

# 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	Carrier lifetimes of $>1 \mu\text{s}$ in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. <i>Science</i> , 2019, 364, 475-479.	12.6	781
2	Perovskite ink with wide processing window for scalable high-efficiency solar cells. <i>Nature Energy</i> , 2017, 2, .	39.5	499
3	Mapping Local Photocurrents in Polymer/Fullerene Solar Cells with Photoconductive Atomic Force Microscopy. <i>Nano Letters</i> , 2007, 7, 738-744.	9.1	283
4	Enhanced Charge Transport in 2D Perovskites via Fluorination of Organic Cation. <i>Journal of the American Chemical Society</i> , 2019, 141, 5972-5979.	13.7	274
5	Space Charge Limited Current Measurements on Conjugated Polymer Films using Conductive Atomic Force Microscopy. <i>Nano Letters</i> , 2008, 8, 1602-1609.	9.1	200
6	The Role of the Side Chain on the Performance of N-type Conjugated Polymers in Aqueous Electrolytes. <i>Chemistry of Materials</i> , 2018, 30, 2945-2953.	6.7	199
7	Mechanism for rapid growth of organic-inorganic halide perovskite crystals. <i>Nature Communications</i> , 2016, 7, 13303.	12.8	191
8	Electrical Scanning Probe Microscopy on Active Organic Electronic Devices. <i>Advanced Materials</i> , 2009, 21, 19-28.	21.0	183
9	Heterogeneity in Polymer Solar Cells: Local Morphology and Performance in Organic Photovoltaics Studied with Scanning Probe Microscopy. <i>Accounts of Chemical Research</i> , 2010, 43, 612-620.	15.6	179
10	Electronic Properties of Bimetallic Metal-Organic Frameworks (MOFs): Tailoring the Density of Electronic States through MOF Modularity. <i>Journal of the American Chemical Society</i> , 2017, 139, 5201-5209.	13.7	178
11	Polymer Nanowire/Fullerene Bulk Heterojunction Solar Cells: How Nanostructure Determines Photovoltaic Properties. <i>ACS Nano</i> , 2010, 4, 1861-1872.	14.6	170
12	Grain-Size-Limited Mobility in Methylammonium Lead Iodide Perovskite Thin Films. <i>ACS Energy Letters</i> , 2016, 1, 561-565.	17.4	160
13	Microstructure formation in molecular and polymer semiconductors assisted by nucleation agents. <i>Nature Materials</i> , 2013, 12, 628-633.	27.5	131
14	Efficient charge extraction and slow recombination in organic-inorganic perovskites capped with semiconducting single-walled carbon nanotubes. <i>Energy and Environmental Science</i> , 2016, 9, 1439-1449.	30.8	126
15	Charge Photogeneration in Neat Conjugated Polymers. <i>Chemistry of Materials</i> , 2014, 26, 561-575.	6.7	118
16	Imaging the Evolution of Nanoscale Photocurrent Collection and Transport Networks during Annealing of Polythiophene/Fullerene Solar Cells. <i>Nano Letters</i> , 2009, 9, 2946-2952.	9.1	111
17	Interfacial charge-transfer doping of metal halide perovskites for high performance photovoltaics. <i>Energy and Environmental Science</i> , 2019, 12, 3063-3073.	30.8	111
18	The influence of solid-state microstructure on the origin and yield of long-lived photogenerated charge in neat semiconducting polymers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2012, 50, 27-37.	2.1	101

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19	Submicrosecond Time Resolution Atomic Force Microscopy for Probing Nanoscale Dynamics. <i>Nano Letters</i> , 2012, 12, 893-898.	9.1	82
20	Concerted Emission and Local Potentiometry of Light-Emitting Electrochemical Cells. <i>ACS Nano</i> , 2010, 4, 2673-2680.	14.6	81
21	Tuning the driving force for exciton dissociation in single-walled carbon nanotube heterojunctions. <i>Nature Chemistry</i> , 2016, 8, 603-609.	13.6	79
22	Morphological Origin of Charge Transport Anisotropy in Aligned Polythiophene Thin Films. <i>Advanced Functional Materials</i> , 2014, 24, 3422-3431.	14.9	77
23	Quantitative analysis of time-resolved microwave conductivity data. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 493002.	2.8	74
24	Design and synthesis of two-dimensional covalent organic frameworks with four-arm cores: prediction of remarkable ambipolar charge-transport properties. <i>Materials Horizons</i> , 2019, 6, 1868-1876.	12.2	62
25	Additive-assisted supramolecular manipulation of polymer:fullerene blend phase morphologies and its influence on photophysical processes. <i>Materials Horizons</i> , 2014, 1, 270-279.	12.2	58
26	Photoinduced spontaneous free-carrier generation in semiconducting single-walled carbon nanotubes. <i>Nature Communications</i> , 2015, 6, 8809.	12.8	52
27	Imaging Local Trap Formation in Conjugated Polymer Solar Cells: A Comparison of Time-Resolved Electrostatic Force Microscopy and Scanning Kelvin Probe Imaging. <i>Journal of Physical Chemistry C</i> , 2010, 114, 20672-20677.	3.1	51
28	Slow charge transfer from pentacene triplet states at the Marcus optimum. <i>Nature Chemistry</i> , 2020, 12, 63-70.	13.6	36
29	Probing Exciton Diffusion and Dissociation in Single-Walled Carbon Nanotube $C_{60}$ Heterojunctions. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1794-1799.	4.6	33
30	Covalently Bound Nitroxyl Radicals in an Organic Framework. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3660-3665.	4.6	33
31	Rapid Charge-Transfer Cascade through SWCNT Composites Enabling Low-Voltage Losses for Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2019, 4, 1872-1879.	17.4	33
32	Quantitative Transient Absorption Measurements of Polaron Yield and Absorption Coefficient in Neat Conjugated Polymers. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 2348-2355.	4.6	31
33	Trap-limited carrier recombination in single-walled carbon nanotube heterojunctions with fullerene acceptor layers. <i>Physical Review B</i> , 2015, 91, .	3.2	31
34	Local Intermolecular Order Controls Photoinduced Charge Separation at Donor/Acceptor Interfaces in Organic Semiconductors. <i>Advanced Energy Materials</i> , 2016, 6, 1502176.	19.5	31
35	Effect of non-stoichiometric solution chemistry on improving the performance of wide-bandgap perovskite solar cells. <i>Materials Today Energy</i> , 2018, 7, 232-238.	4.7	31
36	Efficiency of Charge-Transfer Doping in Organic Semiconductors Probed with Quantitative Microwave and Direct-Current Conductance. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6864-6870.	4.6	30

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37	Mobility of Holes in Oligo- and Polyfluorenes of Defined Lengths. <i>Journal of Physical Chemistry C</i> , 2014, 118, 6100-6109.	3.1	29
38	Ion-pair reorganization regulates reactivity in photoredox catalysts. <i>Nature Chemistry</i> , 2022, 14, 746-753.	13.6	28
39	Photoinduced Carrier Generation and Recombination Dynamics of a Trilayer Cascade Heterojunction Composed of Poly(3-hexylthiophene), Titanyl Phthalocyanine, and C <sub>60</sub> . <i>Journal of Physical Chemistry B</i> , 2015, 119, 7729-7739.	2.6	25
40	Delocalization Drives Free Charge Generation in Conjugated Polymer Films. <i>ACS Energy Letters</i> , 2018, 3, 735-741.	17.4	23
41	Nanostructure determines the intensity-dependence of open-circuit voltage in plastic solar cells. <i>Journal of Applied Physics</i> , 2010, 108, 084320.	2.5	19
42	Photoconductivity of CdTe Nanocrystal-Based Thin Films: Te <sup>2+</sup> Ligands Lead To Charge Carrier Diffusion Lengths Over 2 $\mu$ m. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 4815-4821.	4.6	19
43	On the Effect of Confinement on the Structure and Properties of Small-Molecular Organic Semiconductors. <i>Advanced Electronic Materials</i> , 2018, 4, 1700308.	5.1	19
44	Control of polythiophene film microstructure and charge carrier dynamics through crystallization temperature. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2014, 52, 700-707.	2.1	15
45	Interfullerene Electronic Coupling Controls the Efficiency of Photoinduced Charge Generation in Organic Bulk Heterojunctions. <i>Advanced Energy Materials</i> , 2016, 6, 1601427.	19.5	15
46	Controlled $\delta$ -Doping of Naphthalene-Diimide-Based 2D Polymers. <i>Advanced Materials</i> , 2022, 34, e2101932.	21.0	13
47	Resonance Energy Transfer Enables Efficient Planar Heterojunction Organic Solar Cells. <i>Journal of Physical Chemistry C</i> , 2016, 120, 87-97.	3.1	12
48	Triplet Excitons in Pentacene Are Intrinsically Difficult to Dissociate via Charge Transfer. <i>Journal of Physical Chemistry C</i> , 2020, 124, 26153-26164.	3.1	12
49	Measuring Photoexcited Free Charge Carriers in Mono- to Few-Layer Transition-Metal Dichalcogenides with Steady-State Microwave Conductivity. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 99-107.	4.6	11
50	Disentangling oxygen and water vapor effects on optoelectronic properties of monolayer tungsten disulfide. <i>Nanoscale</i> , 2020, 12, 8344-8354.	5.6	11
51	Reconciling the Driving Force and the Barrier to Charge Separation in Donor-Nonfullerene Acceptor Films. <i>ACS Energy Letters</i> , 2021, 6, 3572-3581.	17.4	10
52	Conversion between triplet pair states is controlled by molecular coupling in pentadithiophene thin films. <i>Chemical Science</i> , 2020, 11, 7226-7238.	7.4	8
53	Short and long-range electron transfer compete to determine free-charge yield in organic semiconductors. <i>Materials Horizons</i> , 2022, 9, 312-324.	12.2	4
54	Influence of squaraine aggregation on short-circuit current and device efficiency. , 2012, , .		3

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55	Linking optical spectra to free charges in donor/acceptor heterojunctions: cross-correlation of transient microwave and optical spectroscopy. <i>Materials Horizons</i> , 2021, 8, 1509-1517.	12.2	3
56	Spectroscopy of Ground- and Excited-State Charge Carriers in Single-Wall Carbon Nanotubes. <i>World Scientific Series on Carbon Nanoscience</i> , 2019, , 237-296.	0.1	3
57	Nanoscale Photoexcited Carrier Dynamics in Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 2388-2395.	4.6	3
58	Non-aqueous thermolytic route to oxynitride photomaterials using molecular precursors $Ti(OtBu)_4$ and $Ni\epsilon, Mo(OtBu)_3$ . <i>Journal of Materials Chemistry A</i> , 2013, 1, 14066.	10.3	2
59	Polymer Solar Cells: Inter-Fullerene Electronic Coupling Controls the Efficiency of Photoinduced Charge Generation in Organic Bulk Heterojunctions ( <i>Adv. Energy Mater.</i> 24/2016). <i>Advanced Energy Materials</i> , 2016, 6, .	19.5	2
60	Robust Processing of Small-Molecule:Fullerene Organic Solar Cells via Use of Nucleating Agents. <i>ACS Applied Energy Materials</i> , 2018, 1, 1973-1980.	5.1	2
61	Detecting free carriers in organic photovoltaic systems: Time-resolved microwave conductivity. , 2011, , .		1
62	Understanding Nanostructured Solar Cell Performance with Time-Resolved Electrostatic Force Microscopy. , 2007, , .		1
63	Scanning Probe Microscopy: Electrical Scanning Probe Microscopy on Active Organic Electronic Devices ( <i>Adv. Mater.</i> 1/2009). <i>Advanced Materials</i> , 2009, 21, NA-NA.	21.0	0
64	Photo-induced carrier generation and recombination dynamics probed by combining time-resolved microwave conductivity and transient absorption spectroscopy. <i>Proceedings of SPIE</i> , 2015, , .	0.8	0