Eugene A Katz

List of Publications by Year
in descending order

93 papers	5,024 citations	126907 33 h-index	88630 70 g-index
97 all docs	97 docs citations	97 times ranked	6433 citing authors

#	Article	IF	Citations
1	Morphology control of perovskite films: a two-step, all solution process for conversion of lead selenide into methylammonium lead iodide. Materials Chemistry Frontiers, 2021, 5, 1410-1417.	5.9	9
2	Perovskite/Silicon Tandem Solar Cells: Effect of Luminescent Coupling and Bifaciality. Solar Rrl, 2021, 5, 2000628.	5.8	33
3	Relaxed current-matching constraints by bifacial operation and luminescent coupling in perovskite/silicon tandem solar cells. , 2021, , .		2
4	Bias-Dependent Dynamics of Degradation and Recovery in Perovskite Solar Cells. ACS Applied Energy Materials, 2021, 4, 6562-6573.	5.1	11
5	Biasâ€Dependent Stability of Perovskite Solar Cells Studied Using Natural and Concentrated Sunlight. Solar Rrl, 2020, 4, 1900335.	5.8	17
6	Initial Stages of Photodegradation of MAPbI₃ Perovskite: Accelerated Aging with Concentrated Sunlight. Solar Rrl, 2020, 4, 1900270.	5.8	17
7	Photoluminescence kinetics for monitoring photoinduced processes in perovskite solar cells. Solar Energy, 2020, 195, 114-120.	6.1	17
8	A Two-Step, All Solution Process for Conversion of Lead Sulfide to Methylammonium Lead Iodide Perovskite Thin Films. Thin Solid Films, 2020, 714, 138367.	1.8	4
9	InGaN/GaN multiâ€quantumâ€well solar cells under high solar concentration and elevated temperatures for hybrid solar thermalâ€photovoltaic power plants. Progress in Photovoltaics: Research and Applications, 2020, 28, 1167-1174.	8.1	20
10	An Interlaboratory Study on the Stability of Allâ€Printable Hole Transport Materialâ€“Free Perovskite Solar Cells. Energy Technology, 2020, 8, 2000134.	3.8	18
11	Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISOS procedures. Nature Energy, 2020, 5, 35-49.	39.5	797
12	Perovskite: Name Puzzle and Germanâ€Russian Odyssey of Discovery. Helvetica Chimica Acta, 2020, 103, e2000061.	1.6	51
13	Preparation and stabilization of C60-carbon nanotube exohedral hybrids with controlled nano-morphology. SN Applied Sciences, 2019, 1, 1.	2.9	2
14	Impact of P3HT materials properties and layer architecture on OPV device stability. Solar Energy Materials and Solar Cells, 2019, 202, 110151.	6.2	17
15	Bias-dependent degradation of various solar cells: lessons for stability of perovskite photovoltaics. Energy and Environmental Science, 2019, 12, 550-558.	30.8	84
16	Hybrid organic nanocrystal/carbon nanotube film electrodes for air- and photo-stable perovskite photovoltaics. Nanoscale, 2019, 11, 3733-3740.	5.6	14
17	Initial photo-degradation of PCDTBT:PC70BM solar cells studied under various illumination conditions: Role of the hole transport layer. Solar Energy, 2019, 183, 234-239.	6.1	9
18	Up-Conversion Threshold under Concentrated Sunlight. , 2019, , .		0

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19	In-Situ Photoluminescence Kinetics of Lead Halide Perovskites under Sunlight Excitation. , 2019, , .		0
20	Reconsidering figures of merit for performance and stability of perovskite photovoltaics. Energy and Environmental Science, 2018, 11, 739-743.	30.8	79
21	Donorâ€“acceptor photovoltaic polymers based on 1,4â€dithienylâ€2,5â€dialkoxybenzene with intramolecular noncovalent interactions. Journal of Polymer Science Part A, 2018, 56, 689-698.	2.3	8
22	Dynamics of Photoinduced Degradation of Perovskite Photovoltaics: From Reversible to Irreversible Processes. ACS Applied Energy Materials, 2018, 1, 799-806.	5.1	85
23	Concentrated Sunlight for Materials Synthesis and Diagnostics. Advanced Materials, 2018, 30, e1800444.	21.0	12
24	Assessing high-temperature photovoltaic performance for solar hybrid power plants. Solar Energy Materials and Solar Cells, 2018, 182, 61-67.	6.2	26
25	Lead iodide as a buffer layer in UV-induced degradation of CH3NH3PbI3 films. Solar Energy, 2018, 159, 794-799.	6.1	28
26	All carbon non-covalent exohedral hybrids: C60 aggregates on nanotube networks. Journal of Energy Chemistry, 2018, 27, 957-961.	12.9	7
27	A Solution-Processed Tetra-Alkoxylated Zinc Phthalocyanine as Hole Transporting Material for Emerging Photovoltaic Technologies. International Journal of Photoenergy, 2018, 2018, 1-9.	2.5	1
28	UV-Cross-linkable Donorâ€“Acceptor Polymers Bearing a Photostable Conjugated Backbone for Efficient and Stable Organic Photovoltaics. ACS Applied Materials & Interfaces, 2018, 10, 35430-35440.	8.0	22
29	Stability of organic solar cells with PCDTBT donor polymer: An interlaboratory study. Journal of Materials Research, 2018, 33, 1909-1924.	2.6	17
30	Performance bounds and perspective for hybrid solar photovoltaic/thermal electricity-generation strategies. Sustainable Energy and Fuels, 2018, 2, 2060-2067.	4.9	26
31	Mutual Composition Transformations Among 2D/3D Organolead Halide Perovskites and Mechanisms Behind. Solar Rrl, 2018, 2, 1800125.	5.8	17
32	Outdoor operation of small-molecule organic photovoltaics. Organic Electronics, 2017, 41, 274-279.	2.6	17
33	Effect of Electronâ€Transport Material on Lightâ€Induced Degradation of Inverted Planar Junction Perovskite Solar Cells. Advanced Energy Materials, 2017, 7, 1700476.	19.5	103
34	Light-induced generation of free radicals by fullerene derivatives: an important degradation pathway in organic photovoltaics?. Journal of Materials Chemistry A, 2017, 5, 8044-8050.	10.3	46
35	Temperature and spectral dependence of CH3NH3PbI3 films photoconductivity. Applied Physics Letters, 2017, 110, .	3.3	15
36	Application of luminescence downshifting materials for enhanced stability of CH3NH3PbI3(1-x)Cl3x perovskite photovoltaic devices. Organic Electronics, 2017, 49, 129-134.	2.6	25

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37	High quality large single crystals of metal halide perovskites for optoelectronic applications. Science China Chemistry, 2017, 60, 1326-1327.	8.2	2
38	Band Gap Engineering of Multi-Junction Solar Cells: Effects of Series Resistances and Solar Concentration. Scientific Reports, 2017, 7, 1766.	3.3	39
39	Identifying Fundamental Limitations in Halide Perovskite Solar Cells. Advanced Materials, 2016, 28, 2439-2445.	21.0	129
40	Efficient solar cells are more stable: the impact of polymer molecular weight on performance of organic photovoltaics. Journal of Materials Chemistry A, 2016, 4, 7274-7280.	10.3	66
41	Reliability of Small Molecule Organic Photovoltaics with Electronâ€Filtering Compound Buffer Layers. Advanced Energy Materials, 2016, 6, 1601094.	19.5	28
42	Effect of Halide Composition on the Photochemical Stability of Perovskite Photovoltaic Materials. ChemSusChem, 2016, 9, 2572-2577.	6.8	62
43	Assessing the outdoor photochemical stability of conjugated polymers by EPR spectroscopy. Journal of Materials Chemistry A, 2016, 4, 13166-13170.	10.3	13
44	Fullerenes, Polyhedra, and Chinese Guardian Lions. Mathematical Intelligencer, 2016, 38, 61-68.	0.2	1
45	Bucky-corn: van der Waals composite of carbon nanotube coated by fullerenes. Molecular Physics, 2016, 114, 92-101.	1.7	7
46	Reversible degradation in ITO-containing organic photovoltaics under concentrated sunlight. Physical Chemistry Chemical Physics, 2015, 17, 3891-3897.	2.8	29
47	Temperature- and Component-Dependent Degradation of Perovskite Photovoltaic Materials under Concentrated Sunlight. Journal of Physical Chemistry Letters, 2015, 6, 326-330.	4.6	472
48	Geometrical Analysis of Radiolaria and Fullerene Structures: Who Gets the Credit?. Mathematical Intelligencer, 2014, 36, 34-36.	0.2	1
49	Worldwide outdoor round robin study of organic photovoltaic devices and modules. Solar Energy Materials and Solar Cells, 2014, 130, 281-290.	6.2	23
50	Temperature dynamics of multijunction concentrator solar cells up to ultraâ€high irradiance. Progress in Photovoltaics: Research and Applications, 2013, 21, 202-208.	8.1	57
51	Basic aspects of the temperature coefficients of concentrator solar cell performance parameters. Progress in Photovoltaics: Research and Applications, 2013, 21, 1087-1094.	8.1	40
52	Interlaboratory outdoor stability studies of flexible roll-to-roll coated organic photovoltaic modules: Stability over 10,000 h. Solar Energy Materials and Solar Cells, 2013, 116, 187-196.	6.2	107
53	Photovoltaic performance enhancement by external recycling of photon emission. Energy and Environmental Science, 2013, 6, 1499.	30.8	53
54	Light-induced electron paramagnetic resonance evidence of charge transfer in electrospun fibers containing conjugated polymer/fullerene and conjugated polymer/fullerene/carbon nanotube blends. Applied Physics Letters, 2012, 100, 113303.	3.3	6

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55	Accelerated stability testing of organic photovoltaics using concentrated sunlight. , 2012, , .		3
56	Temperature coefficients of concentrator solar cells up to ultra-high irradiance. , 2012, , .		2
57	Irradiance-dependent current-limiting behavior of multijunction solar cells. , 2012, , .		0
58	Multiple-bandgap vertical-junction architectures for ultra-efficient concentrator solar cells. Energy and Environmental Science, 2012, 5, 8523.	30.8	24
59	Conjugated polymers â€•carbon nanotubesâ€based functional materials for organic photovoltaics: a critical review. Polymers for Advanced Technologies, 2012, 23, 1129-1140.	3.2	58
60	Open-circuit voltage of organic photovoltaics: Implications of the generalized Einstein relation for disordered semiconductors. Solar Energy Materials and Solar Cells, 2012, 97, 132-138.	6.2	19
61	Enhancing functionality of ZnO hole blocking layer in organic photovoltaics. Solar Energy Materials and Solar Cells, 2012, 98, 491-493.	6.2	56
62	Reversible degradation of inverted organic solar cells by concentrated sunlight. Nanotechnology, 2011, 22, 225401.	2.6	35
63	Origin of size effect on efficiency of organic photovoltaics. Journal of Applied Physics, 2011, 109, 074508.	2.5	59
64	Study of organic photovoltaics by localized concentrated sunlight: Towards optimization of charge collection in large-area solar cells. Applied Physics Letters, 2011, 99, .	3.3	27
65	Spinoza and the Icosahedron. Mathematical Intelligencer, 2011, 33, 77-77.	0.2	0
66	An inter-laboratory stability study of roll-to-roll coated flexible polymer solar modules. Solar Energy Materials and Solar Cells, 2011, 95, 1398-1416.	6.2	132
67	Consensus stability testing protocols for organic photovoltaic materials and devices. Solar Energy Materials and Solar Cells, 2011, 95, 1253-1267.	6.2	812
68	Electrospun fibers of functional nanocomposites composed of singleâ€walled carbon nanotubes, fullerene derivatives, and poly(3â€hexylthiophene). Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 1263-1268.	2.1	16
69	Electrical and Photoâ€Induced Degradation of ZnO Layers in Organic Photovoltaics. Advanced Energy Materials, 2011, 1, 836-843.	19.5	123
70	Innentitelbild: MoS2 Hybrid Nanostructures: From Octahedral to Quasi-Spherical Shells within Individual Nanoparticles (Angew. Chem. 8/2011). Angewandte Chemie, 2011, 123, 1766-1766.	2.0	0
71	Inside Cover: MoS2 Hybrid Nanostructures: From Octahedral to Quasi-Spherical Shells within Individual Nanoparticles (Angew. Chem. Int. Ed. 8/2011). Angewandte Chemie - International Edition, 2011, 50, 1728-1728.	13.8	0
72	MoS₂ Hybrid Nanostructures: From Octahedral to Quasiâ€Spherical Shells within Individual Nanoparticles. Angewandte Chemie - International Edition, 2011, 50, 1810-1814.	13.8	62

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73	Current-limiting behavior in multijunction solar cells. Applied Physics Letters, 2011, 98, .	3.3	27
74	Synthesis of Inorganic Fullereneâ€like Nanostructures by Concentrated Solar and Artificial Light. Israel Journal of Chemistry, 2010, 50, 417-425.	2.3	20
75	Effects of concentrated sunlight on organic photovoltaics. Applied Physics Letters, 2010, 96, 073501.	3.3	69
76	Localized irradiation effects on tunnel diode transitions in multi-junction concentrator solar cells. Solar Energy Materials and Solar Cells, 2009, 93, 1692-1695.	6.2	42
77	Singular MoS₂, SiO₂and Si nanostructuresâ€”synthesis by solar ablation. Journal of Materials Chemistry, 2008, 18, 458-462.	6.7	35
78	High-flux characterization of ultrasmall multijunction concentrator solar cells. Applied Physics Letters, 2007, 91, .	3.3	39
79	Effects of ultra-high flux and intensity distribution in multi-junction solar cells. Progress in Photovoltaics: Research and Applications, 2006, 14, 297-303.	8.1	45
80	Out-door testing and long-term stability of plastic solar cells. EPJ Applied Physics, 2006, 36, 307-311.	0.7	111
81	Photovoltaic characterization of concentrator solar cells by localized irradiation. Journal of Applied Physics, 2006, 100, 044514.	2.5	66
82	Photovoltaic hysteresis and its ramifications for concentrator solar cell design and diagnostics. Applied Physics Letters, 2005, 86, 073508.	3.3	22
83	Carbon Encapsulated Magnetic Nanoparticles Produced by a Catalytic Disproportionation of Carbon Monoxide. Materials Research Society Symposia Proceedings, 2005, 877, 1.	0.1	0
84	Thin Glassy Carbon Coating for Protection Against Oxygen Penetration into the C60 Fullerite. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 12, 187-191.	2.1	3
85	Toward ultrahigh-flux photovoltaic concentration. Applied Physics Letters, 2004, 84, 3642-3644.	3.3	87
86	Electrodiffusion phenomena in C60 thin films. Physics of the Solid State, 2002, 44, 493-496.	0.6	1
87	Potential of fullerene-based materials for the utilization of solar energy. Physics of the Solid State, 2002, 44, 647-651.	0.6	4
88	Temperature dependence for the photovoltaic device parameters of polymer-fullerene solar cells under operating conditions. Journal of Applied Physics, 2001, 90, 5343-5350.	2.5	184
89	Changes in the photoelectrical properties and generation of photoinduced defects under light/air exposure of C60 thin films. Journal of Applied Physics, 1998, 84, 3333-3337.	2.5	23
90	A Photovoltaic C₆₀-Si Heterojunction. Fullerenes, Nanotubes, and Carbon Nanostructures, 1998, 6, 103-111.	0.6	14

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91	Initial Stages of Phoodegradation of MAPBI3 Perovskite: Accelerated Study by Concentrated Sunlight. , 0, , .		0
92	Bias-Dependent Stability of Perovskite Solar Cells: Degradation Mechanisms Reconsidered. , 0, , .		0
93	Naphthalene dithiol additive reduces trap-assisted recombination and improves outdoor operational stability of organic solar cells. Sustainable Energy and Fuels, 0, , .	4.9	1