

Russell J Holmes

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

90
papers

3,839
citations

29
h-index

60
g-index

100
ext. papers

4,251
ext. citations

9.1
avg, IF

5.84
L-index

#	Paper	IF	Citations
90	Blue and near-UV phosphorescence from iridium complexes with cyclometalated pyrazolyl or N-heterocyclic carbene ligands. <i>Inorganic Chemistry</i> , 2005 , 44, 7992-8003	5.1	573
89	Ultrahigh Energy Gap Hosts in Deep Blue Organic Electrophosphorescent Devices. <i>Chemistry of Materials</i> , 2004 , 16, 4743-4747	9.6	450
88	High-efficiency silicon nanocrystal light-emitting devices. <i>Nano Letters</i> , 2011 , 11, 1952-6	11.5	300
87	Exciton diffusion in organic photovoltaic cells. <i>Energy and Environmental Science</i> , 2014 , 7, 499-512	35.4	267
86	Tailored exciton diffusion in organic photovoltaic cells for enhanced power conversion efficiency. <i>Nature Materials</i> , 2013 , 12, 152-7	27	159
85	Plasmonic nanocavity arrays for enhanced efficiency in organic photovoltaic cells. <i>Applied Physics Letters</i> , 2008 , 93, 123308	3.4	149
84	Investigation of Energy Transfer in Organic Photovoltaic Cells and Impact on Exciton Diffusion Length Measurements. <i>Advanced Functional Materials</i> , 2011 , 21, 764-771	15.6	123
83	Hybrid silicon nanocrystal-organic light-emitting devices for infrared electroluminescence. <i>Nano Letters</i> , 2010 , 10, 1154-7	11.5	117
82	Efficient Organic Photovoltaic Cells Based on Nanocrystalline Mixtures of Boron Subphthalocyanine Chloride and C60. <i>Advanced Functional Materials</i> , 2012 , 22, 617-624	15.6	116
81	Enhanced exciton diffusion in an organic photovoltaic cell by energy transfer using a phosphorescent sensitizer. <i>Applied Physics Letters</i> , 2009 , 94, 153304	3.4	88
80	Graded donor-acceptor heterojunctions for efficient organic photovoltaic cells. <i>Advanced Materials</i> , 2010 , 22, 5301-5	24	81
79	Engineering Efficiency Roll-Off in Organic Light-Emitting Devices. <i>Advanced Functional Materials</i> , 2014 , 24, 6074-6080	15.6	74
78	Efficient, bulk heterojunction organic photovoltaic cells based on boron subphthalocyanine chloride-C70. <i>Applied Physics Letters</i> , 2012 , 101, 033308	3.4	58
77	An all-gas-phase approach for the fabrication of silicon nanocrystal light-emitting devices. <i>Nano Letters</i> , 2012 , 12, 2822-5	11.5	58
76	Investigating the Role of Emissive Layer Architecture on the Exciton Recombination Zone in Organic Light-Emitting Devices. <i>Advanced Functional Materials</i> , 2013 , 23, 5190-5198	15.6	57
75	Highly efficient, single-layer organic light-emitting devices based on a graded-composition emissive layer. <i>Applied Physics Letters</i> , 2010 , 97, 083308	3.4	57
74	High-Transconductance Organic Thin-Film Electrochemical Transistors for Driving Low-Voltage Red-Green-Blue Active Matrix Organic Light-Emitting Devices. <i>Advanced Functional Materials</i> , 2012 , 22, 1623-1631	15.6	53

73	Connecting molecular structure and exciton diffusion length in rubrene derivatives. <i>Advanced Materials</i> , 2013 , 25, 3689-93	24	50
72	Computational Study of Structural and Electronic Properties of Lead-Free CsMI ₃ Perovskites (M = Ge, Sn, Pb, Mg, Ca, Sr, and Ba). <i>Journal of Physical Chemistry C</i> , 2018 , 122, 7838-7848	3.8	45
71	Diarylindenotetracenes via a selective cross-coupling/C-H functionalization: electron donors for organic photovoltaic cells. <i>Organic Letters</i> , 2012 , 14, 1390-3	6.2	35
70	Exciton Transport in an Organic Semiconductor Exhibiting Thermally Activated Delayed Fluorescence. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 8502-8508	3.8	35
69	Temperature-Dependent Bias Poling and Hysteresis in Planar Organo-Metal Halide Perovskite Photovoltaic Cells. <i>Advanced Energy Materials</i> , 2016 , 6, 1501994	21.8	33
68	7.9% efficient vapor-deposited organic photovoltaic cells based on a simple bulk heterojunction. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 12397	13	31
67	Impact of Thermal Annealing on Organic Photovoltaic Cells Using Regioisomeric Donor-Acceptor-Acceptor Molecules. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 25418-25425	9.5	31
66	Characterizing the charge collection efficiency in bulk heterojunction organic photovoltaic cells. <i>Applied Physics Letters</i> , 2012 , 100, 083303	3.4	30
65	Formation of aligned periodic patterns during the crystallization of organic semiconductor thin films. <i>Nature Materials</i> , 2019 , 18, 725-731	27	29
64	Tandem organic photodetectors with tunable, broadband response. <i>Applied Physics Letters</i> , 2012 , 101, 223301	3.4	29
63	Influence of a MoO _x interlayer on the open-circuit voltage in organic photovoltaic cells. <i>Applied Physics Letters</i> , 2013 , 103, 053302	3.4	29
62	Femtosecond to nanosecond excited state dynamics of vapor deposited copper phthalocyanine thin films. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 11454-9	3.6	29
61	Self-assembled plasmonic electrodes for high-performance organic photovoltaic cells. <i>Applied Physics Letters</i> , 2011 , 99, 103306	3.4	26
60	Energy-cascade organic photovoltaic devices incorporating a host-guest architecture. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 2912-8	9.5	25
59	Blue-Emitting Arylalkynyl Naphthalene Derivatives via a Hexadehydro-Diels-Alder Cascade Reaction. <i>Journal of the American Chemical Society</i> , 2016 , 138, 12739-12742	16.4	24
58	Crystal Morphology and Growth in Annealed Rubrene Thin Films. <i>Crystal Growth and Design</i> , 2016 , 16, 4720-4726	3.5	24
57	Tin naphthalocyanine complexes for infrared absorption in organic photovoltaic cells. <i>Organic Electronics</i> , 2013 , 14, 804-808	3.5	23
56	Correlation between the Open-Circuit Voltage and Charge Transfer State Energy in Organic Photovoltaic Cells. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 18306-11	9.5	21

55	Sub-turn-on exciton quenching due to molecular orientation and polarization in organic light-emitting devices. <i>Science Advances</i> , 2020 , 6, eabb2659	14.3	21
54	Intrinsic measurements of exciton transport in photovoltaic cells. <i>Nature Communications</i> , 2019 , 10, 11567.4	7.4	20
53	Isolating Degradation Mechanisms in Mixed Emissive Layer Organic Light-Emitting Devices. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 5693-5699	9.5	20
52	Nanoporous Poly(3,4-ethylenedioxythiophene) Derived from Polymeric Bicontinuous Microemulsion Templates. <i>Macromolecules</i> , 2012 , 45, 599-601	5.5	20
51	Lead-free double perovskites CsInCuCl and (CHNH)InCuCl: electronic, optical, and electrical properties. <i>Nanoscale</i> , 2019 , 11, 11173-11182	7.7	18
50	Intermolecular Interactions Determine Exciton Lifetimes in Neat Films and Solid State Solutions of Metal-Free Phthalocyanine. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 27340-27347	3.8	18
49	Unified analysis of transient and steady-state electrophosphorescence using exciton and polaron dynamics modeling. <i>Journal of Applied Physics</i> , 2016 , 120, 195501	2.5	17
48	Probing dark exciton diffusion using photovoltage. <i>Nature Communications</i> , 2017 , 8, 14215	17.4	16
47	Directing energy transport in organic photovoltaic cells using interfacial exciton gates. <i>ACS Nano</i> , 2015 , 9, 4543-52	16.7	16
46	Relating charge transport and performance in single-layer graded-composition organic light-emitting devices. <i>Journal of Applied Physics</i> , 2011 , 110, 084515	2.5	16
45	Electrical excitation of microcavity polaritons by radiative pumping from a weakly coupled organic semiconductor. <i>Physical Review B</i> , 2010 , 82,	3.3	16
44	The Role of Exciton Ionization Processes in Bulk Heterojunction Organic Photovoltaic Cells. <i>Advanced Energy Materials</i> , 2015 , 5, 1500019	21.8	15
43	Polarization splitting in polariton electroluminescence from an organic semiconductor microcavity with metallic reflectors. <i>Applied Physics Letters</i> , 2011 , 98, 233301	3.4	14
42	Consensus statement: Standardized reporting of power-producing luminescent solar concentrator performance. <i>Joule</i> , 2022 , 6, 8-15	27.8	14
41	Decoupling degradation in exciton formation and recombination during lifetime testing of organic light-emitting devices. <i>Applied Physics Letters</i> , 2017 , 111, 113301	3.4	12
40	Organic Photovoltaic Cells Based on Continuously Graded Donor-Acceptor Heterojunctions. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2010 , 16, 1537-1543	3.8	12
39	Interpreting impedance spectra of organic photovoltaic cells: Extracting charge transit and recombination rates. <i>Journal of Applied Physics</i> , 2014 , 116, 124513	2.5	11
38	Long-range, photon-mediated exciton hybridization in an all-organic, one-dimensional photonic crystal. <i>Physical Review Letters</i> , 2012 , 109, 096401	7.4	11

37	Understanding rate-limiting processes for the sublimation of small molecule organic semiconductors. <i>AICHE Journal</i> , 2014 , 60, 1347-1354	3.6	10
36	Role of impurities in determining the exciton diffusion length in organic semiconductors. <i>Applied Physics Letters</i> , 2016 , 108, 163301	3.4	10
35	Evaluating the role of energetic disorder and thermal activation in exciton transport. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 3437-3442	7.1	10
34	Photovoltage as a quantitative probe of carrier generation and recombination in organic photovoltaic cells. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 11885-11891	7.1	9
33	Relating photocurrent, photovoltage, and charge carrier density to the recombination rate in organic photovoltaic cells. <i>Applied Physics Letters</i> , 2015 , 107, 123303	3.4	9
32	Formation of Stable Metal Halide Perovskite/Perovskite Heterojunctions. <i>ACS Energy Letters</i> , 2020 , 5, 3443-3451	20.1	9
31	Decoupling Photocurrent Loss Mechanisms in Photovoltaic Cells Using Complementary Measurements of Exciton Diffusion. <i>Advanced Energy Materials</i> , 2018 , 8, 1702339	21.8	8
30	Depth profiling organic light-emitting devices by gas-cluster ion beam sputtering and X-ray photoelectron spectroscopy. <i>Organic Electronics</i> , 2014 , 15, 2988-2992	3.5	8
29	Measurement of the triplet exciton diffusion length in organic semiconductors. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 5695-5701	7.1	7
28	Nanoporous polyethylene thin films templated by polymeric bicontinuous microemulsions: evolution of morphology on non-neutral substrates. <i>ACS Applied Materials & Interfaces</i> , 2011 , 3, 4101-11	9.5	7
27	Mitigating Damage to Hybrid Perovskites Using Pulsed-Beam TEM. <i>ACS Omega</i> , 2020 , 5, 31867-31871	3.9	7
26	Overcoming the trade-off between exciton dissociation and charge recombination in organic photovoltaic cells. <i>Applied Physics Letters</i> , 2018 , 113, 143302	3.4	7
25	Carrier-gas assisted vapor deposition for highly tunable morphology of halide perovskite thin films. <i>Sustainable Energy and Fuels</i> , 2019 , 3, 2447-2455	5.8	6
24	Thermally activated population of microcavity polariton states under optical and electrical excitation. <i>Physical Review B</i> , 2011 , 83,	3.3	6
23	Effects of Additives on Crystallization in Thin Organic Films. <i>Crystal Growth and Design</i> , 2017 , 17, 4522-4526	3.9	5
22	Mechanism for the separation of organic semiconductors via thermal gradient sublimation. <i>Organic Electronics</i> , 2015 , 24, 212-218	3.5	5
21	Optical spacing effect in organic photovoltaic cells incorporating a dilute acceptor layer. <i>Applied Physics Letters</i> , 2014 , 104, 243302	3.4	5
20	22.1: Invited Paper: Color Tuning Dopants for Electrophosphorescent Devices: Toward Efficient Blue Phosphorescence from Metal Complexes. <i>Digest of Technical Papers SID International Symposium</i> , 2005 , 36, 1058	0.5	5

19	Investigation of Excitonic Gates in Organic Semiconductor Thin Films. <i>Physical Review Applied</i> , 2019 , 11,	4.3	4
18	Impact of molecular structure on singlet and triplet exciton diffusion in phenanthroline derivatives. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 6118-6123	7.1	4
17	Probing Enhanced Exciton Diffusion in a Triplet-Sensitized Organic Photovoltaic Cell. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 3489-3495	3.8	4
16	Improved stability in organic light-emitting devices by mixing ambipolar and wide energy gap hosts. <i>Journal of the Society for Information Display</i> , 2019 , 27, 434	2.1	3
15	Plasmonic nanocomposites of zinc oxide and titanium nitride. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020 , 38, 042404	2.9	3
14	Role of host excimer formation in the degradation of organic light-emitting devices. <i>Applied Physics Letters</i> , 2020 , 116, 063302	3.4	3
13	Sublimation as a function of diffusion. <i>AIChE Journal</i> , 2016 , 62, 861-867	3.6	3
12	Experimental Characterization of Charge and Exciton Transport in Organic Semiconductors. <i>Materials and Energy</i> , 2016 , 231-291		3
11	Enhancing energy transport in conjugated polymers. <i>Science</i> , 2018 , 360, 854-855	33.3	3
10	Device-Based Probe of Triplet Exciton Diffusion in Singlet Fission Materials. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 966-972	6.4	3
9	Migration of Charge-Transfer States at Organic Semiconductor Heterojunctions. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 31677-31686	9.5	2
8	Effect of Rapid Pressurization on the Solubility of Small Organic Molecules. <i>Crystal Growth and Design</i> , 2016 , 16, 1404-1408	3.5	2
7	Volume diffusion in purification by sublimation. <i>AIChE Journal</i> , 2017 , 63, 1757-1764	3.6	1
6	Organic polaritons: Long-distance relationships. <i>Nature Materials</i> , 2014 , 13, 669-70	27	1
5	Solid-State Properties and Spectroscopic Analysis of Thin-Film TPBi. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 23716-23723	3.8	1
4	Impact of Grain Boundaries on Triplet Exciton Diffusion in Organic Singlet-Fission Materials. <i>Journal of Physical Chemistry C</i> , 2022 , 126, 4792-4798	3.8	1
3	10-2: Invited Paper: Unified Analysis of Transient and Steady-State Electroluminescence Establishing an Analytical Formalism for OLED Charge Balance. <i>Digest of Technical Papers SID International Symposium</i> , 2017 , 48, 115-118	0.5	
2	Understanding and Engineering Exciton Transport. <i>Materials and Energy</i> , 2018 , 209-264		

- 1 17.3: Invited Paper: In-operando Measurements of Photoluminescence to Probe Degradation and Low-Bias Exciton-Polaron Quenching in OLEDs. *Digest of Technical Papers SID International Symposium*, **2021**, 52, 230-230 0.5