabling Flexible All-Perovskite Tandem Solar Cells. *Joule*, **2019**, 3, 2193-2204	27.8	211
239	Solar-driven, highly sustained splitting of seawater into hydrogen and oxygen fuels. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 6624-6629	11.5	223
238	Atomic layer deposition of vanadium oxide to reduce parasitic absorption and improve stability in nip perovskite solar cells for tandems. *Sustainable Energy and Fuels*, **2019**, 3, 1517-1525	5.8	52
237	Series Resistance Measurements of Perovskite Solar Cells Using Jsc–Voc Measurements. *Solar Rrl*, **2019**, 3, 1800378	7.1	30
236	Enhanced Nucleation of Atomic Layer Deposited Contacts Improves Operational Stability of Perovskite Solar Cells in Air. *Advanced Energy Materials*, **2019**, 9, 1902353	21.8	28
235	Hybrid dynamic windows using reversible metal electrodeposition and ion insertion. *Nature Energy*, **2019**, 4, 223-229	62.3	70
234	Design of low bandgap tin–lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability. *Nature Energy*, **2019**, 4, 939-947	62.3	152
233	Understanding Degradation Mechanisms and Improving Stability of Perovskite Photovoltaics. *Chemical Reviews*, **2019**, 119, 3418-3451	68.1	663
232	Developing a Robust Recombination Contact to Realize Monolithic Perovskite Tandems With Industrially Common p-Type Silicon Solar Cells. *IEEE Journal of Photovoltaics*, **2018**, 8, 1023-1028	3.7	19
231	Compositional Engineering for Efficient Wide Band Gap Perovskites with Improved Stability to Photoinduced Phase Segregation. *ACS Energy Letters*, **2018**, 3, 428-435	20.1	225
230	Terahertz Emission from Hybrid Perovskites Driven by Ultrafast Charge Separation and Strong Electron-Phonon Coupling. *Advanced Materials*, **2018**, 30, 1704737	24	69
229	Thermal Stability of Mixed Cation Metal Halide Perovskites in Air. *ACS Applied Materials & Interfaces*, **2018**, 10, 5485-5491	9.5	90
228	Controlling Thin-Film Stress and Wrinkling during Perovskite Film Formation. *ACS Energy Letters*, **2018**, 3, 1225-1232	20.1	108
227	Terahertz Emission: Terahertz Emission from Hybrid Perovskites Driven by Ultrafast Charge Separation and Strong Electron–Phonon Coupling (Adv. Mater. 11/2018). *Advanced Materials*, **2018**, 30, 1870079	24	1
226	Design and understanding of encapsulated perovskite solar cells to withstand temperature cycling. *Energy and Environmental Science*, **2018**, 11, 144-150	35.4	229
225	Tin–lead halide perovskites with improved thermal and air stability for efficient all-perovskite tandem solar cells. *Sustainable Energy and Fuels*, **2018**, 2, 2450-2459	5.8	127

224	Atomic Layer Deposited TiO2–TiOx Alloy as a Hole Transport Material for Perovskite Solar Cells. *Advanced Materials Interfaces*, **2018**, 5, 1800191	4.6	13
223	Opportunities and challenges for tandem solar cells using metal halide perovskite semiconductors. *Nature Energy*, **2018**, 3, 828-838	62.3	454
222	Transformation from crystalline precursor to perovskite in PbCl-derived MAPbI. *Nature Communications*, **2018**, 9, 3458	17.4	59
221	Minimizing Current and Voltage Losses to Reach 25% Efficient Monolithic Two-Terminal Perovskite–Silicon Tandem Solar Cells. *ACS Energy Letters*, **2018**, 3, 2173-2180	20.1	143
220	Optical modeling of wide-bandgap perovskite and perovskite/silicon tandem solar cells using complex refractive indices for arbitrary-bandgap perovskite absorbers. *Optics Express*, **2018**, 26, 27441-27460	3.3	56
219	Effect of Cation Composition on the Mechanical Stability of Perovskite Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1702116	21.8	84
218	Reverse Bias Behavior of Halide Perovskite Solar Cells. *Advanced Energy Materials*, **2018**, 8, 1702365	21.8	80
217	Bistable Black Electrochromic Windows Based on the Reversible Metal Electrodeposition of Bi and Cu. *ACS Energy Letters*, **2018**, 3, 104-111	20.1	57
216	Current-matching in two-terminal perovskite/silicon tandems employing wide-bandgap perovskites and varying light-management schemes **2018**,		2
215	Damp Heat, Temperature Cycling and UV Stress Testing of Encapsulated Perovskite Photovoltaic Cells **2018**,		5
214	Compositional engineering of tin-lead halide perovskites for efficient and stable low band gap solar cells **2018**,		4
213	Impact of Surfaces on Photoinduced Halide Segregation in Mixed-Halide Perovskites. *ACS Energy Letters*, **2018**, 3, 2694-2700	20.1	117
212	Factors that Determine the Length Scale for Uniform Tinting in Dynamic Windows Based on Reversible Metal Electrodeposition. *ACS Energy Letters*, **2018**, 3, 2823-2828	20.1	29
211	In Situ Measurement of Electric-Field Screening in Hysteresis-Free PTAA/FACsPb(IBr)/C60 Perovskite Solar Cells Gives an Ion Mobility of ~3 □10 cm/(V s), 2 Orders of Magnitude Faster than Reported for Metal-Oxide-Contacted Perovskite Cells with Hysteresis. *Journal of the American Chemical Society*, **2018**, 140, 12775-12784	16.4	35
210	Challenges for commercializing perovskite solar cells. *Science*, **2018**, 361,	33.3	853
209	Engineering Stress in Perovskite Solar Cells to Improve Stability. *Advanced Energy Materials*, **2018**, 8, 1802139	21.8	148
208	Barrier Design to Prevent Metal-Induced Degradation and Improve Thermal Stability in Perovskite Solar Cells. *ACS Energy Letters*, **2018**, 3, 1772-1778	20.1	132
207	Interfacial Effects of Tin Oxide Atomic Layer Deposition in Metal Halide Perovskite Photovoltaics. *Advanced Energy Materials*, **2018**, 8, 1800591	21.8	44

206	Encapsulating perovskite solar cells to withstand damp heat and thermal cycling. *Sustainable Energy and Fuels*, **2018**, 2, 2398-2406	5.8	157
205	Open-Circuit Voltage in Organic Solar Cells: The Impacts of Donor Semicrystallinity and Coexistence of Multiple Interfacial Charge-Transfer Bands. *Advanced Energy Materials*, **2017**, 7, 1601995	21.8	30
204	23.6%-efficient monolithic perovskite/silicon tandem solar cells with improved stability. *Nature Energy*, **2017**, 2,	62.3	965
203	Towards enabling stable lead halide perovskite solar cells; interplay between structural, environmental, and thermal stability. *Journal of Materials Chemistry A*, **2017**, 5, 11483-11500	13	241
202	Progress in Understanding Degradation Mechanisms and Improving Stability in Organic Photovoltaics. *Advanced Materials*, **2017**, 29, 1603940	24	248
201	Assessing the stability of high performance solution processed small molecule solar cells. *Solar Energy Materials and Solar Cells*, **2017**, 161, 368-376	6.4	23
200	Interpretation of inverted photocurrent transients in organic lead halide perovskite solar cells: proof of the field screening by mobile ions and determination of the space charge layer widths. *Energy and Environmental Science*, **2017**, 10, 192-204	35.4	113
199	The Potential of Multijunction Perovskite Solar Cells. *ACS Energy Letters*, **2017**, 2, 2506-2513	20.1	180
198	Mechanism of Tin Oxidation and Stabilization by Lead Substitution in Tin Halide Perovskites. *ACS Energy Letters*, **2017**, 2, 2159-2165	20.1	242
197	Dynamic Windows with Neutral Color, High Contrast, and Excellent Durability Using Reversible Metal Electrodeposition. *Joule*, **2017**, 1, 133-145	27.8	125
196	Macroscopic Structural Compositions of π-Conjugated Polymers: Combined Insights from Solid-State NMR and Molecular Dynamics Simulations. *Journal of Physical Chemistry Letters*, **2017**, 8, 4155-4160	6.4	22
195	Band Gap Tuning via Lattice Contraction and Octahedral Tilting in Perovskite Materials for Photovoltaics. *Journal of the American Chemical Society*, **2017**, 139, 11117-11124	16.4	353
194	Improved light management in planar silicon and perovskite solar cells using PDMS scattering layer. *Solar Energy Materials and Solar Cells*, **2017**, 173, 59-65	6.4	56
193	Trade-Off between Trap Filling, Trap Creation, and Charge Recombination Results in Performance Increase at Ultralow Doping Levels in Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1601149	21.8	40
192	The Roles of Structural Order and Intermolecular Interactions in Determining Ionization Energies and Charge-Transfer State Energies in Organic Semiconductors. *Advanced Energy Materials*, **2016**, 6, 1601211	21.8	37
191	Minimal Effect of the Hole-Transport Material Ionization Potential on the Open-Circuit Voltage of Perovskite Solar Cells. *ACS Energy Letters*, **2016**, 1, 556-560	20.1	100
190	Small Molecule Anchored to Mesoporous ITO for High-Contrast Black Electrochromics. *Journal of Physical Chemistry C*, **2016**, 120, 26336-26341	3.8	24
189	Light-Induced Phase Segregation in Halide-Perovskite Absorbers. *ACS Energy Letters*, **2016**, 1, 1199-1205	20.1	398

188	Perovskite-perovskite tandem photovoltaics with optimized band gaps. *Science*, **2016**, 354, 861-865	33.3	865
187	Mechanical integrity of solution-processed perovskite solar cells. *Extreme Mechanics Letters*, **2016**, 9, 353-358	3.9	104
186	Thermal and Environmental Stability of Semi-Transparent Perovskite Solar Cells for Tandems Enabled by a Solution-Processed Nanoparticle Buffer Layer and Sputtered ITO Electrode. *Advanced Materials*, **2016**, 28, 3937-43	24	344
185	How the Energetic Landscape in the Mixed Phase of Organic Bulk Heterojunction Solar Cells Evolves with Fullerene Content. *Journal of Physical Chemistry C*, **2016**, 120, 6427-6434	3.8	19
184	Polymer Nanoparticle Electrochromic Materials that Selectively Modulate Visible and Near-Infrared Light. *Chemistry of Materials*, **2016**, 28, 1439-1445	9.6	75
183	Characterizing the Polymer:Fullerene Intermolecular Interactions. *Chemistry of Materials*, **2016**, 28, 1446-1452	9.6	17
182	Cesium Lead Halide Perovskites with Improved Stability for Tandem Solar Cells. *Journal of Physical Chemistry Letters*, **2016**, 7, 746-51	6.4	788
181	Morphological and electrical control of fullerene dimerization determines organic photovoltaic stability. *Energy and Environmental Science*, **2016**, 9, 247-256	35.4	169
180	Time- and Temperature-Independent Local Carrier Mobility and Effects of Regioregularity in Polymer-Fullerene Organic Semiconductors. *Advanced Electronic Materials*, **2016**, 2, 1500351	6.4	19
179	Thermal and environmental stability of semi-transparent perovskite solar cells for tandems by a solution-processed nanoparticle buffer layer and sputtered ITO electrode **2016**,		2
178	Fully inorganic cesium lead halide perovskites with improved stability for tandem solar cells **2016**,		2
177	Cross-Linkable, Solvent-Resistant Fullerene Contacts for Robust and Efficient Perovskite Solar Cells with Increased J and V. *ACS Applied Materials & Interfaces*, **2016**, 8, 25896-25904	9.5	39
176	Impact of Molecular Orientation and Spontaneous Interfacial Mixing on the Performance of Organic Solar Cells. *Chemistry of Materials*, **2015**, 27, 5597-5604	9.6	34
175	A 2-terminal perovskite/silicon multijunction solar cell enabled by a silicon tunnel junction. *Applied Physics Letters*, **2015**, 106, 121105	3.4	371
174	Beyond Langevin Recombination: How Equilibrium Between Free Carriers and Charge Transfer States Determines the Open-Circuit Voltage of Organic Solar Cells. *Advanced Energy Materials*, **2015**, 5, 1500123	21.8	306
173	The impact of donor-acceptor phase separation on the charge carrier dynamics in pBTTT:PCBM photovoltaic blends. *Macromolecular Rapid Communications*, **2015**, 36, 1054-60	4.8	27
172	Chlorine in PbCl2-Derived Hybrid-Perovskite Solar Absorbers. *Chemistry of Materials*, **2015**, 27, 7240-7243	9.6	78
171	Molecular Packing and Arrangement Govern the Photo-Oxidative Stability of Organic Photovoltaic Materials. *Chemistry of Materials*, **2015**, 27, 6345-6353	9.6	72

170	Semi-transparent perovskite solar cells for tandems with silicon and CIGS. *Energy and Environmental Science*, **2015**, 8, 956-963	35.4	553
169	Reversible photo-induced trap formation in mixed-halide hybrid perovskites for photovoltaics. *Chemical Science*, **2015**, 6, 613-617	9.4	1266
168	High-efficiency tandem perovskite solar cells. *MRS Bulletin*, **2015**, 40, 681-686	3.2	102
167	Disorder-Induced Open-Circuit Voltage Losses in Organic Solar Cells During Photoinduced Burn-In. *Advanced Energy Materials*, **2015**, 5, 1500111	21.8	127
166	Charge-Carrier Mobility Requirements for Bulk Heterojunction Solar Cells with High Fill Factor and External Quantum Efficiency >90%. *Advanced Energy Materials*, **2015**, 5, 1500577	21.8	186
165	Mapping Electric Field-Induced Switchable Poling and Structural Degradation in Hybrid Lead Halide Perovskite Thin Films. *Advanced Energy Materials*, **2015**, 5, 1500962	21.8	179
164	Transient Response of Organo-Metal-Halide Solar Cells Analyzed by Time-Resolved Current-Voltage Measurements. *Photonics*, **2015**, 2, 1101-1115	2.2	13
163	Influence of Intermixed Donor and Acceptor Domains on the Ultrafast Charge Generation in Bulk Heterojunction Materials. *Journal of Physical Chemistry C*, **2015**, 119, 26889-26894	3.8	19
162	Optical loss analysis of monolithic perovskite/Si tandem solar cell **2015**,		2
161	Minimal Long-Term Intrinsic Degradation Observed in a Polymer Solar Cell Illuminated in an Oxygen-Free Environment. *Chemistry of Materials*, **2015**, 27, 404-407	9.6	76
160	Sequential "click" functionalization of mesoporous titania for energy-relay dye enhanced dye-sensitized solar cells. *Physical Chemistry Chemical Physics*, **2015**, 17, 6565-71	3.6	10
159	Electron Barrier Formation at the Organic-Back Contact Interface is the First Step in Thermal Degradation of Polymer Solar Cells. *Advanced Functional Materials*, **2014**, 24, 3978-3985	15.6	84
158	Increased open-circuit voltage of organic solar cells by reduced donor-acceptor interface area. *Advanced Materials*, **2014**, 26, 3839-43	24	152
157	How high local charge carrier mobility and an energy cascade in a three-phase bulk heterojunction enable >90% quantum efficiency. *Advanced Materials*, **2014**, 26, 1923-8	24	226
156	Intercalation in Polymer:Fullerene Blends **2014**, 421-444		1
155	Comparing the Device Physics and Morphology of Polymer Solar Cells Employing Fullerenes and Non-Fullerene Acceptors. *Advanced Energy Materials*, **2014**, 4, 1301426	21.8	80
154	Ring Substituents Mediate the Morphology of PBDTTPD-PCBM Bulk-Heterojunction Solar Cells. *Chemistry of Materials*, **2014**, 26, 2299-2306	9.6	113
153	Efficient charge generation by relaxed charge-transfer states at organic interfaces. *Nature Materials*, **2014**, 13, 63-8	27	584

152	Melt-infiltration of spiro-OMeTAD and thermal instability of solid-state dye-sensitized solar cells. *Physical Chemistry Chemical Physics*, **2014**, 16, 4864-70	3.6	66
151	A layered hybrid perovskite solar-cell absorber with enhanced moisture stability. *Angewandte Chemie - International Edition*, **2014**, 53, 11232-5	16.4	1217
150	A Layered Hybrid Perovskite Solar-Cell Absorber with Enhanced Moisture Stability. *Angewandte Chemie*, **2014**, 126, 11414-11417	3.6	577
149	Perovskite solar cells: Continuing to soar. *Nature Materials*, **2014**, 13, 845-6	27	183
148	Enhancing the hole-conductivity of spiro-OMeTAD without oxygen or lithium salts by using spiro(TFSI)₂ in perovskite and dye-sensitized solar cells. *Journal of the American Chemical Society*, **2014**, 136, 10996-1001	16.4	457
147	Characterization of the polymer energy landscape in polymer:fullerene bulk heterojunctions with pure and mixed phases. *Journal of the American Chemical Society*, **2014**, 136, 14078-88	16.4	169
146	Hysteresis and transient behavior in current–voltage measurements of hybrid-perovskite absorber solar cells. *Energy and Environmental Science*, **2014**, 7, 3690-3698	35.4	1006
145	Reducing burn-in voltage loss in polymer solar cells by increasing the polymer crystallinity. *Energy and Environmental Science*, **2014**, 7, 2974-2980	35.4	142
144	Importance of the donor:fullerene intermolecular arrangement for high-efficiency organic photovoltaics. *Journal of the American Chemical Society*, **2014**, 136, 9608-18	16.4	283
143	Metamaterial mirrors in optoelectronic devices. *Nature Nanotechnology*, **2014**, 9, 542-7	28.7	136
142	Ternary bulk heterojunction solar cells: addition of soluble NIR dyes for photocurrent generation beyond 800 nm. *ACS Applied Materials & Interfaces*, **2014**, 6, 6905-13	9.5	51
141	Chloride in Lead Chloride-Derived Organo-Metal Halides for Perovskite-Absorber Solar Cells. *Chemistry of Materials*, **2014**, 26, 7158-7165	9.6	230
140	Controlling Solution-Phase Polymer Aggregation with Molecular Weight and Solvent Additives to Optimize Polymer-Fullerene Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1301733	21.8	182
139	Spray Deposition of Silver Nanowire Electrodes for Semitransparent Solid-State Dye-Sensitized Solar Cells. *Advanced Energy Materials*, **2013**, 3, 1657-1663	21.8	91
138	Improving the long-term stability of PBDTTPD polymer solar cells through material purification aimed at removing organic impurities. *Energy and Environmental Science*, **2013**, 6, 2529	35.4	91
137	Re-evaluating the role of sterics and electronic coupling in determining the open-circuit voltage of organic solar cells. *Advanced Materials*, **2013**, 25, 6076-82	24	85
136	Efficient energy sensitization of C60 and application to organic photovoltaics. *Journal of the American Chemical Society*, **2013**, 135, 11920-8	16.4	15
135	Dynamical Orientation of Large Molecules on Oxide Surfaces and its Implications for Dye-Sensitized Solar Cells. *Chemistry of Materials*, **2013**, 25, 4354-4363	9.6	15

134	All-back-contact ultra-thin silicon nanocone solar cells with 13.7% power conversion efficiency. *Nature Communications*, **2013**, 4, 2950	17.4	235
133	White OLEDs: Color in the Corners: ITO-Free White OLEDs with Angular Color Stability (Adv. Mater. 29/2013). *Advanced Materials*, **2013**, 25, 4060-4060	24	3
132	Transparent and conductive paper from nanocellulose fibers. *Energy and Environmental Science*, **2013**, 6, 513-518	35.4	375
131	Silicon-naphthalo/phthalocyanine-hybrid sensitizer for efficient red response in dye-sensitized solar cells. *Organic Letters*, **2013**, 15, 784-7	6.2	62
130	Effect of Al2O3 Recombination Barrier Layers Deposited by Atomic Layer Deposition in Solid-State CdS Quantum Dot-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2013**, 117, 5584-5592	3.8	100
129	Molecular Engineering of Organic Dyes for Improved Recombination Lifetime in Solid-State Dye-Sensitized Solar Cells. *Chemistry of Materials*, **2013**, 25, 1519-1525	9.6	58
128	Parasitic Absorption and Internal Quantum Efficiency Measurements of Solid-State Dye Sensitized Solar Cells. *Advanced Energy Materials*, **2013**, 3, 959-966	21.8	23
127	Color in the corners: ITO-free white OLEDs with angular color stability. *Advanced Materials*, **2013**, 25, 4006-13	24	212
126	The Importance of Fullerene Percolation in the Mixed Regions of Polymer–Fullerene Bulk Heterojunction Solar Cells. *Advanced Energy Materials*, **2013**, 3, 364-374	21.8	386
125	Molecular Intercalation and Cohesion of Organic Bulk Heterojunction Photovoltaic Devices. *Advanced Functional Materials*, **2013**, 23, 2863-2871	15.6	55
124	Highly soluble energy relay dyes for dye-sensitized solar cells. *Physical Chemistry Chemical Physics*, **2013**, 15, 11306-12	3.6	23
123	Linear side chains in benzo[1,2-b:4,5-b']dithiophene-thieno[3,4-c]pyrrole-4,6-dione polymers direct self-assembly and solar cell performance. *Journal of the American Chemical Society*, **2013**, 135, 4656-9	16.4	625
122	TiO2 Conduction Band Modulation with In2O3 Recombination Barrier Layers in Solid-State Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2013**, 117, 24138-24149	3.8	29
121	Semi-transparent polymer solar cells with excellent sub-bandgap transmission for third generation photovoltaics. *Advanced Materials*, **2013**, 25, 7020-6	24	82
120	Recombination in Polymer:Fullerene Solar Cells with Open-Circuit Voltages Approaching and Exceeding 1.0 V. *Advanced Energy Materials*, **2013**, 3, 220-230	21.8	199
119	Solar Cells: Re-evaluating the Role of Sterics and Electronic Coupling in Determining the Open-Circuit Voltage of Organic Solar Cells (Adv. Mater. 42/2013). *Advanced Materials*, **2013**, 25, 5990-5990	24	1
118	Geometric light trapping with a V-trap for efficient organic solar cells. *Optics Express*, **2013**, 21 Suppl 3, A305-12	3.3	17
117	Probing the effect of substrate heating during deposition of DCV4T:C60 blend layers for organic solar cells. *Organic Electronics*, **2012**, 13, 623-631	3.5	20

116	The mechanism of burn-in loss in a high efficiency polymer solar cell. *Advanced Materials*, **2012**, 24, 663-8	24	208
115	Modeling low cost hybrid tandem photovoltaics with the potential for efficiencies exceeding 20%. *Energy and Environmental Science*, **2012**, 5, 9173	35.4	131
114	Modeling low-cost hybrid tandem photovoltaics with power conversion efficiencies exceeding 20% **2012**,		4
113	The importance of dye chemistry and TiCl4 surface treatment in the behavior of Al2O3 recombination barrier layers deposited by atomic layer deposition in solid-state dye-sensitized solar cells. *Physical Chemistry Chemical Physics*, **2012**, 14, 12130-40	3.6	36
112	Free Carrier Generation in Fullerene Acceptors and Its Effect on Polymer Photovoltaics. *Journal of Physical Chemistry C*, **2012**, 116, 26674-26678	3.8	47
111	Impact of regioregularity on thin-film transistor and photovoltaic cell performances of pentacene-containing polymers. *Journal of Materials Chemistry*, **2012**, 22, 4356		13
110	Use of X-ray diffraction, molecular simulations, and spectroscopy to determine the molecular packing in a polymer-fullerene bimolecular crystal. *Advanced Materials*, **2012**, 24, 6071-9	24	113
109	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	21.8	90
108	Molecular packing and solar cell performance in blends of polymers with a bisadduct fullerene. *Nano Letters*, **2012**, 12, 1566-70	11.5	132
107	Hole transport materials with low glass transition temperatures and high solubility for application in solid-state dye-sensitized solar cells. *ACS Nano*, **2012**, 6, 1455-62	16.7	277
106	The renaissance of dye-sensitized solar cells. *Nature Photonics*, **2012**, 6, 162-169	33.9	1091
105	Self-limited plasmonic welding of silver nanowire junctions. *Nature Materials*, **2012**, 11, 241-9	27	891
104	Hybrid silicon nanocone-polymer solar cells. *Nano Letters*, **2012**, 12, 2971-6	11.5	380
103	Three-dimensional packing structure and electronic properties of biaxially oriented poly(2,5-bis(3-alkylthiophene-2-yl)thieno[3,2-b]thiophene) films. *Journal of the American Chemical Society*, **2012**, 134, 6177-90	16.4	93
102	The Role of Electron Affinity in Determining Whether Fullerenes Catalyze or Inhibit Photooxidation of Polymers for Solar Cells. *Advanced Energy Materials*, **2012**, 2, 1351-1357	21.8	116
101	Controlled conjugated backbone twisting for an increased open-circuit voltage while having a high short-circuit current in poly(hexylthiophene) derivatives. *Journal of the American Chemical Society*, **2012**, 134, 5222-32	16.4	177
100	Facile infiltration of semiconducting polymer into mesoporous electrodes for hybrid solar cells. *Energy and Environmental Science*, **2011**, 4, 3051	35.4	65
99	Energy and hole transfer between dyes attached to titania in cosensitized dye-sensitized solar cells. *Journal of the American Chemical Society*, **2011**, 133, 10662-7	16.4	92

98	Nanowire Solar Cells. *Annual Review of Materials Research*, **2011**, 41, 269-295	12.8	493
97	Transparent electrode requirements for thin film solar cell modules. *Energy and Environmental Science*, **2011**, 4, 131-134	35.4	125
96	3,4-Disubstituted polyalkylthiophenes for high-performance thin-film transistors and photovoltaics. *Journal of the American Chemical Society*, **2011**, 133, 16722-5	16.4	64
95	Applied physics. Paradigm shifts in dye-sensitized solar cells. *Science*, **2011**, 334, 607-8	33.3	58
94	A quantum-chemical perspective into low optical-gap polymers for highly-efficient organic solar cells. *Chemical Science*, **2011**, 2, 1200-1218	9.4	218
93	Effects of self-assembled monolayers on solid-state CdS quantum dot sensitized solar cells. *ACS Nano*, **2011**, 5, 1495-504	16.7	84
92	Effects of nanostructured back reflectors on the external quantum efficiency in thin film solar cells. *Nano Research*, **2011**, 4, 153-158	10	11
91	The phase behavior of a polymer-fullerene bulk heterojunction system that contains bimolecular crystals. *Journal of Polymer Science, Part B: Polymer Physics*, **2011**, 49, 499-503	2.6	70
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