Obadiah G Reid

List of Publications by Year
in descending order

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64 papers	5,193 citations	147801 31 h-index	133252 59 g-index
72 all docs	72 docs citations	72 times ranked	8055 citing authors

#	Article	IF	Citations
1	Short and long-range electron transfer compete to determine free-charge yield in organic semiconductors. Materials Horizons, 2022, 9, 312-324.	12.2	4
2	Controlled nâ€Doping of Naphthaleneâ€Diimideâ€Based 2D Polymers. Advanced Materials, 2022, 34, e2101932.	21.0	13
3	Nanoscale Photoexcited Carrier Dynamics in Perovskites. Journal of Physical Chemistry Letters, 2022, 13, 2388-2395.	4.6	3
4	Ion-pair reorganization regulates reactivity in photoredox catalysts. Nature Chemistry, 2022, 14, 746-753.	13.6	28
5	Linking optical spectra to free charges in donor/acceptor heterojunctions: cross-correlation of transient microwave and optical spectroscopy. Materials Horizons, 2021, 8, 1509-1517.	12.2	3
6	Reconciling the Driving Force and the Barrier to Charge Separation in Donorâ€“Nonfullerene Acceptor Films. ACS Energy Letters, 2021, 6, 3572-3581.	17.4	10
7	Measuring Photoexcited Free Charge Carriers in Mono- to Few-Layer Transition-Metal Dichalcogenides with Steady-State Microwave Conductivity. Journal of Physical Chemistry Letters, 2020, 11, 99-107.	4.6	11
8	Slow charge transfer from pentacene triplet states at the Marcus optimum. Nature Chemistry, 2020, 12, 63-70.	13.6	36
9	Triplet Excitons in Pentacene Are Intrinsically Difficult to Dissociate via Charge Transfer. Journal of Physical Chemistry C, 2020, 124, 26153-26164.	3.1	12
10	Conversion between triplet pair states is controlled by molecular coupling in pentadithiophene thin films. Chemical Science, 2020, 11, 7226-7238.	7.4	8
11	Disentangling oxygen and water vapor effects on optoelectronic properties of monolayer tungsten disulfide. Nanoscale, 2020, 12, 8344-8354.	5.6	11
12	Interfacial charge-transfer doping of metal halide perovskites for high performance photovoltaics. Energy and Environmental Science, 2019, 12, 3063-3073.	30.8	111
13	Rapid Charge-Transfer Cascade through SWCNT Composites Enabling Low-Voltage Losses for Perovskite Solar Cells. ACS Energy Letters, 2019, 4, 1872-1879.	17.4	33
14	Design and synthesis of two-dimensional covalent organic frameworks with four-arm cores: prediction of remarkable ambipolar charge-transport properties. Materials Horizons, 2019, 6, 1868-1876.	12.2	62
15	Carrier lifetimes of >1 Î¼s in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. Science, 2019, 364, 475-479.	12.6	781
16	Enhanced Charge Transport in 2D Perovskites via Fluorination of Organic Cation. Journal of the American Chemical Society, 2019, 141, 5972-5979.	13.7	274
17	Spectroscopy of Ground- and Excited-State Charge Carriers in Single-Wall Carbon Nanotubes. World Scientific Series on Carbon Nanoscience, 2019, , 237-296.	0.1	3
18	Delocalization Drives Free Charge Generation in Conjugated Polymer Films. ACS Energy Letters, 2018, 3, 735-741.	17.4	23

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19	The Role of the Side Chain on the Performance of N-type Conjugated Polymers in Aqueous Electrolytes. Chemistry of Materials, 2018, 30, 2945-2953.	6.7	199
20	Robust Processing of Small-Molecule:Fullerene Organic Solar Cells via Use of Nucleating Agents. ACS Applied Energy Materials, 2018, 1, 1973-1980.	5.1	2
21	Effect of non-stoichiometric solution chemistry on improving the performance of wide-bandgap perovskite solar cells. Materials Today Energy, 2018, 7, 232-238.	4.7	31
22	On the Effect of Confinement on the Structure and Properties of Smallâ€Molecular Organic Semiconductors. Advanced Electronic Materials, 2018, 4, 1700308.	5.1	19
23	Efficiency of Charge-Transfer Doping in Organic Semiconductors Probed with Quantitative Microwave and Direct-Current Conductance. Journal of Physical Chemistry Letters, 2018, 9, 6864-6870.	4.6	30
24	Electronic Properties of Bimetallic Metalâ€“Organic Frameworks (MOFs): Tailoring the Density of Electronic States through MOF Modularity. Journal of the American Chemical Society, 2017, 139, 5201-5209.	13.7	178
25	Perovskite ink with wide processing window for scalable high-efficiency solar cells. Nature Energy, 2017, 2, .	39.5	499
26	Quantitative analysis of time-resolved microwave conductivity data. Journal Physics D: Applied Physics, 2017, 50, 493002.	2.8	74
27	Local Intermolecular Order Controls Photoinduced Charge Separation at Donor/Acceptor Interfaces in Organic Semiconductors. Advanced Energy Materials, 2016, 6, 1502176.	19.5	31
28	Polymer Solar Cells: Inter-Fullerene Electronic Coupling Controls the Efficiency of Photoinduced Charge Generation in Organic Bulk Heterojunctions (Adv. Energy Mater. 24/2016). Advanced Energy Materials, 2016, 6, .	19.5	2
29	Probing Exciton Diffusion and Dissociation in Single-Walled Carbon Nanotubeâ€“C₆₀ Heterojunctions. Journal of Physical Chemistry Letters, 2016, 7, 1794-1799.	4.6	33
30	Tuning the driving force for exciton dissociation in single-walled carbon nanotube heterojunctions. Nature Chemistry, 2016, 8, 603-609.	13.6	79
31	Covalently Bound Nitroxyl Radicals in an Organic Framework. Journal of Physical Chemistry Letters, 2016, 7, 3660-3665.	4.6	33
32	Interâ€Fullerene Electronic Coupling Controls the Efficiency of Photoinduced Charge Generation in Organic Bulk Heterojunctions. Advanced Energy Materials, 2016, 6, 1601427.	19.5	15
33	Grain-Size-Limited Mobility in Methylammonium Lead Iodide Perovskite Thin Films. ACS Energy Letters, 2016, 1, 561-565.	17.4	160
34	Mechanism for rapid growth of organicâ€“inorganic halide perovskite crystals. Nature Communications, 2016, 7, 13303.	12.8	191
35	Resonance Energy Transfer Enables Efficient Planar Heterojunction Organic Solar Cells. Journal of Physical Chemistry C, 2016, 120, 87-97.	3.1	12
36	Efficient charge extraction and slow recombination in organicâ€“inorganic perovskites capped with semiconducting single-walled carbon nanotubes. Energy and Environmental Science, 2016, 9, 1439-1449.	30.8	126

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37	Trap-limited carrier recombination in single-walled carbon nanotube heterojunctions with fullerene acceptor layers. Physical Review B, 2015, 91, .	3.2	31
38	Photoconductivity of CdTe Nanocrystal-Based Thin Films: Te^{2â€“} Ligands Lead To Charge Carrier Diffusion Lengths Over 2 Î¼m. Journal of Physical Chemistry Letters, 2015, 6, 4815-4821.	4.6	19
39	Photo-induced carrier generation and recombination dynamics probed by combining time-resolved microwave conductivity and transient absorption spectroscopy. Proceedings of SPIE, 2015, , .	0.8	0
40	Photoinduced Carrier Generation and Recombination Dynamics of a Trilayer Cascade Heterojunction Composed of Poly(3-hexylthiophene), Titanyl Phthalocyanine, and C₆₀. Journal of Physical Chemistry B, 2015, 119, 7729-7739.	2.6	25
41	Photoinduced spontaneous free-carrier generation in semiconducting single-walled carbon nanotubes. Nature Communications, 2015, 6, 8809.	12.8	52
42	Control of polythiophene film microstructure and charge carrier dynamics through crystallization temperature. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 700-707.	2.1	15
43	Charge Photogeneration in Neat Conjugated Polymers. Chemistry of Materials, 2014, 26, 561-575.	6.7	118
44	Morphological Origin of Charge Transport Anisotropy in Aligned Polythiophene Thin Films. Advanced Functional Materials, 2014, 24, 3422-3431.	14.9	77
45	Additive-assisted supramolecular manipulation of polymer:fullerene blend phase morphologies and its influence on photophysical processes. Materials Horizons, 2014, 1, 270-279.	12.2	58
46	Mobility of Holes in Oligo- and Polyfluorenes of Defined Lengths. Journal of Physical Chemistry C, 2014, 118, 6100-6109.	3.1	29
47	Quantitative Transient Absorption Measurements of Polaron Yield and Absorption Coefficient in Neat Conjugated Polymers. Journal of Physical Chemistry Letters, 2013, 4, 2348-2355.	4.6	31
48	Non-aqueous thermolytic route to oxynitride photomaterials using molecular precursors Ti(OtBu)4 and Ni€,Mo(OtBu)3. Journal of Materials Chemistry A, 2013, 1, 14066.	10.3	2
49	Microstructure formation in molecular and polymer semiconductors assisted by nucleation agents. Nature Materials, 2013, 12, 628-633.	27.5	131
50	Influence of squaraine aggregation on short-circuit current and device efficiency. , 2012, , .		3
51	Submicrosecond Time Resolution Atomic Force Microscopy for Probing Nanoscale Dynamics. Nano Letters, 2012, 12, 893-898.	9.1	82
52	The influence of solidâ€state microstructure on the origin and yield of longâ€lived photogenerated charge in neat semiconducting polymers. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 27-37.	2.1	101
53	Detecting free carriers in organic photovoltaic systems: Time-resolved microwave conductivity. , 2011, , .		1
54	Nanostructure determines the intensity-dependence of open-circuit voltage in plastic solar cells. Journal of Applied Physics, 2010, 108, 084320.	2.5	19

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55	Imaging Local Trap Formation in Conjugated Polymer Solar Cells: A Comparison of Time-Resolved Electrostatic Force Microscopy and Scanning Kelvin Probe Imaging. Journal of Physical Chemistry C, 2010, 114, 20672-20677.	3.1	51
56	Polymer Nanowire/Fullerene Bulk Heterojunction Solar Cells: How Nanostructure Determines Photovoltaic Properties. ACS Nano, 2010, 4, 1861-1872.	14.6	170
57	Concerted Emission and Local Potentiometry of Light-Emitting Electrochemical Cells. ACS Nano, 2010, 4, 2673-2680.	14.6	81
58	Heterogeneity in Polymer Solar Cells: Local Morphology and Performance in Organic Photovoltaics Studied with Scanning Probe Microscopy. Accounts of Chemical Research, 2010, 43, 612-620.	15.6	179
59	Electrical Scanning Probe Microscopy on Active Organic Electronic Devices. Advanced Materials, 2009, 21, 19-28.	21.0	183
60	Scanning Probe Microscopy: Electrical Scanning Probe Microscopy on Active Organic Electronic Devices (Adv. Mater. 1/2009). Advanced Materials, 2009, 21, NA-NA.	21.0	0
61	Imaging the Evolution of Nanoscale Photocurrent Collection and Transport Networks during Annealing of Polythiophene/Fullerene Solar Cells. Nano Letters, 2009, 9, 2946-2952.	9.1	111
62	Space Charge Limited Current Measurements on Conjugated Polymer Films using Conductive Atomic Force Microscopy. Nano Letters, 2008, 8, 1602-1609.	9.1	200
63	Mapping Local Photocurrents in Polymer/Fullerene Solar Cells with Photoconductive Atomic Force Microscopy. Nano Letters, 2007, 7, 738-744.	9.1	283
64	Understanding Nanostructured Solar Cell Performance with Time-Resolved Electrostatic Force Microscopy. , 2007, , .		1