Barry P Rand

List of Publications by Year
in descending order

184 papers	17,228 citations	18482 62 h-index	13771 129 g-index
188 all docs	188 docs citations	188 times ranked	17097 citing authors

#	Article	IF	Citations
1	Efficient perovskite light-emitting diodes featuring nanometre-sized crystallites. Nature Photonics, 2017, 11, 108-115.	31.4	1,175
2	Offset energies at organic semiconductor heterojunctions and their influence on the open-circuit voltage of thin-film solar cells. Physical Review B, 2007, 75, .	3.2	689
3	Perovskites for Next-Generation Optical Sources. Chemical Reviews, 2019, 119, 7444-7477.	47.7	640
4	Long-range absorption enhancement in organic tandem thin-film solar cells containing silver nanoclusters. Journal of Applied Physics, 2004, 96, 7519-7526.	2.5	569
5	Asymmetric tandem organic photovoltaic cells with hybrid planar-mixed molecular heterojunctions. Applied Physics Letters, 2004, 85, 5757-5759.	3.3	555
6	4.2% efficient organic photovoltaic cells with low series resistances. Applied Physics Letters, 2004, 84, 3013-3015.	3.3	535
7	8.4% efficient fullerene-free organic solar cells exploiting long-range exciton energy transfer. Nature Communications, 2014, 5, 3406.	12.8	506
8	A Hybrid Planarâ€“Mixed Molecular Heterojunction Photovoltaic Cell. Advanced Materials, 2005, 17, 66-71.	21.0	485
9	Enhanced Open-Circuit Voltage in Subphthalocyanine/C60 Organic Photovoltaic Cells. Journal of the American Chemical Society, 2006, 128, 8108-8109.	13.7	454
10	Solar cells utilizing small molecular weight organic semiconductors. Progress in Photovoltaics: Research and Applications, 2007, 15, 659-676.	8.1	439
11	3D Printed Quantum Dot Light-Emitting Diodes. Nano Letters, 2014, 14, 7017-7023.	9.1	371
12	Strategies for Increasing the Efficiency of Heterojunction Organic Solar Cells: Material Selection and Device Architecture. Accounts of Chemical Research, 2009, 42, 1740-1747.	15.6	367
13	Continuous-wave lasing in an organicâ€“inorganic lead halide perovskite semiconductor. Nature Photonics, 2017, 11, 784-788.	31.4	356
14	Valence and Conduction Band Densities of States of Metal Halide Perovskites: A Combined Experimentalâ€“Theoretical Study. Journal of Physical Chemistry Letters, 2016, 7, 2722-2729.	4.6	333
15	The Impact of Molecular Orientation on the Photovoltaic Properties of a Phthalocyanine/Fullerene Heterojunction. Advanced Functional Materials, 2012, 22, 2987-2995.	14.9	298
16	Extremely Low Operating Current Resistive Memory Based on Exfoliated 2D Perovskite Single Crystals for Neuromorphic Computing. ACS Nano, 2017, 11, 12247-12256.	14.6	286
17	Solution-Processed MoO₃ Thin Films As a Hole-Injection Layer for Organic Solar Cells. ACS Applied Materials & Interfaces, 2011, 3, 3244-3247.	8.0	280
18	Organic small molecule solar cells with a homogeneously mixed copper phthalocyanine: C60 active layer. Applied Physics Letters, 2004, 84, 4218-4220.	3.3	252

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19	Effect of Fluorination on the Properties of a Donorâ€"Acceptor Copolymer for Use in Photovoltaic Cells and Transistors. Chemistry of Materials, 2013, 25, 277-285.	6.7	218
20	Design of Transparent Anodes for Resonant Cavity Enhanced Light Harvesting in Organic Solar Cells. Advanced Materials, 2012, 24, 728-732.	21.0	216
21	Delocalization and dielectric screening of charge transfer states in organic photovoltaic cells. Nature Communications, 2014, 5, 3245.	12.8	212
22	Analytical model for the open-circuit voltage and its associated resistance in organic planar heterojunction solar cells. Physical Review B, 2008, 77, .	3.2	198
23	Improved Outcoupling Efficiency and Stability of Perovskite Lightâ€Emitting Diodes using Thin Emitting Layers. Advanced Materials, 2019, 31, e1805836.	21.0	198
24	Highâ€Performance Organic Solar Cells with Sprayâ€Coated Holeâ€Transport and Active Layers. Advanced Functional Materials, 2011, 21, 64-72.	14.9	197
25	Redox Chemistry Dominates the Degradation and Decomposition of Metal Halide Perovskite Optoelectronic Devices. ACS Energy Letters, 2016, 1, 595-602.	17.4	196
26	Diode-Pumped Organo-Lead Halide Perovskite Lasing in a Metal-Clad Distributed Feedback Resonator. Nano Letters, 2016, 16, 4624-4629.	9.1	194
27	Mixed donor-acceptor molecular heterojunctions for photovoltaic applications. II. Device performance. Journal of Applied Physics, 2005, 98, 124903.	2.5	184
28	Exploring spray coating as a deposition technique for the fabrication of solution-processed solar cells. Solar Energy Materials and Solar Cells, 2009, 93, 454-458.	6.2	181
29	Mixed donor-acceptor molecular heterojunctions for photovoltaic applications. I. Material properties. Journal of Applied Physics, 2005, 98, 124902.	2.5	177
30	Mixed-Halide Perovskites with Stabilized Bandgaps. Nano Letters, 2017, 17, 6863-6869.	9.1	165
31	On the Role of Bathocuproine in Organic Photovoltaic Cells. Advanced Functional Materials, 2008, 18, 3686-3691.	14.9	155
32	<i>In Situ</i> Preparation of Metal Halide Perovskite Nanocrystal Thin Films for Improved Light-Emitting Devices. ACS Nano, 2017, 11, 3957-3964.	14.6	151
33	Hybrid perovskite light emitting diodes under intense electrical excitation. Nature Communications, 2018, 9, 4893.	12.8	146
34	A Transparent, Smooth, Thermally Robust, Conductive Polyimide for Flexible Electronics. Advanced Functional Materials, 2015, 25, 7428-7434.	14.9	140
35	Organic solar cells with sensitivity extending into the near infrared. Applied Physics Letters, 2005, 87, 233508.	3.3	139
36	Beating the thermodynamic limit with photo-activation of n-doping in organic semiconductors. Nature Materials, 2017, 16, 1209-1215.	27.5	139

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37	Near-infrared sensitive small molecule organic photovoltaic cells based on chloroaluminum phthalocyanine. Applied Physics Letters, 2007, 91, .	3.3	129
38	Thermal Management Enables Bright and Stable Perovskite Lightâ€Emitting Diodes. Advanced Materials, 2020, 32, e2000752.	21.0	126
39	Organic Double-Heterostructure Photovoltaic Cells Employing Thick Tris(acetylacetonato)ruthenium(III) Exciton-Blocking Layers. Advanced Materials, 2005, 17, 2714-2718.	21.0	124
40	The effects of copper phthalocyanine purity on organic solar cell performance. Organic Electronics, 2005, 6, 242-246.	2.6	121
41	Semitransparent organic photovoltaic cells. Applied Physics Letters, 2006, 88, 233502.	3.3	118
42	Interfacial charge-transfer doping of metal halide perovskites for high performance photovoltaics. Energy and Environmental Science, 2019, 12, 3063-3073.	30.8	111
43	A 4% Efficient Organic Solar Cell Using a Fluorinated Fused Subphthalocyanine Dimer as an Electron Acceptor. Advanced Energy Materials, 2011, 1, 565-568.	19.5	110
44	Electrical Stress Influences the Efficiency of CH₃NH₃PbI₃ Perovskite Light Emitting Devices. Advanced Materials, 2017, 29, 1605317.	21.0	105
45	Nanoparticle-based, spray-coated silver top contacts for efficient polymer solar cells. Organic Electronics, 2009, 10, 735-740.	2.6	103
46	Enhanced Outcoupling in Organic Light-Emitting Diodes via a High-Index Contrast Scattering Layer. ACS Photonics, 2015, 2, 1366-1372.	6.6	103
47	Roadmap on organicâ€“inorganic hybrid perovskite semiconductors and devices. APL Materials, 2021, 9, .	5.1	102
48	Organic tandem solar cells with complementary absorbing layers and a high open-circuit voltage. Applied Physics Letters, 2010, 97, 033301.	3.3	101
49	Electronic structure of the CsPbBr3/polytriarylamine (PTAA) system. Journal of Applied Physics, 2017, 121, .	2.5	93
50	Device Performance of Emerging Photovoltaic Materials (Version 1). Advanced Energy Materials, 2021, 11, 2002774.	19.5	93
51	X-ray imager using solution processed organic transistor arrays and bulk heterojunction photodiodes on thin, flexible plastic substrate. Organic Electronics, 2013, 14, 2602-2609.	2.6	89
52	The role of halide oxidation in perovskite halide phase separation. Joule, 2021, 5, 2273-2295.	24.0	86
53	Engineering Perovskite Nanocrystal Surface Termination for Lightâ€Emitting Diodes with External Quantum Efficiency Exceeding 15%. Advanced Functional Materials, 2019, 29, 1807284.	14.9	80
54	Thieno[3,2â€‹<i>b</i>]thiopheneâ€diketopyrrolopyrrole Containing Polymers for Inverted Solar Cells Devices with High Short Circuit Currents. Advanced Functional Materials, 2013, 23, 5647-5654.	14.9	78

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55	Plasmonic Efficiency Enhancement of High Performance Organic Solar Cells with a Nanostructured Rear Electrode. Advanced Energy Materials, 2013, 3, 145-150.	19.5	76
56	Influence of Bulky Organoâ€Ammonium Halide Additive Choice on the Flexibility and Efficiency of Perovskite Lightâ€Emitting Devices. Advanced Functional Materials, 2018, 28, 1802060.	14.9	76
57	Novel bis-C60 derivative compared to other fullerene bis-adducts in high efficiency polymer photovoltaic cells. Journal of Materials Chemistry, 2011, 21, 17345.	6.7	75
58	Decreased Recombination Through the Use of a Nonâ€Fullerene Acceptor in a 6.4% Efficient Organic Planar Heterojunction Solar Cell. Advanced Energy Materials, 2014, 4, 1301413.	19.5	75
59	The Impact of Local Morphology on Organic Donor/Acceptor Charge Transfer States. Advanced Energy Materials, 2018, 8, 1702816.	19.5	75
60	Reactions at noble metal contacts with methylammonium lead triiodide perovskites: Role of underpotential deposition and electrochemistry. APL Materials, 2019, 7, .	5.1	74
61	Thin Film Metal Nanocluster Lightâ€Emitting Devices. Advanced Materials, 2014, 26, 1446-1449.	21.0	71
62	Electrode Considerations for the Optical Enhancement of Organic Bulk Heterojunction Solar Cells. Advanced Energy Materials, 2011, 1, 930-935.	19.5	70
63	Mixed Leadâ€"Tin Halide Perovskites for Efficient and Wavelengthâ€Tunable Nearâ€Infrared Lightâ€Emitting Diodes. Advanced Materials, 2019, 31, e1806105.	21.0	66
64	Device Performance of Emerging Photovoltaic Materials (Version 2). Advanced Energy Materials, 2021, 11, .	19.5	66
65	Consensus statement: Standardized reporting of power-producing luminescent solar concentrator performance. Joule, 2022, 6, 8-15.	24.0	66
66	Ultrasmooth metal halide perovskite thin films via solâ€"gel processing. Journal of Materials Chemistry A, 2016, 4, 8308-8315.	10.3	64
67	Structural Evolution of Evaporated Lead Phthalocyanine Thin Films for Near-Infrared Sensitive Solar Cells. Chemistry of Materials, 2011, 23, 886-895.	6.7	61
68	Polariton Transitions in Femtosecond Transient Absorption Studies of Ultrastrong Lightâ€"Molecule Coupling. Journal of Physical Chemistry Letters, 2020, 11, 2667-2674.	4.6	60
69	Enhanced photocurrent and open-circuit voltage in a 3-layer cascade organic solar cell. Applied Physics Letters, 2012, 101, 143301.	3.3	59
70	Best practices for measuring emerging light-emitting diode technologies. Nature Photonics, 2019, 13, 818-821.	31.4	59
71	The characterization of chloroboron (iii) subnaphthalocyanine thin films and their application as a donor material for organic solar cells. Journal of Materials Chemistry, 2009, 19, 5295.	6.7	58
72	Triplet Energy Transfer Governs the Dissociation of the Correlated Triplet Pair in Exothermic Singlet Fission. Journal of Physical Chemistry Letters, 2018, 9, 4087-4095.	4.6	58

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73	Organic solar cells with sensitized phosphorescent absorbing layers. Organic Electronics, 2009, 10, 1015-1019.	2.6	56
74	Amine additive reactions induced by the soft Lewis acidity of Pb²⁺ in halide perovskites. Part I: evidence for Pbâ€“alkylamide formation. Journal of Materials Chemistry C, 2019, 7, 5251-5259.	5.5	56
75	Isostructural, Deeper Highest Occupied Molecular Orbital Analogues of Poly(3-hexylthiophene) for High-Open Circuit Voltage Organic Solar Cells. Chemistry of Materials, 2013, 25, 4239-4249.	6.7	55
76	Determination of Energy Level Alignment within an Energy Cascade Organic Solar Cell. Chemistry of Materials, 2016, 28, 794-801.	6.7	54
77	Enhanced sub-bandgap efficiency of a solid-state organic intermediate band solar cell using tripletâ€“triplet annihilation. Energy and Environmental Science, 2017, 10, 1465-1475.	30.8	54
78	Controlling the Texture and Crystallinity of Evaporated Lead Phthalocyanine Thin Films for Near-Infrared Sensitive Solar Cells. ACS Applied Materials & Interfaces, 2013, 5, 8505-8515.	8.0	53
79	Perovskite Lightâ€Emitting Diodes with Improved Outcoupling Using a Highâ€Index Contrast Nanoarray. Small, 2019, 15, e1900135.	10.0	53
80	Microcrystalline Organic Thinâ€Film Solar Cells. Advanced Materials, 2013, 25, 5504-5507.	21.0	50
81	Optically Pumped Lasing from Hybrid Perovskite Lightâ€Emitting Diodes. Advanced Optical Materials, 2020, 8, 1901297.	7.3	49
82	Efficient truxenone-based acceptors for organic photovoltaics. Journal of Materials Chemistry A, 2013, 1, 73-76.	10.3	48
83	Linking Chemistry at the TiO₂/CH₃NH₃PbI₃ Interface to Currentâ€“Voltage Hysteresis. Journal of Physical Chemistry Letters, 2017, 8, 2298-2303.	4.6	46
84	Electrically driven lasing in metal halide perovskites: Challenges and outlook. APL Materials, 2020, 8, .	5.1	46
85	A benzotrithiophene-based low band gap polymer for polymer solar cells with high open-circuit voltage. Journal of Materials Chemistry, 2011, 21, 17642.	6.7	44
86	Concurrently pumped ultrasonic spray coating for donor:acceptor and thickness optimization of organic solar cells. Organic Electronics, 2013, 14, 1002-1008.	2.6	44
87	Low Threshold Voltages Electrochemically Drive Gold Migration in Halide Perovskite Devices. ACS Energy Letters, 2020, 5, 3352-3356.	17.4	43
88	Correlating the Polymorphism of Titanyl Phthalocyanine Thin Films with Solar Cell Performance. Journal of Physical Chemistry Letters, 2012, 3, 2395-2400.	4.6	42
89	Lightâ€Induced Degradation of Polymer:Fullerene Photovoltaic Devices: An Intrinsic or Materialâ€Dependent Failure Mechanism?. Advanced Energy Materials, 2014, 4, 1400848.	19.5	40
90	Enhanced outcoupling in flexible organic light-emitting diodes on scattering polyimide substrates. Organic Electronics, 2017, 51, 471-476.	2.6	40

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91	The angular response of ultrathin film organic solar cells. Applied Physics Letters, 2008, 92, 243310.	3.3	39
92	Ionicâ€“Electronic Ambipolar Transport in Metal Halide Perovskites: Can Electronic Conductivity Limit Ionic Diffusion?. Journal of Physical Chemistry Letters, 2018, 9, 132-137.	4.6	39
93	Ultrasensitive Heterojunctions of Graphene and 2D Perovskites Reveal Spontaneous Iodide Loss. Joule, 2018, 2, 2133-2144.	24.0	39
94	Electrochemical and Thermal Etching of Indium Tin Oxide by Solid-State Hybrid Organicâ€“Inorganic Perovskites. ACS Applied Energy Materials, 2019, 2, 6097-6101.	5.1	39
95	Metal nanocluster light-emitting devices with suppressed parasitic emission and improved efficiency: exploring the impact of photophysical properties. Nanoscale, 2015, 7, 9140-9146.	5.6	38
96	Hall Effect in Polycrystalline Organic Semiconductors: The Effect of Grain Boundaries. Advanced Functional Materials, 2020, 30, 1903617.	14.9	37
97	Structural templating of chloro-aluminum phthalocyanine layers for planar and bulk heterojunction organic solar cells. Organic Electronics, 2011, 12, 2131-2139.	2.6	36
98	Contorted Hexabenzocoronenes with Extended Heterocyclic Moieties Improve Visible-Light Absorption and Performance in Organic Solar Cells. Chemistry of Materials, 2016, 28, 673-681.	6.7	34
99	Use of an Underlayer for Large Area Crystallization of Rubrene Thin Films. Chemistry of Materials, 2017, 29, 6666-6673.	6.7	34
100	Donor/Acceptor Charge-Transfer States at Two-Dimensional Metal Halide Perovskite and Organic Semiconductor Interfaces. ACS Energy Letters, 2018, 3, 2708-2712.	17.4	34
101	Revealing the Full Charge Transfer State Absorption Spectrum of Organic Solar Cells. Advanced Energy Materials, 2016, 6, 1601001.	19.5	33
102	Ultraviolet Photoemission Spectroscopy and Kelvin Probe Measurements on Metal Halide Perovskites: Advantages and Pitfalls. Advanced Energy Materials, 2020, 10, 1903252.	19.5	33
103	Engineering Charge-Transfer States for Efficient, Low-Energy-Loss Organic Photovoltaics. Trends in Chemistry, 2019, 1, 815-829.	8.5	32
104	Widely Tunable, Room Temperature, Single-Mode Lasing Operation from Mixed-Halide Perovskite Thin Films. ACS Photonics, 2019, 6, 3331-3337.	6.6	31
105	Photocurrent enhancement in polymer:fullerene bulk heterojunction solar cells doped with a phosphorescent molecule. Applied Physics Letters, 2009, 95, 173304.	3.3	30
106	Amine additive reactions induced by the soft Lewis acidity of Pb²⁺ in halide perovskites. Part II: impacts of amido Pb impurities in methylammonium lead triiodide thin films. Journal of Materials Chemistry C, 2019, 7, 5244-5250.	5.5	30
107	Excitation of Charge Transfer States and Low-Driving Force Triplet Exciton Dissociation at Planar Donor/Acceptor Interfaces. Journal of Physical Chemistry Letters, 2012, 3, 2064-2068.	4.6	29
108	Exciton dynamics in an energy up-converting solid state system based on diphenylanthracene doped with platinum octaethylporphyrin. Chemical Physics, 2014, 429, 57-62.	1.9	28

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109	Organic Hole Transport Material Ionization Potential Dictates Diffusion Kinetics of Iodine Species in Halide Perovskite Devices. ACS Energy Letters, 2021, 6, 501-508.	17.4	28
110	Homoepitaxy of Crystalline Rubrene Thin Films. Nano Letters, 2017, 17, 3040-3046.	9.1	27
111	Reduced Recombination and Capacitor-like Charge Buildup in an Organic Heterojunction. Journal of the American Chemical Society, 2020, 142, 2562-2571.	13.7	27
112	Ultrasonic Spray Coating of 6.5% Efficient Diketopyrrolopyrrole-Based Organic Photovoltaics. IEEE Journal of Photovoltaics, 2014, 4, 1538-1544.	2.5	26
113	Factors that Limit Continuousâ€Wave Lasing in Hybrid Perovskite Semiconductors. Advanced Optical Materials, 2020, 8, 1901514.	7.3	26
114	Nanosecondâ€Pulsed Perovskite Lightâ€Emitting Diodes at High Current Density. Advanced Materials, 2021, 33, e2104867.	21.0	26
115	Phototriggered Depolymerization of Flexible Poly(phthalaldehyde) Substrates by Integrated Organic Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2018, 10, 28062-28068.	8.0	25
116	Solar fuels and feedstocks: the quest for renewable black gold. Energy and Environmental Science, 2021, 14, 1402-1419.	30.8	25
117	Organoammonium-Ion-based Perovskites Can Degrade to Pb⁰ via Amineâ€“Pb(II) Coordination. ACS Energy Letters, 2021, 6, 2262-2267.	17.4	25
118	Iodine Electrochemistry Dictates Voltageâ€Induced Halide Segregation Thresholds in Mixedâ€Halide Perovskite Devices. Advanced Functional Materials, 2022, 32, .	14.9	25
119	Morphological Tuning of the Energetics in Singlet Fission Organic Solar Cells. Advanced Functional Materials, 2016, 26, 6489-6494.	14.9	24
120	Complexities of Contact Potential Difference Measurements on Metal Halide Perovskite Surfaces. Journal of Physical Chemistry Letters, 2019, 10, 890-896.	4.6	24
121	Real-Time Tracking of Singlet Exciton Diffusion in Organic Semiconductors. Physical Review Letters, 2016, 116, 057402.	7.8	23
122	Interfacial Depletion Regions: Beyond the Space Charge Limit in Thick Bulk Heterojunctions. ACS Applied Materials & Interfaces, 2016, 8, 2211-2219.	8.0	23
123	Bandâ€like Charge Photogeneration at a Crystalline Organic Donor/Acceptor Interface. Advanced Energy Materials, 2018, 8, 1701494.	19.5	23
124	nâ€Doping of a Lowâ€Electronâ€Affinity Polymer Used as an Electronâ€Transport Layer in Organic Lightâ€Emitting Diodes. Advanced Functional Materials, 2020, 30, 2000328.	14.9	22
125	Polariton Decay in Donorâ€“Acceptor Cavity Systems. Journal of Physical Chemistry Letters, 2021, 12, 9774-9782.	4.6	22
126	Thin-film organic position sensitive detectors. IEEE Photonics Technology Letters, 2003, 15, 1279-1281.	2.5	21

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127	Improved cathode buffer layer to decrease exciton recombination in organic planar heterojunction solar cells. Applied Physics Letters, 2013, 102, .	3.3	21
128	Structure induced conductivity enhancement in metal-doped molybdenum oxide thin films. Journal of Applied Physics, 2013, 113, .	2.5	21
129	Multiple Charge Transfer States in Donorâ€"Acceptor Heterojunctions with Large Frontier Orbital Energy Offsets. Chemistry of Materials, 2019, 31, 6808-6817.	6.7	20
130	The efficacy of Lewis affinity scale metrics to represent solvent interactions with reagent salts in all-inorganic metal halide perovskite solutions. Journal of Materials Chemistry A, 2021, 9, 13087-13099.	10.3	19
131	Near-Field Interactions between Metal Nanoparticle Surface Plasmons and Molecular Excitons in Thin-Films. Part I: Absorption. Journal of Physical Chemistry C, 2012, 116, 24206-24214.	3.1	18
132	Comprehensive method for analyzing the power conversion efficiency of organic solar cells under different spectral irradiances considering both photonic and electrical characteristics. Applied Energy, 2016, 180, 516-523.	10.1	18
133	Two temperature regimes of triplet transfer in the dissociation of the correlated triplet pair after singlet fission. Canadian Journal of Chemistry, 2019, 97, 465-473.	1.1	18
134	Accurate spectral response measurements of a complementary absorbing organic tandem cell with fill factor exceeding the subcells. Applied Physics Letters, 2014, 104, .	3.3	17
135	Excitation of multiple dipole surface plasmon resonances in spherical silver nanoparticles. Optics Express, 2010, 18, 19032.	3.4	15
136	Understanding metal doping for organic electron transport layers. Applied Physics Letters, 2012, 100, 053305.	3.3	14
137	Reducing exciton-polaron annihilation in organic planar heterojunction solar cells. Physical Review B, 2014, 90, .	3.2	14
138	Variable charge transfer state energies at nanostructured pentacene/C60 interfaces. Applied Physics Letters, 2018, 112, 213302.	3.3	12
139	Tuning Laser Threshold within the Large Optical Gain Bandwidth of Halide Perovskite Thin Films. ACS Photonics, 2021, 8, 2548-2554.	6.6	12
140	Role of Electron- and Hole-Collecting Buffer Layers on the Stability of Inverted Polymer: Fullerene Photovoltaic Devices. IEEE Journal of Photovoltaics, 2014, 4, 265-270.	2.5	11
141	Thermal Properties, Molecular Structure, and Thin-Film Organic Semiconductor Crystallization. Journal of Physical Chemistry C, 2020, 124, 27213-27221.	3.1	11
142	Role of Photon Recycling and Band Filling in Halide Perovskite Photoluminescence under Focussed Excitation Conditions. Journal of Physical Chemistry C, 2021, 125, 2240-2249.	3.1	11
143	Light-trapping in polymer solar cells by processing with nanostructured diatomaceous earth. Organic Electronics, 2017, 51, 422-427.	2.6	10
144	Time-resolved imaging of carrier transport in halide perovskite thin films and evidence for nondiffusive transport. Physical Review Materials, 2019, 3, .	2.4	10

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145	Improved Charge Balance in Green Perovskite Light-Emitting Diodes with Atomic-Layer-Deposited Al₂O₃. ACS Applied Materials & Interfaces, 2022, 14, 34247-34252.	8.0	10
146	Near-Field Interactions between Metal Nanoparticle Surface Plasmons and Molecular Excitons in Thin-Films. Part II: Emission. Journal of Physical Chemistry C, 2012, 116, 24215-24223.	3.1	9
147	Resonant cavity enhanced light harvesting in flexible thin-film organic solar cells. Optics Letters, 2013, 38, 1431.	3.3	9
148	Fate of Low-Lying Charge-Transfer Excited States in a Donor:Acceptor Blend with a Large Energy Offset. Journal of Physical Chemistry Letters, 2020, 11, 10219-10226.	4.6	9
149	Influence of Disorder and State Filling on Charge-Transfer-State Absorption and Emission Spectra. Physical Review Applied, 2021, 16, .	3.8	9
150	Absorptive carbon nanotube electrodes: Consequences of optical interference loss in thin film solar cells. Nanoscale, 2015, 7, 7259-7266.	5.6	8
151	Organic photovoltaics (OPVs): Device physics. , 2019, , 665-693.		8
152	Electrochemically n-Doped CsPbBr₃ Nanocrystal Thin Films. ACS Energy Letters, 2022, 7, 211-216.	17.4	8
153	Green Lithography for Delicate Materials. Advanced Functional Materials, 2021, 31, 2101533.	14.9	7
154	Methods for Conducting Electron Backscattered Diffraction (EBSD) on Polycrystalline Organic Molecular Thin Films. Microscopy and Microanalysis, 2018, 24, 420-423.	0.4	6
155	Controlling Microring Resonator Extinction Ratio via Metalâ€Halide Perovskite Nonlinearity. Advanced Optical Materials, 2021, 9, 2100783.	7.3	6
156	Powerful Organic Molecular Oxidants and Reductants Enable Ambipolar Injection in a Large-Gap Organic Homojunction Diode. ACS Applied Materials & Interfaces, 2022, 14, 2381-2389.	8.0	5
157	Nonradiative Recombination via Chargeâ€Transferâ€Exciton to Polaron Energy Transfer Limits Photocurrent in Organic Solar Cells. Advanced Energy Materials, 2022, 12, .	19.5	5
158	Origin of the open-circuit voltage in organic solar cells. , 2006, , .		4
159	Highâ€Voltage Photogeneration Exclusively via Aggregationâ€Induced Triplet States in a Heavyâ€Atomâ€Free Nonplanar Organic Semiconductor. Advanced Energy Materials, 2019, 9, 1901649.	19.5	4
160	Alleviating halide perovskite surface defects. Matter, 2021, 4, 2104-2105.	10.0	4
161	Morphological Requirements for Nanoscale Electric Field Buildup in a Bulk Heterojunction Solar Cell. Journal of Physical Chemistry Letters, 2021, 12, 537-545.	4.6	4
162	Untying the Cesium â€œNotâ€ Cesiumâ€“Iodoplumbate Complexation in Perovskite Solution-Processing Inks Has Implications for Crystallization. Journal of Physical Chemistry Letters, 2022, 13, 6130-6137.	4.6	4

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163	Introduction to the Issue on Next-Generation Organic and Hybrid Solar Cells. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1512-1513.	2.9	3
164	Flexible Electronics: A Transparent, Smooth, Thermally Robust, Conductive Polyimide for Flexible Electronics (Adv. Funct. Mater. 48/2015). Advanced Functional Materials, 2015, 25, 7547-7547.	14.9	3
165	Organic-Flow: An Open-Source Organic Standard Cell Library and Process Development Kit. , 2020, , .		3
166	Benchmarking organic thin film transistor inverter design styles. Synthetic Metals, 2021, 278, 116825.	3.9	3
167	Comparing the Expense and Accuracy of Methods to Simulate Atomic Vibrations in Rubrene. Journal of Chemical Theory and Computation, 2021, , .	5.3	3
168	Editorial for â€˜special issue on advanced solar cell technologyâ€™. Journal of Optics (United Kingdom), 2017, 19, 120401.	2.2	2
169	Study of local structure at crystalline rubrene grain boundaries via scanning transmission X-ray microscopy. Organic Electronics, 2019, 74, 315-320.	2.6	2
170	Crystalline order offers access to high speeds for organic transistors. Nature, 2022, 606, 661-662.	27.8	2
171	Efficient polymer solar cells via an all-spray-coated deposition. , 2010, , .		1
172	18â€1: Invited Paper: Color Tunable, Flexible, and Efficient Light Emitting Diodes Composed of Metal Halide Perovskites. Digest of Technical Papers SID International Symposium, 2018, 49, 212-213.	0.3	1
173	Efficient Perovskite LEDs Featuring Nanometer Sized Crystallites. , 2017, , .		0
174	Metalâ€Halide Perovskites: Emerging Lightâ€Emitting Materials. Information Display, 2018, 34, 18-22.	0.2	0
175	33-1: Invited Paper: Exploring the Formation and Growth of Organic Semiconductors with mm-Scale Grains. Digest of Technical Papers SID International Symposium, 2018, 49, 413-414.	0.3	0
176	Unlocking Efficient Perovskite-based Light Emitting Devices. , 2016, , .		0
177	Unlocking Efficient Perovskite-based Light Emitting Devices. , 2016, , .		0
178	ITO-free Flexible Organic Light Emitting Diodes with Enhanced Light Outcoupling. , 2016, , .		0
179	Outcoupling Enhancement in White Organic Light-Emitting Diodes on Scattering Polyimide Substrates. , 2017, , .		0
180	Metal Halide Perovskites: Processing, Interfaces, and Light Emitting Devices. , 2017, , .		0

#	Article	IF	Citations
181	Light emitting devices and lasers from metal halide perovskites. , 0, , .		0
182	Efficient, Color Tunable, and Flexible Thin Film Perovskite Light Emitting Devices. , 2019, , .		0
183	Halide Perovskites for Photonics and Optoelectronics: introduction to special issue. Optical Materials Express, 2022, 12, 1764.	3.0	0
184	Flexible and color tunable metal halide perovskite light emitting diodes using bulky organoammonium additives. , 0, , .		0