Richard R Lunt

List of Publications by Year
in descending order

92 papers	6,790 citations	87843 38 h-index	60583 81 g-index
97 all docs	97 docs citations	97 times ranked	9527 citing authors

#	Article	IF	Citations
1	Energy Level Modification in Lead Sulfide Quantum Dot Thin Films through Ligand Exchange. ACS Nano, 2014, 8, 5863-5872.	7.3	843
2	Emergence of highly transparent photovoltaics for distributed applications. Nature Energy, 2017, 2, 849-860.	19.8	512
3	Exciton diffusion lengths of organic semiconductor thin films measured by spectrally resolved photoluminescence quenching. Journal of Applied Physics, 2009, 105, .	1.1	401
4	Relationship between Crystalline Order and Exciton Diffusion Length in Molecular Organic Semiconductors. Advanced Materials, 2010, 22, 1233-1236.	11.1	295
5	Transparent, near-infrared organic photovoltaic solar cells for window and energy-scavenging applications. Applied Physics Letters, 2011, 98, .	1.5	291
6	Improved Current Extraction from ZnO/PbS Quantum Dot Heterojunction Photovoltaics Using a MoO₃ Interfacial Layer. Nano Letters, 2011, 11, 2955-2961.	4.5	265
7	Direct Monolithic Integration of Organic Photovoltaic Circuits on Unmodified Paper. Advanced Materials, 2011, 23, 3500-3505.	11.1	243
8	Broad Spectral Response Using Carbon Nanotube/Organic Semiconductor/C₆₀ Photodetectors. Nano Letters, 2009, 9, 3354-3358.	4.5	223
9	Open circuit voltage enhancement due to reduced dark current in small molecule photovoltaic cells. Applied Physics Letters, 2009, 94, 023307.	1.5	198
10	Toward Efficient Carbon Nanotube/P3HT Solar Cells: Active Layer Morphology, Electrical, and Optical Properties. Nano Letters, 2011, 11, 5316-5321.	4.5	189
11	Transparent Luminescent Solar Concentrators for Largeâ€Area Solar Windows Enabled by Massive Stokesâ€Shift Nanocluster Phosphors. Advanced Energy Materials, 2013, 3, 1143-1148.	10.2	180
12	Nearâ€Infrared Harvesting Transparent Luminescent Solar Concentrators. Advanced Optical Materials, 2014, 2, 606-611.	3.6	164
13	Practical Roadmap and Limits to Nanostructured Photovoltaics. Advanced Materials, 2011, 23, 5712-5727.	11.1	160
14	Theoretical limits for visibly transparent photovoltaics. Applied Physics Letters, 2012, 101, 043902.	1.5	154
15	How to Accurately Report Transparent Solar Cells. Joule, 2019, 3, 1803-1809.	11.7	146
16	All vapor-deposited lead-free doped CsSnBr3 planar solar cells. Nano Energy, 2016, 28, 469-474.	8.2	139
17	Porphyrinâ€Tape/C₆₀ Organic Photodetectors with 6.5% External Quantum Efficiency in the Near Infrared. Advanced Materials, 2010, 22, 2780-2783.	11.1	137
18	Efficient, Ordered Bulk Heterojunction Nanocrystalline Solar Cells by Annealing of Ultrathin Squaraine Thin Films. Nano Letters, 2010, 10, 3555-3559.	4.5	132

#	Article	IF	Citations
19	Low-Temperature Solution-Processed Solar Cells Based on PbS Colloidal Quantum Dot/CdS Heterojunctions. Nano Letters, 2013, 13, 994-999.	4.5	129
20	Limits of Visibly Transparent Luminescent Solar Concentrators. Advanced Optical Materials, 2017, 5, 1600851.	3.6	100
21	Device Performance of Emerging Photovoltaic Materials (Version 1). Advanced Energy Materials, 2021, 11, 2002774.	10.2	93
22	Impact of Ultrathin C₆₀ on Perovskite Photovoltaic Devices. ACS Nano, 2018, 12, 876-883.	7.3	80
23	Halide Perovskites for Selective Ultraviolet-Harvesting Transparent Photovoltaics. Joule, 2018, 2, 1827-1837.	11.7	80
24	How to Accurately Report Transparent Luminescent Solar Concentrators. Joule, 2019, 3, 2871-2876.	11.7	71
25	Net energy and cost benefit of transparent organic solar cells in building-integrated applications. Applied Energy, 2020, 261, 114429.	5.1	69
26	Phosphorescent Nanocluster Lightâ€Emitting Diodes. Advanced Materials, 2016, 28, 320-326.	11.1	67
27	Aqueousâ€Containing Precursor Solutions for Efficient Perovskite Solar Cells. Advanced Science, 2018, 5, 1700484.	5.6	66
28	Device Performance of Emerging Photovoltaic Materials (Version 2). Advanced Energy Materials, 2021, 11, .	10.2	66
29	Consensus statement: Standardized reporting of power-producing luminescent solar concentrator performance. Joule, 2022, 6, 8-15.	11.7	66
30	Nearâ€Infrared and Shortâ€Wavelength Infrared Photodiodes Based on Dyeâ€"Perovskite Composites. Advanced Functional Materials, 2017, 27, 1702485.	7.8	59
31	Organic Heptamethine Salts for Photovoltaics and Detectors with Nearâ€Infrared Photoresponse up to 1600 nm. Advanced Optical Materials, 2016, 4, 1028-1033.	3.6	53
32	Simultaneous heterojunction organic solar cells with broad spectral sensitivity. Applied Physics Letters, 2008, 92, .	1.5	51
33	Organic Photovoltaics Using Tetraphenylbenzoporphyrin Complexes as Donor Layers. Advanced Materials, 2009, 21, 1517-1520.	11.1	51
34	Highâ€Performance Nearâ€Infrared Harvesting Transparent Luminescent Solar Concentrators. Advanced Optical Materials, 2020, 8, 1901536.	3.6	48
35	Room Temperature Processing of Inorganic Perovskite Films to Enable Flexible Solar Cells. IScience, 2018, 6, 272-279.	1.9	44
36	The nature of photoinduced phase transition and metastable states in vanadium dioxide. Scientific Reports, 2016, 6, 38514.	1.6	42

#	Article	IF	Citations
37	Understanding the impact of C60 at the interface of perovskite solar cells via drift-diffusion modeling. AIP Advances, 2019, 9, .	0.6	42
38	Near-infrared photodetector consisting of J-aggregating cyanine dye and metal oxide thin films. Applied Physics Letters, 2012, 101, 113303.	1.5	41
39	Impact of Stokes Shift on the Performance of Near-Infrared Harvesting Transparent Luminescent Solar Concentrators. Scientific Reports, 2018, 8, 16359.	1.6	40
40	Anisotropic Crystalline Organic Step-Flow Growth on Deactivated Si Surfaces. Physical Review Letters, 2013, 110, 086107.	2.9	37
41	Paper Electronics: Direct Monolithic Integration of Organic Photovoltaic Circuits on Unmodified Paper (Adv. Mater. 31/2011). Advanced Materials, 2011, 23, 3499-3499.	11.1	36
42	Topâ€illuminated Organic Photovoltaics on a Variety of Opaque Substrates with Vaporâ€printed Poly(3,4â€ethylenedioxythiophene) Top Electrodes and MoO₃ Buffer Layer. Advanced Energy Materials, 2012, 2, 1404-1409.	10.2	36
43	Organic vapor phase deposition for the growth of large area organic electronic devices. Applied Physics Letters, 2009, 95, .	1.5	34
44	Ultraviolet and Nearâ€Infrared Dualâ€Band Selectiveâ€Harvesting Transparent Luminescent Solar Concentrators. Advanced Energy Materials, 2021, 11, 2003581.	10.2	34
45	Structural templating of multiple polycrystalline layers in organic photovoltaic cells. Optics Express, 2010, 18, A444.	1.7	30
46	Direct vapor jet printing of three color segment organic light emitting devices for white light illumination. Applied Physics Letters, 2008, 92, 053301.	1.5	29
47	Organic Salts as a Route to Energy Level Control in Low Bandgap, High Openâ€Circuit Voltage Organic and Transparent Solar Cells that Approach the Excitonic Voltage Limit. Advanced Energy Materials, 2016, 6, 1501659.	10.2	29
48	Organic salt photovoltaics. Sustainable Energy and Fuels, 2017, 1, 955-968.	2.5	29
49	Unlocking the Singleâ€Domain Epitaxy of Halide Perovskites. Advanced Materials Interfaces, 2017, 4, 1701003.	1.9	29
50	Modulating cellular cytotoxicity and phototoxicity of fluorescent organic salts through counterion pairing. Scientific Reports, 2019, 9, 15288.	1.6	29
51	Alkali Metal Halide Salts as Interface Additives to Fabricate Hysteresis-Free Hybrid Perovskite-Based Photovoltaic Devices. ACS Applied Materials & Interfaces, 2016, 8, 23086-23094.	4.0	28
52	Epitaxial Stabilization of Tetragonal Cesium Tin Iodide. ACS Applied Materials & Interfaces, 2019, 11, 32076-32083.	4.0	28
53	Ordered organic-organic multilayer growth. Physical Review B, 2011, 83, .	1.1	26
54	Luminescent Solar Concentrator Paintings: Connecting Art and Energy. Journal of Chemical Education, 2018, 95, 1161-1166.	1.1	21

#	Article	IF	Citations
55	Lead Halide Ultraviolet-Harvesting Transparent Photovoltaics with an Efficiency Exceeding 1%. ACS Applied Energy Materials, 2019, 2, 3972-3978.	2.5	21
56	Epitaxial and quasiepitaxial growth of halide perovskites: New routes to high end optoelectronics. APL Materials, 2020, 8, .	2.2	21
57	Real-time monitoring of organic vapor-phase deposition of molecular thin films using high-pressure reflection high-energy electron diffraction. Applied Physics Letters, 2007, 90, 181932.	1.5	20
58	Integration of near-infrared harvesting transparent luminescent solar concentrators onto arbitrary surfaces. Journal of Luminescence, 2019, 210, 239-246.	1.5	18
59	Current Advances in Photoactive Agents for Cancer Imaging and Therapy. Annual Review of Biomedical Engineering, 2021, 23, 29-60.	5.7	17
60	Angle dependence of transparent photovoltaics in conventional and optically inverted configurations. Applied Physics Letters, 2013, 103, .	1.5	15
61	Anions for Near-Infrared Selective Organic Salt Photovoltaics. Scientific Reports, 2017, 7, 16399.	1.6	15
62	Multijunction organic photovoltaics with a broad spectral response. Physical Chemistry Chemical Physics, 2012, 14, 14548.	1.3	14
63	Electrodeposition of Ni/Ni(OH)₂ Catalytic Films for the Hydrogen Evolution Reaction Produced by using Cyclic Voltammetry. ChemElectroChem, 2017, 4, 241-245.	1.7	14
64	Lifetime of Organic Salt Photovoltaics. Advanced Energy Materials, 2018, 8, 1703678.	10.2	12
65	General strategy for tuning the Stokes shifts of near infrared cyanine dyes. Journal of Materials Chemistry C, 2020, 8, 16769-16773.	2.7	11
66	Analysis of the Aesthetics of Semitransparent, Colorful, and Transparent Luminescent Solar Concentrators. Physical Review Applied, 2022, 17, .	1.5	11
67	Influence of photovoltaic angle-dependence on overall power output for fixed building integrated configurations. Solar Energy Materials and Solar Cells, 2015, 132, 523-527.	3.0	10
68	Homoepitaxial Growth of Metal Halide Crystals Investigated by Reflection High-Energy Electron Diffraction. Scientific Reports, 2017, 7, 40542.	1.6	9
69	Measurement of the Mean Inner Potentials of Anthracene and Naphthalene. Physical Review Letters, 2009, 102, 065504.	2.9	8
70	Elucidating the Impact of Thin Film Texture on Charge Transport and Collection in Perovskite Solar Cells. ACS Omega, 2018, 3, 3522-3529.	1.6	8
71	Efficient zinc sulfide cathode layers for organic photovoltaic applications via n-type doping. Journal of Applied Physics, 2014, 115, .	1.1	7
72	Enhanced Electroluminescence Efficiency in Metal Halide Nanocluster Based Light Emitting Diodes through Apical Halide Exchange. ACS Applied Energy Materials, 2018, 1, 3587-3592.	2.5	7

#	Article	IF	Citations
73	Comment on â€œUpconversion-Assisted Dual-Band Luminescent Solar Concentrator Coupled for High Power Conversion Efficiency Photovoltaic Systemsâ€. ACS Photonics, 2021, 8, 678-681.	3.2	6
74	Nonthermal Plasma Synthesis of Gallium Nitride Nanoparticles: Implications for Optical and Electronic Applications. ACS Applied Nano Materials, 2021, 4, 5624-5629.	2.4	6
75	Ultrathin Hole Extraction Layer for Efficient Inverted Perovskite Solar Cells. ACS Omega, 2018, 3, 6339-6345.	1.6	5
76	Extraordinary phase coherence length in epitaxial halide perovskites. IScience, 2021, 24, 102912.	1.9	5
77	Synthesis of MnO_{<i>x</i>} Water Oxidation Catalyst on Fluorineâ€Doped Tin Oxide with a Dualâ€Series Cyclic Voltammetry Method. ChemElectroChem, 2016, 3, 709-712.	1.7	4
78	Evaluating the Electricity Production of Electric Vehicle-Integrated Photovoltaics via a Coupled Modeling Approach. , 2021, , .		4
79	Photovoltaic Devices: Organic Heptamethine Salts for Photovoltaics and Detectors with Nearâ€Infrared Photoresponse up to 1600 nm (Advanced Optical Materials 7/2016). Advanced Optical Materials, 2016, 4, 1027-1027.	3.6	3
80	Organic Step Edge Driven Heteroquasiepitaxial Growth of Organic Multilayer Films. Advanced Materials Interfaces, 2016, 3, 1600401.	1.9	3
81	Coherent Hopping Transport and Giant Negative Magnetoresistance in Epitaxial CsSnBr3. ACS Applied Electronic Materials, 2021, 3, 2948-2952.	2.0	3
82	Evaluation of ClAlPc synthesis methods for transparent organic photovoltaic. , 2016, , .		2
83	Light-Emitting Diodes: Phosphorescent Nanocluster Light-Emitting Diodes (Adv. Mater. 2/2016). Advanced Materials, 2016, 28, 319-319.	11.1	2
84	Mapping recombination profiles in single-, dual-, and mixed-host phosphorescent organic light emitting diodes. Organic Electronics, 2018, 57, 28-33.	1.4	2
85	Solar Windows: Transparent Luminescent Solar Concentrators for Largeâ€Area Solar Windows Enabled by Massive Stokesâ€Shift Nanocluster Phosphors (Adv. Energy Mater. 9/2013). Advanced Energy Materials, 2013, 3, 1248-1248.	10.2	1
86	Life cycle assessment of transparent organic photovoltaic for window applications. , 2017, , .		1
87	Evaluating the Electricity Production and Energy Saving from Transparent Photovoltaics for Windows in Commercial Buildings. , 2019, , .		1
88	Homoepitaxial growth of 9,10-diphenylanthracene. Journal of Crystal Growth, 2020, 546, 125771.	0.7	1
89	Solar photovoltaic design tool for non-residential buildings: From blueprints to arrays. Journal of Renewable and Sustainable Energy, 2016, 8, 035501.	0.8	0
90	Perovskites: Unlocking the Singleâ€Domain Epitaxy of Halide Perovskites (Adv. Mater. Interfaces 22/2017). Advanced Materials Interfaces, 2017, 4, .	1.9	0

#	Article	IF	Citations
91	Comment on â€œan overview of various configurations of luminescent solar concentrators for photovoltaic applicationsâ€• Optical Materials, 2021, 112, 110752.	1.7	0
92	Transparent Photovoltaics. Materials and Energy, 2018, , 445-499.	2.5	0