Jonathan E Halpert

List of Publications by Year
in descending order

69 papers	8,265 citations	117625 34 h-index	102487 66 g-index
71 all docs	71 docs citations	71 times ranked	11387 citing authors

#	Article	IF	Citations
1	Recent advances in micro-/nano-structured hollow spheres for energy applications: From simple to complex systems. Energy and Environmental Science, 2012, 5, 5604-5618.	30.8	1,069
2	Colloidal quantum-dot light-emitting diodes with metal-oxide charge transport layers. Nature Photonics, 2008, 2, 247-250.	31.4	855
3	Quantum Dot Light-Emitting Devices with Electroluminescence Tunable over the Entire Visible Spectrum. Nano Letters, 2009, 9, 2532-2536.	9.1	796
4	Hot-carrier cooling and photoinduced refractive index changes in organicâ€“inorganic lead halide perovskites. Nature Communications, 2015, 6, 8420.	12.8	491
5	Accurate Control of Multishelled ZnO Hollow Microspheres for Dyeâ€Sensitized Solar Cells with High Efficiency. Advanced Materials, 2012, 24, 1046-1049.	21.0	482
6	Electroluminescence from a Mixed Redâˆ’Greenâˆ’Blue Colloidal Quantum Dot Monolayer. Nano Letters, 2007, 7, 2196-2200.	9.1	399
7	Inkjetâ€Printed Quantum Dotâ€“Polymer Composites for Fullâ€Color ACâ€Driven Displays. Advanced Materials, 2009, 21, 2151-2155.	21.0	367
8	A Novel and Highly Efficient Photocatalyst Based on P25â€“Graphdiyne Nanocomposite. Small, 2012, 8, 265-271.	10.0	289
9	Field-Driven Ion Migration and Color Instability in Red-Emitting Mixed Halide Perovskite Nanocrystal Light-Emitting Diodes. Chemistry of Materials, 2017, 29, 5965-5973.	6.7	267
10	The Evolution of Quantum Confinement in CsPbBr₃ Perovskite Nanocrystals. Chemistry of Materials, 2017, 29, 3644-3652.	6.7	258
11	Color-Saturated Green-Emitting QD-LEDs. Angewandte Chemie - International Edition, 2006, 45, 5796-5799.	13.8	250
12	High Efficiency Blue and Green Light-Emitting Diodes Using Ruddlesdenâ€“Popper Inorganic Mixed Halide Perovskites with Butylammonium Interlayers. Chemistry of Materials, 2019, 31, 83-89.	6.7	250
13	NiO as an Inorganic Hole-Transporting Layer in Quantum-Dot Light-Emitting Devices. Nano Letters, 2006, 6, 2991-2994.	9.1	234
14	Selection of Metal Oxide Charge Transport Layers for Colloidal Quantum Dot LEDs. ACS Nano, 2009, 3, 3581-3586.	14.6	199
15	Alternating Current Driven Electroluminescence from ZnSe/ZnS:Mn/ZnS Nanocrystals. Nano Letters, 2009, 9, 2367-2371.	9.1	194
16	Synthesis of CdSe/CdTe Nanobarbells. Journal of the American Chemical Society, 2006, 128, 12590-12591.	13.7	168
17	Air-Stable Operation of Transparent, Colloidal Quantum Dot Based LEDs with a Unipolar Device Architecture. Nano Letters, 2010, 10, 24-29.	9.1	149
18	Room Temperature Synthesis of Stable, Printable Cs₃Cu₂X₅ (X = I,) Tj ETQq0 0 0 rgBT /Overlock Chemistry of Materials, 2020, 32, 5515-5524.	6.7	127

#	Article	IF	Citations
19	Effect of Carrier Thermalization Dynamics on Light Emission and Amplification in Organometal Halide Perovskites. Journal of Physical Chemistry Letters, 2015, 6, 153-158.	4.6	101
20	The Future Is Blue (LEDs): Why Chemistry Is the Key to Perovskite Displays. Chemistry of Materials, 2019, 31, 6003-6032.	6.7	91
21	Luminescent Downâ€Conversion Semiconductor Quantum Dots and Aligned Quantum Rods for Liquid Crystal Displays. Advanced Science, 2019, 6, 1901345.	11.2	83
22	Multiexciton fluorescence from semiconductor nanocrystals. Chemical Physics, 2005, 318, 71-81.	1.9	78
23	Electrostatic Formation of Quantum Dot/J-aggregate FRET Pairs in Solution. Journal of Physical Chemistry C, 2009, 113, 9986-9992.	3.1	76
24	Photoconduction in Annealed and Chemically Treated CdSe/ZnS Inorganic Nanocrystal Films. Journal of Physical Chemistry C, 2008, 112, 2308-2316.	3.1	65
25	Photorechargeable Lead-Free Perovskite Lithium-Ion Batteries Using Hexagonal Cs₃Bi₂I₉ Nanosheets. Nano Letters, 2021, 21, 5578-5585.	9.1	59
26	Progress in copper metal halides for optoelectronic applications. Materials Chemistry Frontiers, 2021, 5, 4796-4820.	5.9	55
27	Charge transport in mixed CdSe and CdTe colloidal nanocrystal films. Physical Review B, 2010, 82, .	3.2	47
28	Granumâ€Like Stacking Structures with TiO₂â€"Graphene Nanosheets for Improving Photoâ€electric Conversion. Small, 2012, 8, 1762-1770.	10.0	44
29	Charge Dynamics in Solution-Processed Nanocrystalline CuInS₂ Solar Cells. ACS Nano, 2015, 9, 5857-5867.	14.6	43
30	Identification of dipole disorder in low temperature solution processed oxides: its utility and suppression for transparent high performance solution-processed hybrid electronics. Chemical Science, 2016, 7, 6337-6346.	7.4	41
31	All-Inorganic, Solution-Processed, Inverted CsPbI₃ Quantum Dot Solar Cells with a PCE of 13.1% Achieved via a Layer-by-Layer FAI Treatment. ACS Applied Energy Materials, 2020, 3, 5620-5627.	5.1	41
32	300 nm Spectral Resolution in the Mid-Infrared with Robust, High Responsivity Flexible Colloidal Quantum Dot Devices at Room Temperature. ACS Photonics, 2018, 5, 3009-3015.	6.6	40
33	Enhanced mobility in PbS quantum dot films <i>via</i> PbSe quantum dot mixing for optoelectronic applications. Journal of Materials Chemistry C, 2019, 7, 4497-4502.	5.5	40
34	Recent Advancements in Near-Infrared Perovskite Light-Emitting Diodes. ACS Applied Electronic Materials, 2020, 2, 3470-3490.	4.3	40
35	How do molecular interactions affect fluorescence behavior of AIEgens in solution and aggregate states?. Science China Chemistry, 2022, 65, 135-144.	8.2	31
36	PbSe Quantum Dot Passivated Via Mixed Halide Perovskite Nanocrystals for Solar Cells With Over 9% Efficiency. Solar Rrl, 2018, 2, 1800234.	5.8	29

#	Article	IF	Citations
37	Shape-, Size-, and Composition-Controlled Thallium Lead Halide Perovskite Nanowires and Nanocrystals with Tunable Band Gaps. Chemistry of Materials, 2018, 30, 2973-2982.	6.7	28
38	Ultrafast Spectrally Resolved Photoinduced Complex Refractive Index Changes in CsPbBr₃ Perovskites. ACS Photonics, 2019, 6, 345-350.	6.6	27
39	Nanoscale Morphology Revealed at the Interface Between Colloidal Quantum Dots and Organic Semiconductor Films. Nano Letters, 2010, 10, 2421-2426.	9.1	26
40	Solution Synthesis and Optical Properties of Transition-Metal-Doped Silicon Nanocrystals. Journal of Physical Chemistry Letters, 2015, 6, 1573-1576.	4.6	25
41	Discovery of a New Intermediate Enables Oneâ€Step Deposition of Highâ€Quality Perovskite Films via Solvent Engineering. Solar Rrl, 2021, 5, 2000712.	5.8	24
42	Rapid Synthesis of Bright, Shapeâ€Controlled, Large Single Crystals of Cs₃Cu₂X₅ for Phase Pure Single (XÂ=ÂBr, Cl) and Mixed Halides (XÂ=ÂBr/Cl) as the Blue and Green Components for Printable White Lightâ€Emitting Devices. Advanced Materials Interfaces, 2021, 8, 2101471.	3.7	21
43	Formation of efficient dye-sensitized solar cells by introducing an interfacial layer of hierarchically ordered macro-mesoporous TiO2 film. Science China Chemistry, 2011, 54, 930-935.	8.2	19
44	A Hybrid Perovskite Solar Cell Modified With Copper Indium Sulfide Nanocrystals to Enhance Hole Transport and Moisture Stability. Solar Rrl, 2017, 1, 1700078.	5.8	19
45	Quantum-Dot Tandem Solar Cells Based on a Solution-Processed Nanoparticle Intermediate Layer. ACS Applied Materials & Interfaces, 2020, 12, 2313-2318.	8.0	19
46	Single crystals of mixed Br/Cl and Sn-doped formamidinium lead halide perovskites <i>via</i> inverse temperature crystallization. RSC Advances, 2020, 10, 3832-3836.	3.6	18
47	Controlled Growth of CH₃NH₃PbI₃ Using a Dynamically Dispensed Spinâ€Coating Method: Improving Efficiency with a Reproducible PbI₂ Blocking Layer. ChemSusChem, 2017, 10, 2677-2684.	6.8	17
48	Recent advancements in batteries and photo-batteries using metal halide perovskites. APL Materials, 2022, 10, .	5.1	17
49	Tuning the Self-Trapped Emission: Reversible Transformation to 0D Copper Clusters Permits Bright Red Emission in Potassium and Rubidium Copper Bromides. ACS Energy Letters, 2021, 6, 4383-4389.	17.4	16
50	Hierarchical Hydroxyapatite Microspheres Composed of Nanorods and Their Competitive Sorption Behavior for Heavy Metal Ions. European Journal of Inorganic Chemistry, 2012, 2012, 2665-2668.	2.0	14
51	Waterâ€Soluble Monodispersed Lanthanide Oxide Submicrospheres: PVPâ€Assisted Hydrothermal Synthesis, Sizeâ€Control and Luminescence Properties. ChemPhysChem, 2012, 13, 2610-2614.	2.1	13
52	Potassium and Rubidium Copper Halide A₂CuX₃ (A = K, Rb, X = Cl, Br) Micro- and Nanocrystals with Near Unity Quantum Yields for White Light Applications. ACS Applied Nano Materials, 2021, 4, 14188-14196.	5.0	13
53	Photo-Electrosensitive Memristor Using Oxygen Doping in HgTe Nanocrystal Films. ACS Applied Materials & Interfaces, 2018, 10, 18927-18934.	8.0	12
54	Solution-Processed, Inverted AgBiS₂ Nanocrystal Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 1634-1642.	8.0	12

#	Article	IF	Citations
55	Optically Clear Films of Formamidinium Lead Bromide Perovskite for Wide-Band-Gap, Solution-Processed, Semitransparent Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 37223-37230.	8.0	10
56	Room Temperature Mid-IR Detection through Localized Surface Vibrational States of SnTe Nanocrystals. ACS Sensors, 2018, 3, 2087-2094.	7.8	8
57	Dual-Functional Optoelectronic and Magnetic Pyrite/Iron Selenide Core/Shell Nanocrystals. Journal of Physical Chemistry C, 2017, 121, 8220-8226.	3.1	7
58	The Multiple Roles of Metal Ion Dopants in Spectrally Stable, Efficient Quasiâ€2D Perovskite Skyâ€Blue Lightâ€Emitting Devices. Advanced Optical Materials, 2021, 9, 2100860.	7.3	7
59	Solution-Processed Red, Green, and Blue Quantum Rod Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2022, 14, 18723-18735.	8.0	7
60	Polarization anisotropy losses due to morphological instability in CsPbX₃ nanorods and strategies for mitigation. Journal of Materials Chemistry C, 2022, 10, 8947-8954.	5.5	6
61	Large Photogain in Multicolor Nanocrystal Photodetector Arrays Enabling Room-Temperature Detection of Targets Above 100 Â°C. ACS Photonics, 2020, 7, 3078-3085.	6.6	5
62	Highly Stable Tetrahydrothiophene 1-Oxide Caged Copper Bromide and Chloride Clusters with Deep-Red to Near-IR Emission. Inorganic Chemistry, 2022, 61, 10950-10956.	4.0	4
63	â€œSimpleâ€•Aggregationâ€Induced Emission Luminogens for Nondoped Solutionâ€Processed Organic Lightâ€Emitting Diodes with Emission Close to Pure Red in the Standard Red, Green, and Blue Gamut. Advanced Photonics Research, 2021, 2, 2100004.	3.6	2
64	Morphology of contact printed colloidal quantum dots in organic semiconductor films: Implications for QD-LEDs. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 120-123.	0.8	1
65	Emergent electronic properties in Co-deposited superatomic clusters. Journal of Chemical Physics, 2021, 155, 124309.	3.0	1
66	Nanoscale Investigation of Collodial Quantum Dot/Organic Semiconductor Interfaces. , 2009, , .		1
67	A Hybrid Perovskite Solar Cell Modified With Copper Indium Sulfide Nanocrystals to Enhance Hole Transport and Moisture Stability (Solar RRL 8âˆ•2017). Solar Rrl, 2017, 1, 1770130.	5.8	0
68	Pâ€1.16: Synthesis of CsPbBr₃ Nanorods with Tuneable Optical Anisotropy for Optoelectronic Applications. Digest of Technical Papers SID International Symposium, 2019, 50, 949-952.	0.3	0
69	65â€5: Improved Brightness and Efficiency of Green Quantumâ€Rodâ€Based Lightâ€Emitting Diodes. Digest of Technical Papers SID International Symposium, 2021, 52, 959-962.	0.3	0