Giles E Eperon

List of Publications by Year
in descending order

85 papers	47,699 citations	27035 58 h-index	71088 80 g-index
85 all docs	85 docs citations	85 times ranked	27427 citing authors

#	Article	IF	Citations
1	Dimethylammonium Addition to Halide Perovskite Precursor Increases Vertical and Lateral Heterogeneity. ACS Energy Letters, 2022, 7, 204-210.	8.8	10
2	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
3	Proton Radiation Tolerance of Wide and Narrow Band Gap Perovskite Solar Cells. , 2021, , .		1
4	Tolerance of Perovskite Solar Cells to Targeted Proton Irradiation and Electronic Ionization Induced Healing. ACS Energy Letters, 2021, 6, 2362-2368.	8.8	44
5	Protonâ€Radiation Tolerant Allâ€Perovskite Multijunction Solar Cells. Advanced Energy Materials, 2021, 11, 2102246.	10.2	25
6	Radiation stability of mixed tinâ€“lead halide perovskites: Implications for space applications. Solar Energy Materials and Solar Cells, 2021, 230, 111232.	3.0	15
7	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
8	Protonâ€Radiation Tolerant Allâ€Perovskite Multijunction Solar Cells (Adv. Energy Mater. 41/2021). Advanced Energy Materials, 2021, 11, 2170164.	10.2	0
9	Choose Your Own Adventure: Fabrication of Monolithic Allâ€Perovskite Tandem Photovoltaics. Advanced Materials, 2020, 32, e2003312.	11.1	39
10	The Role of Dimethylammonium in Bandgap Modulation for Stable Halide Perovskites. ACS Energy Letters, 2020, 5, 1856-1864.	8.8	65
11	Tinâ€“Lead Alloying for Efficient and Stable All-Inorganic Perovskite Solar Cells. Chemistry of Materials, 2020, 32, 2782-2794.	3.2	58
12	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
13	Enabling Flexible All-Perovskite Tandem Solar Cells. Joule, 2019, 3, 2193-2204.	11.7	331
14	Stability of Tin-Lead Halide Perovskite Solar Cells. , 2019, , .		0
15	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
16	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
17	Biexciton Auger Recombination Differs in Hybrid and Inorganic Halide Perovskite Quantum Dots. Journal of Physical Chemistry Letters, 2018, 9, 104-109.	2.1	64
18	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

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19	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
20	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
21	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
22	Microseconds, milliseconds and seconds: deconvoluting the dynamic behaviour of planar perovskite solar cells. Physical Chemistry Chemical Physics, 2017, 19, 5959-5970.	1.3	200
23	Building integration of semitransparent perovskite-based solar cells: Energy performance and visual comfort assessment. Applied Energy, 2017, 194, 94-107.	5.1	76
24	Spatially resolved studies of the phases and morphology of methylammonium and formamidinium lead tri-halide perovskites. Nanoscale, 2017, 9, 3222-3230.	2.8	44
25	B-Site Metal Cation Exchange in Halide Perovskites. ACS Energy Letters, 2017, 2, 1190-1196.	8.8	99
26	Correlating Photoluminescence Heterogeneity with Local Electronic Properties in Methylammonium Lead Tribromide Perovskite Thin Films. Chemistry of Materials, 2017, 29, 5484-5492.	3.2	42
27	Measurement and modelling of dark current decay transients in perovskite solar cells. Journal of Materials Chemistry C, 2017, 5, 452-462.	2.7	64
28	The Potential of Multijunction Perovskite Solar Cells. ACS Energy Letters, 2017, 2, 2506-2513.	8.8	272
29	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
30	Metal halide perovskite tandem and multiple-junction photovoltaics. Nature Reviews Chemistry, 2017, 1, .	13.8	344
31	Bandâ€Tail Recombination in Hybrid Lead Iodide Perovskite. Advanced Functional Materials, 2017, 27, 1700860.	7.8	127
32	Bandgapâ€Tunable Cesium Lead Halide Perovskites with High Thermal Stability for Efficient Solar Cells. Advanced Energy Materials, 2016, 6, 1502458.	10.2	1,265
33	Shuntâ€Blocking Layers for Semitransparent Perovskite Solar Cells. Advanced Materials Interfaces, 2016, 3, 1500837.	1.9	73
34	Defect states in perovskite solar cells associated with hysteresis and performance. Applied Physics Letters, 2016, 109, .	1.5	69
35	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
36	Charge-Carrier Dynamics in 2D Hybrid Metalâ€“Halide Perovskites. Nano Letters, 2016, 16, 7001-7007.	4.5	428

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37	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
38	Forthcoming perspectives of photoelectrochromic devices: a critical review. Energy and Environmental Science, 2016, 9, 2682-2719.	15.6	122
39	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
40	Perovskite solar cells: Different facets of performance. Nature Energy, 2016, 1, .	19.8	22
41	Metal halide perovskites for energy applications. Nature Energy, 2016, 1, .	19.8	726
42	Electronâ€“phonon coupling in hybrid lead halide perovskites. Nature Communications, 2016, 7, .	5.8	919
43	Perovskite-perovskite tandem photovoltaics with optimized band gaps. Science, 2016, 354, 861-865.	6.0	1,107
44	Oxygen Degradation in Mesoporous Al₂O₃/CH₃NH₃PbI_{3â€“}_xCl_x Perovskite Solar Cells: Kinetics and Mechanisms. Advanced Energy Materials, 2016, 6, 1600014.	10.2	211
45	Semitransparent quantum dot solar cell. Nano Energy, 2016, 22, 70-78.	8.2	37
46	A mixed-cation lead mixed-halide perovskite absorber for tandem solar cells. Science, 2016, 351, 151-155.	6.0	2,514
47	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
48	Cation exchange for thin film lead iodide perovskite interconversion. Materials Horizons, 2016, 3, 63-71.	6.4	146
49	Chargeâ€Carrier Dynamics and Mobilities in Formamidinium Lead Mixedâ€Halide Perovskites. Advanced Materials, 2015, 27, 7938-7944.	11.1	343
50	Temperatureâ€Dependent Chargeâ€Carrier Dynamics in CH₃NH₃PbI₃ Perovskite Thin Films. Advanced Functional Materials, 2015, 25, 6218-6227.	7.8	785
51	Stability of Metal Halide Perovskite Solar Cells. Advanced Energy Materials, 2015, 5, 1500963.	10.2	1,045
52	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
53	Non-ferroelectric nature of the conductance hysteresis in CH3NH3PbI3 perovskite-based photovoltaic devices. Applied Physics Letters, 2015, 106, .	1.5	189
54	Ultrasmooth organicâ€“inorganic perovskite thin-film formation and crystallization for efficient planar heterojunction solar cells. Nature Communications, 2015, 6, 6142.	5.8	784

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55	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
56	The Importance of Moisture in Hybrid Lead Halide Perovskite Thin Film Fabrication. ACS Nano, 2015, 9, 9380-9393.	7.3	451
57	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
58	Impact of microstructure on local carrier lifetime in perovskite solar cells. Science, 2015, 348, 683-686.	6.0	1,833
59	Perovskite photovoltachromic cells for building integration. Energy and Environmental Science, 2015, 8, 1578-1584.	15.6	125
60	Charge selective contacts, mobile ions and anomalous hysteresis in organicâ€“inorganic perovskite solar cells. Materials Horizons, 2015, 2, 315-322.	6.4	366
61	Perovskite Crystals for Tunable White Light Emission. Chemistry of Materials, 2015, 27, 8066-8075.	3.2	362
62	Quantum funneling in blended multi-band gap core/shell colloidal quantum dot solar cells. Applied Physics Letters, 2015, 107, 103902.	1.5	7
63	Inorganic caesium lead iodide perovskite solar cells. Journal of Materials Chemistry A, 2015, 3, 19688-19695.	5.2	1,419
64	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
65	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
66	Controlling coverage of solution cast materials with unfavourable surface interactions. Applied Physics Letters, 2014, 104, .	1.5	34
67	Steric engineering of metal-halide perovskites with tunable optical band gaps. Nature Communications, 2014, 5, 5757.	5.8	787
68	Morphological Control for High Performance, Solutionâ€Processed Planar Heterojunction Perovskite Solar Cells. Advanced Functional Materials, 2014, 24, 151-157.	7.8	1,782
69	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
70	High Charge Carrier Mobilities and Lifetimes in Organolead Trihalide Perovskites. Advanced Materials, 2014, 26, 1584-1589.	11.1	2,785
71	Lead-free organicâ€“inorganic tin halide perovskites for photovoltaic applications. Energy and Environmental Science, 2014, 7, 3061-3068.	15.6	2,086
72	Neutral Color Semitransparent Microstructured Perovskite Solar Cells. ACS Nano, 2014, 8, 591-598.	7.3	412

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73	Formamidinium lead trihalide: a broadly tunable perovskite for efficient planar heterojunction solar cells. Energy and Environmental Science, 2014, 7, 982.	15.6	3,352
74	Enhanced Hole Extraction in Perovskite Solar Cells Through Carbon Nanotubes. Journal of Physical Chemistry Letters, 2014, 5, 4207-4212.	2.1	156
75	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
76	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
77	Anomalous Hysteresis in Perovskite Solar Cells. Journal of Physical Chemistry Letters, 2014, 5, 1511-1515.	2.1	2,190
78	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
79	Efficient organometal trihalide perovskite planar-heterojunction solar cells on flexible polymer substrates. Nature Communications, 2013, 4, 2761.	5.8	1,525
80	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
81	Electron-Hole Diffusion Lengths Exceeding 1 Micrometer in an Organometal Trihalide Perovskite Absorber. Science, 2013, 342, 341-344.	6.0	8,703
82	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
83	Stoichiometry of a regulatory splicing complex revealed by single-molecule analyses. EMBO Journal, 2010, 29, 2161-2172.	3.5	47
84	Band Tail States in FAPbI3: Characterization and Simulation. , 0, , .		0
85	Radiation Tolerant All-Perovskite Multijunction Solar Cells for Moon, Mars and Deep Space Applications. , 0, , .		0