Giles E Eperon

List of Publications by Year
in descending order

85 papers	47,699 citations	23500 58 h-index	62479 80 g-index
85 all docs	85 docs citations	85 times ranked	23842 citing authors

#	Article	IF	Citations
1	Electron-Hole Diffusion Lengths Exceeding 1 Micrometer in an Organometal Trihalide Perovskite Absorber. Science, 2013, 342, 341-344.	6.0	8,703
2	Formamidinium lead trihalide: a broadly tunable perovskite for efficient planar heterojunction solar cells. Energy and Environmental Science, 2014, 7, 982.	15.6	3,352
3	High Charge Carrier Mobilities and Lifetimes in Organolead Trihalide Perovskites. Advanced Materials, 2014, 26, 1584-1589.	11.1	2,785
4	A mixed-cation lead mixed-halide perovskite absorber for tandem solar cells. Science, 2016, 351, 151-155.	6.0	2,514
5	Anomalous Hysteresis in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2014, 5, 1511-1515.	2.1	2,190
6	Lead-free organicâ€“inorganic tin halide perovskites for photovoltaic applications. Energy and Environmental Science, 2014, 7, 3061-3068.	15.6	2,086
7	Impact of microstructure on local carrier lifetime in perovskite solar cells. Science, 2015, 348, 683-686.	6.0	1,833
8	Morphological Control for High Performance, Solutionâ€Processed Planar Heterojunction Perovskite Solar Cells. Advanced Functional Materials, 2014, 24, 151-157.	7.8	1,782
9	Overcoming ultraviolet light instability of sensitized TiO2 with meso-superstructured organometal tri-halide perovskite solar cells. Nature Communications, 2013, 4, 2885.	5.8	1,592
10	Efficient organometal trihalide perovskite planar-heterojunction solar cells on flexible polymer substrates. Nature Communications, 2013, 4, 2761.	5.8	1,525
11	Inorganic caesium lead iodide perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 19688-19695.	5.2	1,419
12	Bandgapâ€Tunable Cesium Lead Halide Perovskites with High Thermal Stability for Efficient Solar Cells. Advanced Energy Materials, 2016, 6, 1502458.	10.2	1,265
13	Perovskite-perovskite tandem photovoltaics with optimized band gaps. Science, 2016, 354, 861-865.	6.0	1,107
14	Carbon Nanotube/Polymer Composites as a Highly Stable Hole Collection Layer in Perovskite Solar Cells. Nano Letters, 2014, 14, 5561-5568.	4.5	1,073
15	Stability of Metal Halide Perovskite Solar Cells. Advanced Energy Materials, 2015, 5, 1500963.	10.2	1,045
16	Electronâ€“phonon coupling in hybrid lead halide perovskites. Nature Communications, 2016, 7, .	5.8	919
17	Steric engineering of metal-halide perovskites with tunable optical band gaps. Nature Communications, 2014, 5, 5757.	5.8	787
18	Temperatureâ€Dependent Chargeâ€Carrier Dynamics in CH₃NH₃PbI₃ Perovskite Thin Films. Advanced Functional Materials, 2015, 25, 6218-6227.	7.8	785

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19	Ultrasmooth organicâ€“inorganic perovskite thin-film formation and crystallization for efficient planar heterojunction solar cells. Nature Communications, 2015, 6, 6142.	5.8	784
20	Metal halide perovskites for energy applications. Nature Energy, 2016, 1, .	19.8	726
21	Determination of the exciton binding energy and effective masses for methylammonium and formamidinium lead tri-halide perovskite semiconductors. Energy and Environmental Science, 2016, 9, 962-970.	15.6	603
22	The Importance of Moisture in Hybrid Lead Halide Perovskite Thin Film Fabrication. ACS Nano, 2015, 9, 9380-9393.	7.3	451
23	Charge-Carrier Dynamics in 2D Hybrid Metalâ€“Halide Perovskites. Nano Letters, 2016, 16, 7001-7007.	4.5	428
24	Neutral Color Semitransparent Microstructured Perovskite Solar Cells. ACS Nano, 2014, 8, 591-598.	7.3	412
25	Carrier trapping and recombination: the role of defect physics in enhancing the open circuit voltage of metal halide perovskite solar cells. Energy and Environmental Science, 2016, 9, 3472-3481.	15.6	409
26	Electronic Properties of Meso-Superstructured and Planar Organometal Halide Perovskite Films: Charge Trapping, Photodoping, and Carrier Mobility. ACS Nano, 2014, 8, 7147-7155.	7.3	370
27	Charge selective contacts, mobile ions and anomalous hysteresis in organicâ€“inorganic perovskite solar cells. Materials Horizons, 2015, 2, 315-322.	6.4	366
28	Perovskite Crystals for Tunable White Light Emission. Chemistry of Materials, 2015, 27, 8066-8075.	3.2	362
29	Characterization of Planar Lead Halide Perovskite Solar Cells by Impedance Spectroscopy, Open-Circuit Photovoltage Decay, and Intensity-Modulated Photovoltage/Photocurrent Spectroscopy. Journal of Physical Chemistry C, 2015, 119, 3456-3465.	1.5	361
30	Metal halide perovskite tandem and multiple-junction photovoltaics. Nature Reviews Chemistry, 2017, 1, .	13.8	344
31	Chargeâ€Carrier Dynamics and Mobilities in Formamidinium Lead Mixedâ€Halide Perovskites. Advanced Materials, 2015, 27, 7938-7944.	11.1	343
32	Enabling Flexible All-Perovskite Tandem Solar Cells. Joule, 2019, 3, 2193-2204.	11.7	331
33	The Potential of Multijunction Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 2506-2513.	8.8	272
34	Charge Carriers in Planar and Meso-Structured Organicâ€“Inorganic Perovskites: Mobilities, Lifetimes, and Concentrations of Trap States. Journal of Physical Chemistry Letters, 2015, 6, 3082-3090.	2.1	257
35	The Impact of the Crystallization Processes on the Structural and Optical Properties of Hybrid Perovskite Films for Photovoltaics. Journal of Physical Chemistry Letters, 2014, 5, 3836-3842.	2.1	238
36	Design of low bandgap tinâ€“lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability. Nature Energy, 2019, 4, 939-947.	19.8	235

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37	Mapping Electric Fieldâ€Induced Switchable Poling and Structural Degradation in Hybrid Lead Halide Perovskite Thin Films. Advanced Energy Materials, 2015, 5, 1500962.	10.2	225
38	The Importance of Perovskite Pore Filling in Organometal Mixed Halide Sensitized TiO₂-Based Solar Cells. Journal of Physical Chemistry Letters, 2014, 5, 1096-1102.	2.1	221
39	Oxygen Degradation in Mesoporous Al₂O₃/CH₃NH₃PbI_{3â€}_xCl_x Perovskite Solar Cells: Kinetics and Mechanisms. Advanced Energy Materials, 2016, 6, 1600014.	10.2	201
40	Microseconds, milliseconds and seconds: deconvoluting the dynamic behaviour of planar perovskite solar cells. Physical Chemistry Chemical Physics, 2017, 19, 5959-5970.	1.3	200
41	Non-ferroelectric nature of the conductance hysteresis in CH3NH3PbI3 perovskite-based photovoltaic devices. Applied Physics Letters, 2015, 106, .	1.5	189
42	Efficient, Semitransparent Neutral-Colored Solar Cells Based on Microstructured Formamidinium Lead Trihalide Perovskite. Journal of Physical Chemistry Letters, 2015, 6, 129-138.	2.1	173
43	Tinâ€“lead halide perovskites with improved thermal and air stability for efficient all-perovskite tandem solar cells. Sustainable Energy and Fuels, 2018, 2, 2450-2459.	2.5	167
44	Enhanced Hole Extraction in Perovskite Solar Cells Through Carbon Nanotubes. Journal of Physical Chemistry Letters, 2014, 5, 4207-4212.	2.1	156
45	Cation exchange for thin film lead iodide perovskite interconversion. Materials Horizons, 2016, 3, 63-71.	6.4	146
46	Bandâ€Tail Recombination in Hybrid Lead Iodide Perovskite. Advanced Functional Materials, 2017, 27, 1700860.	7.8	127
47	Perovskite photovoltachromic cells for building integration. Energy and Environmental Science, 2015, 8, 1578-1584.	15.6	125
48	Forthcoming perspectives of photoelectrochromic devices: a critical review. Energy and Environmental Science, 2016, 9, 2682-2719.	15.6	122
49	Radiative Monomolecular Recombination Boosts Amplified Spontaneous Emission in HC(NH₂)₂SnI₃ Perovskite Films. Journal of Physical Chemistry Letters, 2016, 7, 4178-4184.	2.1	110
50	Interplay of Mobile Ions and Injected Carriers Creates Recombination Centers in Metal Halide Perovskites under Bias. ACS Energy Letters, 2018, 3, 1279-1286.	8.8	106
51	B-Site Metal Cation Exchange in Halide Perovskites. ACS Energy Letters, 2017, 2, 1190-1196.	8.8	99
52	Building integration of semitransparent perovskite-based solar cells: Energy performance and visual comfort assessment. Applied Energy, 2017, 194, 94-107.	5.1	76
53	Shuntâ€Blocking Layers for Semitransparent Perovskite Solar Cells. Advanced Materials Interfaces, 2016, 3, 1500837.	1.9	73
54	Anticorrelation between Local Photoluminescence and Photocurrent Suggests Variability in Contact to Active Layer in Perovskite Solar Cells. ACS Nano, 2016, 10, 10258-10266.	7.3	73

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55	Defect states in perovskite solar cells associated with hysteresis and performance. Applied Physics Letters, 2016, 109, .	1.5	69
56	The Role of Dimethylammonium in Bandgap Modulation for Stable Halide Perovskites. ACS Energy Letters, 2020, 5, 1856-1864.	8.8	65
57	Measurement and modelling of dark current decay transients in perovskite solar cells. Journal of Materials Chemistry C, 2017, 5, 452-462.	2.7	64
58	Biexciton Auger Recombination Differs in Hybrid and Inorganic Halide Perovskite Quantum Dots. Journal of Physical Chemistry Letters, 2018, 9, 104-109.	2.1	64
59	Modulating the Electronâ€“Hole Interaction in a Hybrid Lead Halide Perovskite with an Electric Field. Journal of the American Chemical Society, 2015, 137, 15451-15459.	6.6	61
60	Direct Observation and Quantitative Analysis of Mobile Frenkel Defects in Metal Halide Perovskites Using Scanning Kelvin Probe Microscopy. Journal of Physical Chemistry C, 2018, 122, 12633-12639.	1.5	58
61	Tinâ€“Lead Alloying for Efficient and Stable All-Inorganic Perovskite Solar Cells. Chemistry of Materials, 2020, 32, 2782-2794.	3.2	58
62	Improving energy and visual performance in offices using building integrated perovskite-based solar cells: A case study in Southern Italy. Applied Energy, 2017, 205, 834-846.	5.1	51
63	Orientation of Ferroelectric Domains and Disappearance upon Heating Methylammonium Lead Triiodide Perovskite from Tetragonal to Cubic Phase. ACS Applied Energy Materials, 2018, 1, 1534-1539.	2.5	49
64	Stoichiometry of a regulatory splicing complex revealed by single-molecule analyses. EMBO Journal, 2010, 29, 2161-2172.	3.5	47
65	Spatially resolved studies of the phases and morphology of methylammonium and formamidinium lead tri-halide perovskites. Nanoscale, 2017, 9, 3222-3230.	2.8	44
66	Tolerance of Perovskite Solar Cells to Targeted Proton Irradiation and Electronic Ionization Induced Healing. ACS Energy Letters, 2021, 6, 2362-2368.	8.8	44
67	Correlating Photoluminescence Heterogeneity with Local Electronic Properties in Methylammonium Lead Tribromide Perovskite Thin Films. Chemistry of Materials, 2017, 29, 5484-5492.	3.2	42
68	Choose Your Own Adventure: Fabrication of Monolithic Allâ€Perovskite Tandem Photovoltaics. Advanced Materials, 2020, 32, e2003312.	11.1	39
69	Relaxed Current Matching Requirements in Highly Luminescent Perovskite Tandem Solar Cells and Their Fundamental Efficiency Limits. ACS Energy Letters, 2021, 6, 612-620.	8.8	38
70	Semitransparent quantum dot solar cell. Nano Energy, 2016, 22, 70-78.	8.2	37
71	Controlling coverage of solution cast materials with unfavourable surface interactions. Applied Physics Letters, 2014, 104, .	1.5	34
72	Potential of High-Stability Perovskite Solar Cells for Low-Intensityâ€“Low-Temperature (LILT) Outer Planetary Space Missions. ACS Applied Energy Materials, 2019, 2, 814-821.	2.5	34

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73	Reducing Surface Recombination Velocity of Methylammonium-Free Mixed-Cation Mixed-Halide Perovskites via Surface Passivation. Chemistry of Materials, 2021, 33, 5035-5044.	3.2	33
74	Protonâ€Radiation Tolerant Allâ€Perovskite Multijunction Solar Cells. Advanced Energy Materials, 2021, 11, 2102246.	10.2	25
75	Perovskite solar cells: Different facets of performance. Nature Energy, 2016, 1, .	19.8	22
76	Role of Exciton Binding Energy on LO Phonon Broadening and Polaron Formation in (BA)2PbI4 Ruddlesdenâ€“Popper Films. Journal of Physical Chemistry C, 2020, 124, 9496-9505.	1.5	18
77	Middle atmosphere predictability in a numerical weather prediction model: revisiting the inverse error cascade. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 1366-1378.	1.0	17
78	Radiation stability of mixed tinâ€“lead halide perovskites: Implications for space applications. Solar Energy Materials and Solar Cells, 2021, 230, 111232.	3.0	15
79	Dimethylammonium Addition to Halide Perovskite Precursor Increases Vertical and Lateral Heterogeneity. ACS Energy Letters, 2022, 7, 204-210.	8.8	10
80	Quantum funneling in blended multi-band gap core/shell colloidal quantum dot solar cells. Applied Physics Letters, 2015, 107, 103902.	1.5	7
81	Proton Radiation Tolerance of Wide and Narrow Band Gap Perovskite Solar Cells. , 2021, , .		1
82	Stability of Tin-Lead Halide Perovskite Solar Cells. , 2019, , .		0
83	Band Tail States in FAPbI3: Characterization and Simulation. , 0, , .		0
84	Radiation Tolerant All-Perovskite Multijunction Solar Cells for Moon, Mars and Deep Space Applications. , 0, , .		0
85	Protonâ€Radiation Tolerant Allâ€Perovskite Multijunction Solar Cells (Adv. Energy Mater. 41/2021). Advanced Energy Materials, 2021, 11, 2170164.	10.2	0