Giles E Eperon

List of Publications by Citations

80 papers	39,162 citations	55 h-index	85 g-index
85 ext. papers	43,390 ext. citations	17.5 avg, IF	7.59 L-index

#	Paper	IF	Citations
80	Electron-hole diffusion lengths exceeding 1 micrometer in an organometal trihalide perovskite absorber. *Science*, **2013**, 342, 341-4	33.3	7280
79	Formamidinium lead trihalide: a broadly tunable perovskite for efficient planar heterojunction solar cells. *Energy and Environmental Science*, **2014**, 7, 982	35.4	2706
78	High charge carrier mobilities and lifetimes in organolead trihalide perovskites. *Advanced Materials*, **2014**, 26, 1584-9	24	2282
77	A mixed-cation lead mixed-halide perovskite absorber for tandem solar cells. *Science*, **2016**, 351, 151-5	33.3	2024
76	Anomalous Hysteresis in Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2014**, 5, 1511-5	6.4	1951
75	Morphological Control for High Performance, Solution-Processed Planar Heterojunction Perovskite Solar Cells. *Advanced Functional Materials*, **2014**, 24, 151-157	15.6	1639
74	Lead-free organic–inorganic tin halide perovskites for photovoltaic applications. *Energy and Environmental Science*, **2014**, 7, 3061-3068	35.4	1635
73	Solar cells. Impact of microstructure on local carrier lifetime in perovskite solar cells. *Science*, **2015**, 348, 683-6	33.3	1533
72	Efficient organometal trihalide perovskite planar-heterojunction solar cells on flexible polymer substrates. *Nature Communications*, **2013**, 4, 2761	17.4	1371
71	Overcoming ultraviolet light instability of sensitized TiO_2 with meso-superstructured organometal tri-halide perovskite solar cells. *Nature Communications*, **2013**, 4, 2885	17.4	1367
70	Inorganic caesium lead iodide perovskite solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 19688-19695	9.9	1085
69	Bandgap-Tunable Cesium Lead Halide Perovskites with High Thermal Stability for Efficient Solar Cells. *Advanced Energy Materials*, **2016**, 6, 1502458	21.8	992
68	Carbon nanotube/polymer composites as a highly stable hole collection layer in perovskite solar cells. *Nano Letters*, **2014**, 14, 5561-8	11.5	944
67	Perovskite-perovskite tandem photovoltaics with optimized band gaps. *Science*, **2016**, 354, 861-865	33.3	865
66	Stability of Metal Halide Perovskite Solar Cells. *Advanced Energy Materials*, **2015**, 5, 1500963	21.8	861
65	Ultrasmooth organic-inorganic perovskite thin-film formation and crystallization for efficient planar heterojunction solar cells. *Nature Communications*, **2015**, 6, 6142	17.4	695
64	Electron-phonon coupling in hybrid lead halide perovskites. *Nature Communications*, **2016**, 7,	17.4	668

63	Temperature-Dependent Charge-Carrier Dynamics in CH3NH3PbI3 Perovskite Thin Films. *Advanced Functional Materials*, **2015**, 25, 6218-6227	15.6	645
62	Steric engineering of metal-halide perovskites with tunable optical band gaps. *Nature Communications*, **2014**, 5, 5757	17.4	605
61	Metal halide perovskites for energy applications. *Nature Energy*, **2016**, 1,	62.3	528
60	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	35.4	457
59	The Importance of Moisture in Hybrid Lead Halide Perovskite Thin Film Fabrication. *ACS Nano*, **2015** , 9, 9380-93	16.7	366
58	Neutral color semitransparent microstructured perovskite solar cells. *ACS Nano*, **2014**, 8, 591-8	16.7	365
57	Charge selective contacts, mobile ions and anomalous hysteresis in organic–inorganic perovskite solar cells. *Materials Horizons*, **2015**, 2, 315-322	14.4	338
56	Electronic properties of meso-superstructured and planar organometal halide perovskite films: charge trapping, photodoping, and carrier mobility. *ACS Nano*, **2014**, 8, 7147-55	16.7	328
55	Perovskite Crystals for Tunable White Light Emission. *Chemistry of Materials*, **2015**, 27, 8066-8075	9.6	327
54	Charge-Carrier Dynamics in 2D Hybrid Metal-Halide Perovskites. *Nano Letters*, **2016**, 16, 7001-7007	11.5	327
53	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	35.4	317
52	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	3.8	310
51	Charge-Carrier Dynamics and Mobilities in Formamidinium Lead Mixed-Halide Perovskites. *Advanced Materials*, **2015**, 27, 7938-44	24	276
50	Metal halide perovskite tandem and multiple-junction photovoltaics. *Nature Reviews Chemistry*, **2017**, 1,	34.6	236
49	Charge Carriers in Planar and Meso-Structured Organic-Inorganic Perovskites: Mobilities, Lifetimes, and Concentrations of Trap States. *Journal of Physical Chemistry Letters*, **2015**, 6, 3082-90	6.4	225
48	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, 3836-42	6.4	218
47	Enabling Flexible All-Perovskite Tandem Solar Cells. *Joule*, **2019**, 3, 2193-2204	27.8	211
46	The Importance of Perovskite Pore Filling in Organometal Mixed Halide Sensitized TiO2-Based Solar Cells. *Journal of Physical Chemistry Letters*, **2014**, 5, 1096-102	6.4	200

45	The Potential of Multijunction Perovskite Solar Cells. *ACS Energy Letters*, **2017**, 2, 2506-2513	20.1	180
44	Mapping Electric Field-Induced Switchable Poling and Structural Degradation in Hybrid Lead Halide Perovskite Thin Films. *Advanced Energy Materials*, **2015**, 5, 1500962	21.8	179
43	Non-ferroelectric nature of the conductance hysteresis in CH3NH3PbI3 perovskite-based photovoltaic devices. *Applied Physics Letters*, **2015**, 106, 173502	3.4	173
42	Microseconds, milliseconds and seconds: deconvoluting the dynamic behaviour of planar perovskite solar cells. *Physical Chemistry Chemical Physics*, **2017**, 19, 5959-5970	3.6	160
41	Oxygen Degradation in Mesoporous Al2O3/CH3NH3PbI3-xClx Perovskite Solar Cells: Kinetics and Mechanisms. *Advanced Energy Materials*, **2016**, 6, 1600014	21.8	159
40	Efficient, Semitransparent Neutral-Colored Solar Cells Based on Microstructured Formamidinium Lead Trihalide Perovskite. *Journal of Physical Chemistry Letters*, **2015**, 6, 129-38	6.4	153
39	Design of low bandgap tin–lead halide perovskite solar cells to achieve thermal, atmospheric and operational stability. *Nature Energy*, **2019**, 4, 939-947	62.3	152
38	Cation exchange for thin film lead iodide perovskite interconversion. *Materials Horizons*, **2016**, 3, 63-71	14.4	128
37	Tin–Lead halide perovskites with improved thermal and air stability for efficient all-perovskite tandem solar cells. *Sustainable Energy and Fuels*, **2018**, 2, 2450-2459	5.8	127
36	Enhanced Hole Extraction in Perovskite Solar Cells Through Carbon Nanotubes. *Journal of Physical Chemistry Letters*, **2014**, 5, 4207-12	6.4	126
35	Forthcoming perspectives of photoelectrochromic devices: a critical review. *Energy and Environmental Science*, **2016**, 9, 2682-2719	35.4	103
34	Perovskite photovoltachromic cells for building integration. *Energy and Environmental Science*, **2015**, 8, 1578-1584	35.4	102
33	Band-Tail Recombination in Hybrid Lead Iodide Perovskite. *Advanced Functional Materials*, **2017**, 27, 1700860	15.6	94
32	Interplay of Mobile Ions and Injected Carriers Creates Recombination Centers in Metal Halide Perovskites under Bias. *ACS Energy Letters*, **2018**, 3, 1279-1286	20.1	81
31	B-Site Metal Cation Exchange in Halide Perovskites. *ACS Energy Letters*, **2017**, 2, 1190-1196	20.1	80
30	Radiative Monomolecular Recombination Boosts Amplified Spontaneous Emission in HC(NH)SnI Perovskite Films. *Journal of Physical Chemistry Letters*, **2016**, 7, 4178-4184	6.4	78
29	Anticorrelation between Local Photoluminescence and Photocurrent Suggests Variability in Contact to Active Layer in Perovskite Solar Cells. *ACS Nano*, **2016**, 10, 10258-10266	16.7	61
28	Shunt-Blocking Layers for Semitransparent Perovskite Solar Cells. *Advanced Materials Interfaces*, **2016**, 3, 1500837	4.6	60

27	Building integration of semitransparent perovskite-based solar cells: Energy performance and visual comfort assessment. *Applied Energy*, **2017**, 194, 94-107	10.7	59
26	Defect states in perovskite solar cells associated with hysteresis and performance. *Applied Physics Letters*, **2016**, 109, 153902	3.4	56
25	Biexciton Auger Recombination Differs in Hybrid and Inorganic Halide Perovskite Quantum Dots. *Journal of Physical Chemistry Letters*, **2018**, 9, 104-109	6.4	53
24	Measurement and modelling of dark current decay transients in perovskite solar cells. *Journal of Materials Chemistry C*, **2017**, 5, 452-462	7.1	51
23	Modulating the Electron-Hole Interaction in a Hybrid Lead Halide Perovskite with an Electric Field. *Journal of the American Chemical Society*, **2015**, 137, 15451-9	16.4	51
22	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	3.8	43
21	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	6.1	40
20	The Role of Dimethylammonium in Bandgap Modulation for Stable Halide Perovskites. *ACS Energy Letters*, **2020**, 5, 1856-1864	20.1	39
19	Stoichiometry of a regulatory splicing complex revealed by single-molecule analyses. *EMBO Journal* , **2010**, 29, 2161-72	13	39
18	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	10.7	37
17	Spatially resolved studies of the phases and morphology of methylammonium and formamidinium lead tri-halide perovskites. *Nanoscale*, **2017**, 9, 3222-3230	7.7	36
16	Correlating Photoluminescence Heterogeneity with Local Electronic Properties in Methylammonium Lead Tribromide Perovskite Thin Films. *Chemistry of Materials*, **2017**, 29, 5484-5492	9.6	34
15	Tin–Lead Alloying for Efficient and Stable All-Inorganic Perovskite Solar Cells. *Chemistry of Materials*, **2020**, 32, 2782-2794	9.6	33
14	Controlling coverage of solution cast materials with unfavourable surface interactions. *Applied Physics Letters*, **2014**, 104, 091602	3.4	33
13	Semitransparent quantum dot solar cell. *Nano Energy*, **2016**, 22, 70-78	17.1	30
12	Choose Your Own Adventure: Fabrication of Monolithic All-Perovskite Tandem Photovoltaics. *Advanced Materials*, **2020**, 32, e2003312	24	23
11	Potential of High-Stability Perovskite Solar Cells for Low-Intensity–Low-Temperature (LILT) Outer Planetary Space Missions. *ACS Applied Energy Materials*, **2019**, 2, 814-821	6.1	21
10	Relaxed Current Matching Requirements in Highly Luminescent Perovskite Tandem Solar Cells and Their Fundamental Efficiency Limits. *ACS Energy Letters*, **2021**, 6, 612-620	20.1	20

9	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	6.4	15
8	Reducing Surface Recombination Velocity of Methylammonium-Free Mixed-Cation Mixed-Halide Perovskites via Surface Passivation. *Chemistry of Materials*, **2021**, 33, 5035-5044	9.6	13
7	Role of Exciton Binding Energy on LO Phonon Broadening and Polaron Formation in (BA)2PbI4 RuddlesdenPopper Films. *Journal of Physical Chemistry C*, **2020**, 124, 9496-9505	3.8	12
6	Tolerance of Perovskite Solar Cells to Targeted Proton Irradiation and Electronic Ionization Induced Healing. *ACS Energy Letters*, **2021**, 6, 2362-2368	20.1	11
5	Proton-Radiation Tolerant All-Perovskite Multijunction Solar Cells. *Advanced Energy Materials*, **2021**, 11, 2102246	21.8	7
4	Quantum funneling in blended multi-band gap core/shell colloidal quantum dot solar cells. *Applied Physics Letters*, **2015**, 107, 103902	3.4	6
3	Radiation stability of mixed tinlead halide perovskites: Implications for space applications. *Solar Energy Materials and Solar Cells*, **2021**, 230, 111232	6.4	5
2	Dimethylammonium Addition to Halide Perovskite Precursor Increases Vertical and Lateral Heterogeneity. *ACS Energy Letters*, **2022**, 7, 204-210	20.1	5
1	Proton-Radiation Tolerant All-Perovskite Multijunction Solar Cells (Adv. Energy Mater. 41/2021). *Advanced Energy Materials*, **2021**, 11, 2170164	21.8	