James Durrant

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503 papers	56,085 citations	128 h-index	219 g-index
589 ext. papers	61,127 ext. citations	11.6 avg, IF	7.87 L-index

#	Paper	IF	Citations
503	A strong regioregularity effect in self-organizing conjugated polymer films and high-efficiency polythiophene:fullerene solar cells. *Nature Materials*, **2006**, 5, 197-203	27	2097
502	Charge photogeneration in organic solar cells. *Chemical Reviews*, **2010**, 110, 6736-67	68.1	1760
501	Artificial photosynthesis for solar water-splitting. *Nature Photonics*, **2012**, 6, 511-518	33.9	1484
500	Control of charge recombination dynamics in dye sensitized solar cells by the use of conformally deposited metal oxide blocking layers. *Journal of the American Chemical Society*, **2003**, 125, 475-82	16.4	967
499	High-efficiency and air-stable P3HT-based polymer solar cells with a new non-fullerene acceptor. *Nature Communications*, **2016**, 7, 11585	17.4	903
498	Thieno[3,2-b]thiophene-diketopyrrolopyrrole-containing polymers for high-performance organic field-effect transistors and organic photovoltaic devices. *Journal of the American Chemical Society*, **2011**, 133, 3272-5	16.4	809
497	Reducing the efficiency-stability-cost gap of organic photovoltaics with highly efficient and stable small molecule acceptor ternary solar cells. *Nature Materials*, **2017**, 16, 363-369	27	807
496	Mechanism of photocatalytic water splitting in TiO2. Reaction of water with photoholes, importance of charge carrier dynamics, and evidence for four-hole chemistry. *Journal of the American Chemical Society*, **2008**, 130, 13885-91	16.4	743
495	Subpicosecond Interfacial Charge Separation in Dye-Sensitized Nanocrystalline Titanium Dioxide Films. *The Journal of Physical Chemistry*, **1996**, 100, 20056-20062		736
494	Light and oxygen induced degradation limits the operational stability of methylammonium lead triiodide perovskite solar cells. *Energy and Environmental Science*, **2016**, 9, 1655-1660	35.4	621
493	Degradation of organic solar cells due to air exposure. *Solar Energy Materials and Solar Cells*, **2006**, 90, 3520-3530	6.4	593
492	Parameters Influencing Charge Recombination Kinetics in Dye-Sensitized Nanocrystalline Titanium Dioxide Films. *Journal of Physical Chemistry B*, **2000**, 104, 538-547	3.4	582
491	Charge carrier formation in polythiophene/fullerene blend films studied by transient absorption spectroscopy. *Journal of the American Chemical Society*, **2008**, 130, 3030-42	16.4	576
490	Device annealing effect in organic solar cells with blends of regioregular poly(3-hexylthiophene) and soluble fullerene. *Applied Physics Letters*, **2005**, 86, 063502	3.4	543
489	Parameters influencing the efficiency of electron injection in dye-sensitized solar cells. *Journal of the American Chemical Society*, **2009**, 131, 4808-18	16.4	534
488	Electron Transfer Dynamics in Dye-Sensitized Solar Cells. *Chemistry of Materials*, **2011**, 23, 3381-3399	9.6	525
487	Hybrid polymer/zinc oxide photovoltaic devices with vertically oriented ZnO nanorods and an amphiphilic molecular interface layer. *Journal of Physical Chemistry B*, **2006**, 110, 7635-9	3.4	492

486	Nanocrystalline dye-sensitized solar cells having maximum performance. *Progress in Photovoltaics: Research and Applications*, **2007**, 15, 1-18	6.8	479
485	The role of cobalt phosphate in enhancing the photocatalytic activity of □Fe2O3 toward water oxidation. *Journal of the American Chemical Society*, **2011**, 133, 14868-71	16.4	477
484	Charge separation versus recombination in dye-sensitized nanocrystalline solar cells: the minimization of kinetic redundancy. *Journal of the American Chemical Society*, **2005**, 127, 3456-62	16.4	456
483	Influence of the TiCl4 Treatment on Nanocrystalline TiO2 Films in Dye-Sensitized Solar Cells. 2. Charge Density, Band Edge Shifts, and Quantification of Recombination Losses at Short Circuit. *Journal of Physical Chemistry C*, **2007**, 111, 14001-14010	3.8	444
482	Experimental determination of the rate law for charge carrier decay in a polythiophene: Fullerene solar cell. *Applied Physics Letters*, **2008**, 92, 093311	3.4	428
481	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	35.4	425
480	Kinetic and energetic paradigms for dye-sensitized solar cells: moving from the ideal to the real. *Accounts of Chemical Research*, **2009**, 42, 1799-808	24.3	415
479	A rhodanine flanked nonfullerene acceptor for solution-processed organic photovoltaics. *Journal of the American Chemical Society*, **2015**, 137, 898-904	16.4	407
478	Electron Injection and Recombination in Dye Sensitized Nanocrystalline Titanium Dioxide Films: A Comparison of Ruthenium Bipyridyl and Porphyrin Sensitizer Dyes. *Journal of Physical Chemistry B*, **2000**, 104, 1198-1205	3.4	401
477	Fullerene crystallisation as a key driver of charge separation in polymer/fullerene bulk heterojunction solar cells. *Chemical Science*, **2012**, 3, 485-492	9.4	391
476	Charge transport versus recombination in dye-sensitized solar cells employing nanocrystalline TiO2 and SnO2 films. *Journal of Physical Chemistry B*, **2005**, 109, 12525-33	3.4	365
475	Bimolecular recombination losses in polythiophene: Fullerene solar cells. *Physical Review B*, **2008**, 78,	3.3	364
474	Dynamics of photogenerated holes in surface modified □Fe2O3 photoanodes for solar water splitting. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 15640-5	11.5	362
473	Charge carrier trapping, recombination and transfer in hematite (□Fe2O3) water splitting photoanodes. *Chemical Science*, **2013**, 4, 2724	9.4	362
472	Trap-limited recombination in dye-sensitized nanocrystalline metal oxide electrodes. *Physical Review B*, **2001**, 63,	3.3	357
471	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, 4987-92	24	343
470	Dye-Sensitized Nanocrystalline Solar Cells Employing a Polymer Electrolyte. *Advanced Materials*, **2001**, 13, 826-830	24	338
469	Back electron-hole recombination in hematite photoanodes for water splitting. *Journal of the American Chemical Society*, **2014**, 136, 2564-74	16.4	329

468	Current understanding and challenges of solar-driven hydrogen generation using polymeric photocatalysts. *Nature Energy*, **2019**, 4, 746-760	62.3	326
467	Charge Recombination Kinetics in Dye-Sensitized Nanocrystalline Titanium Dioxide Films under Externally Applied Bias. *Journal of Physical Chemistry B*, **1998**, 102, 1745-1749	3.4	309
466	Time-Resolved Spectroscopic Investigation of Charge Trapping in Carbon Nitrides Photocatalysts for Hydrogen Generation. *Journal of the American Chemical Society*, **2017**, 139, 5216-5224	16.4	307
465	Molecular control of recombination dynamics in dye-sensitized nanocrystalline TiO2 films: free energy vs distance dependence. *Journal of the American Chemical Society*, **2004**, 126, 5225-33	16.4	305
464	Solution-Processed Organic Solar Cells. *MRS Bulletin*, **2008**, 33, 670-675	3.2	303
463	Reversible colorimetric probes for mercury sensing. *Journal of the American Chemical Society*, **2005**, 127, 12351-6	16.4	298
462	Catalysis of recombination and its limitation on open circuit voltage for dye sensitized photovoltaic cells using phthalocyanine dyes. *Journal of the American Chemical Society*, **2008**, 130, 2906-7	16.4	296
461	Long-lived charge separated states in nanostructured semiconductor photoelectrodes for the production of solar fuels. *Chemical Society Reviews*, **2013**, 42, 2281-93	58.5	260
460	Dynamics of photogenerated holes in undoped BiVO4 photoanodes for solar water oxidation. *Chemical Science*, **2014**, 5, 2964-2973	9.4	253
459	Free Energy Control of Charge Photogeneration in Polythiophene/Fullerene Solar Cells: The Influence of Thermal Annealing on P3HT/PCBM Blends. *Advanced Functional Materials*, **2008**, 18, 4029-4035	15.6	247
458	Immobilisation and bioelectrochemistry of proteins on nanoporous TiO2 and ZnO films. *Journal of Electroanalytical Chemistry*, **2001**, 517, 20-27	4.1	246
457	Hybrid polymer/metal oxide solar cells based on ZnO columnar structures. *Journal of Materials Chemistry*, **2006**, 16, 2088		244
456	Charge-density-based analysis of the current-voltage response of polythiophene/fullerene photovoltaic devices. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 16448-52	11.5	243
455	Alkyl chain barriers for kinetic optimization in dye-sensitized solar cells. *Journal of the American Chemical Society*, **2006**, 128, 16376-83	16.4	243
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453	Towards optimisation of electron transfer processes in dye sensitised solar cells. *Coordination Chemistry Reviews*, **2004**, 248, 1247-1257	23.2	239
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451	Dynamics of photogenerated holes in nanocrystalline □Fe2O3 electrodes for water oxidation probed by transient absorption spectroscopy. *Chemical Communications*, **2011**, 47, 716-8	5.8	234

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442	Water Splitting by Nanocrystalline TiO2 in a Complete Photoelectrochemical Cell Exhibits Efficiencies Limited by Charge Recombination. *Journal of Physical Chemistry C*, **2010**, 114, 4208-4214	3.8	212
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437	Iodide Electron Transfer Kinetics in Dye-Sensitized Nanocrystalline TiO2 Films. *Journal of Physical Chemistry B*, **2002**, 106, 12203-12210	3.4	206
436	Ultrafast charge carrier recombination and trapping in hematite photoanodes under applied bias. *Journal of the American Chemical Society*, **2014**, 136, 9854-7	16.4	204
435	Materials Design Considerations for Charge Generation in Organic Solar Cells. *Chemistry of Materials*, **2014**, 26, 616-630	9.6	202
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421	On the Differences between Dark and Light Ideality Factor in Polymer:Fullerene Solar Cells. *Journal of Physical Chemistry Letters*, **2013**, 4, 2371-2376	6.4	178
420	Engineering of a novel ruthenium sensitizer and its application in dye-sensitized solar cells for conversion of sunlight into electricity. *Inorganic Chemistry*, **2005**, 44, 178-80	5.1	178
419	Protein Adsorption on Nanocrystalline TiO(2) Films: An Immobilization Strategy for Bioanalytical Devices. *Analytical Chemistry*, **1998**, 70, 5111-3	7.8	178
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405	Multistep electron transfer processes on dye co-sensitized nanocrystalline TiO2 films. *Journal of the American Chemical Society*, **2004**, 126, 5670-1	16.4	155
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386	An Efficient, "Burn in" Free Organic Solar Cell Employing a Nonfullerene Electron Acceptor. *Advanced Materials*, **2017**, 29, 1701156	24	138
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