Erik C Garnett

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

91 papers	12,460 citations	37 h-index	97 g-index
97 ext. papers	13,887 ext. citations	13.9 avg, IF	6.76 L-index

#	Paper	IF	Citations
91	Enhanced thermoelectric performance of rough silicon nanowires. *Nature*, **2008**, 451, 163-7	50.4	3293
90	Light trapping in silicon nanowire solar cells. *Nano Letters*, **2010**, 10, 1082-7	11.5	1783
89	Photovoltaic materials: Present efficiencies and future challenges. *Science*, **2016**, 352, aad4424	33.3	1192
88	Self-limited plasmonic welding of silver nanowire junctions. *Nature Materials*, **2012**, 11, 241-9	27	891
87	Silicon nanowire radial p-n junction solar cells. *Journal of the American Chemical Society*, **2008**, 130, 9224-5	15.4	774
86	Nanowire Solar Cells. *Annual Review of Materials Research*, **2011**, 41, 269-295	12.8	493
85	Hybrid silicon nanocone-polymer solar cells. *Nano Letters*, **2012**, 12, 2971-6	11.5	380
84	Oligo- and polythiophene/ZnO hybrid nanowire solar cells. *Nano Letters*, **2010**, 10, 334-40	11.5	370
83	Indirect to direct bandgap transition in methylammonium lead halide perovskite. *Energy and Environmental Science*, **2017**, 10, 509-515	35.4	237
82	Passivation coating on electrospun copper nanofibers for stable transparent electrodes. *ACS Nano*, **2012**, 6, 5150-6	16.7	161
81	Dopant profiling and surface analysis of silicon nanowires using capacitance-voltage measurements. *Nature Nanotechnology*, **2009**, 4, 311-4	28.7	145
80	Nanoscale chiral valley-photon interface through optical spin-orbit coupling. *Science*, **2018**, 359, 443-447	33.3	141
79	Metamaterial mirrors in optoelectronic devices. *Nature Nanotechnology*, **2014**, 9, 542-7	28.7	136
78	Interfacial engineering of metal-insulator-semiconductor junctions for efficient and stable photoelectrochemical water oxidation. *Nature Communications*, **2017**, 8, 15968	17.4	132
77	Large-area free-standing ultrathin single-crystal silicon as processable materials. *Nano Letters*, **2013**, 13, 4393-8	11.5	126
76	Optimization of non-periodic plasmonic light-trapping layers for thin-film solar cells. *Nature Communications*, **2013**, 4, 2095	17.4	107
75	The expanding world of hybrid perovskites: materials properties and emerging applications. *MRS Communications*, **2015**, 5, 7-26	2.7	105

74	Local Crystal Misorientation Influences Non-radiative Recombination in Halide Perovskites. *Joule*, **2019**, 3, 3048-3060	27.8	99
73	Understanding Detrimental and Beneficial Grain Boundary Effects in Halide Perovskites. *Advanced Materials*, **2018**, 30, e1804792	24	90
72	Solution-Grown Silver Nanowire Ordered Arrays as Transparent Electrodes. *Advanced Materials*, **2016**, 28, 905-9	24	89
71	Extreme light absorption in thin semiconductor films wrapped around metal nanowires. *Nano Letters*, **2013**, 13, 3173-8	11.5	81
70	Growth and Electrical Characteristics of Platinum-Nanoparticle-Catalyzed Silicon Nanowires. *Advanced Materials*, **2007**, 19, 2946-2950	24	79
69	Fast and scalable printing of large area monolayer nanoparticles for nanotexturing applications. *Nano Letters*, **2010**, 10, 2989-94	11.5	76
68	Carrier Diffusion Lengths in Hybrid Perovskites: Processing, Composition, Aging, and Surface Passivation Effects. *Chemistry of Materials*, **2016**, 28, 5259-5263	9.6	74
67	Nanoscale Back Contact Perovskite Solar Cell Design for Improved Tandem Efficiency. *Nano Letters*, **2017**, 17, 5206-5212	11.5	72
66	Direct Observation of Halide Migration and its Effect on the Photoluminescence of Methylammonium Lead Bromide Perovskite Single Crystals. *Advanced Materials*, **2017**, 29, 1703451	24	68
65	Absorption of light in a single-nanowire silicon solar cell decorated with an octahedral silver nanocrystal. *Nano Letters*, **2011**, 11, 5189-95	11.5	65
64	Measuring n and k at the Microscale in Single Crystals of CH3NH3PbBr3 Perovskite. *Journal of Physical Chemistry C*, **2016**, 120, 616-620	3.8	58
63	Introduction: 1D Nanomaterials/Nanowires. *Chemical Reviews*, **2019**, 119, 8955-8957	68.1	56
62	Effects of Nafion as a binding agent for unsupported nanoparticle catalysts. *Journal of Power Sources*, **2003**, 115, 35-39	8.9	53
61	Fundamentals of the nanowire solar cell: Optimization of the open circuit voltage. *Applied Physics Reviews*, **2018**, 5, 031106	17.3	51
60	Halide Perovskite 3D Photonic Crystals for Distributed Feedback Lasers. *ACS Photonics*, **2017**, 4, 2522-2528	6.9	47
59	Boosting Solar Cell Photovoltage via Nanophotonic Engineering. *Nano Letters*, **2016**, 16, 6467-6471	11.5	47
58	Photovoltaics Reaching for the Shockley□Queisser Limit. *ACS Energy Letters*, **2020**, 5, 3029-3033	20.1	46
57	Increasing Photoluminescence Quantum Yield by Nanophotonic Design of Quantum-Confined Halide Perovskite Nanowire Arrays. *Nano Letters*, **2019**, 19, 2850-2857	11.5	44

56	General Considerations for Improving Photovoltage in Metal-Insulator-Semiconductor Photoanodes. *Journal of Physical Chemistry C*, **2018**, 122, 5462-5471	3.8	40
55	Shape-preserving transformation of carbonate minerals into lead halide perovskite semiconductors based on ion exchange/insertion reactions. *Nature Chemistry*, **2018**, 10, 740-745	17.6	37
54	Controlling crystallization to imprint nanophotonic structures into halide perovskites using soft lithography. *Journal of Materials Chemistry C*, **2017**, 5, 8301-8307	7.1	37
53	Opportunities and Limitations for Nanophotonic Structures To Exceed the Shockley-Queisser Limit. *ACS Nano*, **2016**, 10, 8620-31	16.7	37
52	Quantifying losses and thermodynamic limits in nanophotonic solar cells. *Nature Nanotechnology*, **2016**, 11, 1071-1075	28.7	36
51	Resonant Nanophotonic Spectrum Splitting for Ultrathin Multijunction Solar Cells. *ACS Photonics*, **2015**, 2, 816-821	6.3	34
50	Preparation of Organometal Halide Perovskite Photonic Crystal Films for Potential Optoelectronic Applications. *ACS Applied Materials & Interfaces*, **2016**, 8, 25489-95	9.5	34
49	Perovskite Nanowire Extrusion. *Nano Letters*, **2017**, 17, 6557-6563	11.5	33
48	A monolithic immersion metalens for imaging solid-state quantum emitters. *Nature Communications*, **2019**, 10, 2392	17.4	33
47	Engineering the kinetics and interfacial energetics of Ni/NiMo catalyzed amorphous silicon carbide photocathodes in alkaline media. *Journal of Materials Chemistry A*, **2016**, 4, 6842-6852	13	30
46	Photonics for Photovoltaics: Advances and Opportunities. *ACS Photonics*, **2021**, 8, 61-70	6.3	26
45	Growth and Characterization of PDMS-Stamped Halide Perovskite Single Microcrystals. *Journal of Physical Chemistry C*, **2016**, 120, 6475-6481	3.8	23
44	Transparent Quasi-Interdigitated Electrodes for Semitransparent Perovskite Back-Contact Solar Cells. *ACS Applied Energy Materials*, **2018**, 1, 4473-4478	6.1	23
43	Solution-phase epitaxial growth of quasi-monocrystalline cuprous oxide on metal nanowires. *Nano Letters*, **2014**, 14, 5891-8	11.5	23
42	Charge carrier-selective contacts for nanowire solar cells. *Nature Communications*, **2018**, 9, 3248	17.4	22
41	Metal-Insulator-Semiconductor Nanowire Network Solar Cells. *Nano Letters*, **2016**, 16, 3689-95	11.5	22
40	Integrating Sphere Microscopy for Direct Absorption Measurements of Single Nanostructures. *ACS Nano*, **2017**, 11, 1412-1418	16.7	20
39	Controlling Optically Driven Atomic Migration Using Crystal-Facet Control in Plasmonic Nanocavities. *ACS Nano*, **2020**, 14, 10562-10568	16.7	18

38	Broadband highly directive 3D nanophotonic lenses. *Nature Communications*, **2018**, 9, 4742	17.4	18
37	Super-resolution imaging of light-matter interactions near single semiconductor nanowires. *Nature Communications*, **2016**, 7, 13950	17.4	17
36	Transformation of Ag nanowires into semiconducting AgFeS2 nanowires. *Journal of the American Chemical Society*, **2015**, 137, 4340-3	16.4	16
35	Au-Cu2O core-shell nanowire photovoltaics. *Applied Physics Letters*, **2015**, 106, 023501	3.4	16
34	Spatial Resolution of Coherent Cathodoluminescence Super-Resolution Microscopy. *ACS Photonics*, **2019**, 6, 1067-1072	6.3	15
33	3D multi-energy deconvolution electron microscopy. *Nanoscale*, **2017**, 9, 684-689	7.7	13
32	Monocrystalline Nanopatterns Made by Nanocube Assembly and Epitaxy. *Advanced Materials*, **2017**, 29, 1701064	24	12
31	The Application of Electron Backscatter Diffraction on Halide Perovskite Materials. *Advanced Energy Materials*, **2020**, 10, 2000364	21.8	12
30	Perovskite solar cells with a hybrid electrode structure. *AIP Advances*, **2019**, 9, 125037	1.5	12
29	Tunable plasmonic HfN nanoparticles and arrays. *Nanoscale*, **2019**, 11, 20252-20260	7.7	11
28	Self-Optimized Catalysts: Hot-Electron Driven Photosynthesis of Catalytic Photocathodes. *ACS Applied Materials & Interfaces*, **2019**, 11, 35713-35719	9.5	10
27	Energy-resolved plasmonic chemistry in individual nanoreactors. *Nature Nanotechnology*, **2021**,	28.7	10
26	Nanocube Imprint Lithography. *ACS Nano*, **2020**, 14, 11009-11016	16.7	10
25	Close-Packed Ultrasmooth Self-assembled Monolayer of CsPbBr Perovskite Nanocubes. *ACS Applied Materials & Interfaces*, **2020**, 12, 31764-31769	9.5	9
24	Using Hot Electrons and Hot Holes for Simultaneous Cocatalyst Deposition on Plasmonic Nanostructures. *ACS Applied Materials & Interfaces*, **2020**, 12, 35986-35994	9.5	9
23	Phase-Resolved Surface Plasmon Scattering Probed by Cathodoluminescence Holography. *ACS Photonics*, **2020**, 7, 1476-1482	6.3	8
22	Direct write contacts for solar cells		8
21	Nanophotonic Emission Control for Improved Photovoltaic Efficiency. *ACS Photonics*, **2020**, 7, 1589-1602	6.3	6

20	Silicon nanowire hybrid photovoltaics **2010**,		6
19	Ultrafast Photoinduced Heat Generation by Plasmonic HfN Nanoparticles. *Advanced Optical Materials*, **2021**, 9, 2100510	8.1	6
18	Nano-antenna enhanced two-focus fluorescence correlation spectroscopy. *Scientific Reports*, **2017**, 7, 5985	4.9	5
17	Ultrafast Thermal Imprinting of Plasmonic Hotspots. *Advanced Materials*, **2021**, e2105192	24	5
16	AgFeS -Nanowire-Modified BiVO Photoanodes for Photoelectrochemical Water Splitting. *ChemPlusChem*, **2016**, 81, 1075-1082	2.8	5
15	Surface recombination velocity of methylammonium lead bromide nanowires in anodic aluminium oxide templates. *Molecular Systems Design and Engineering*, **2018**, 3, 723-728	4.6	5
14	Generalized antireflection coatings for complex bulk metamaterials. *Physical Review B*, **2016**, 93,	3.3	4
13	Passivation Properties and Formation Mechanism of Amorphous Halide Perovskite Thin Films. *Advanced Functional Materials*, **2021**, 31, 2010330	15.6	4
12	Benchmarking photoactive thin-film materials using a laser-induced steady-state photocarrier grating. *Progress in Photovoltaics: Research and Applications*, **2017**, 25, 605-613	6.8	3
11	Shaping Tin Nanocomposites through Transient Local Conversion Reactions. *Crystal Growth and Design*, **2021**, 21, 4500-4505	3.5	3
10	Unlocking Higher Power Efficiencies in Luminescent Solar Concentrators through Anisotropic Luminophore Emission. *ACS Applied Materials & Interfaces*, **2021**, 13, 40742-40753	9.5	3
9	Recombination and localization: Unfolding the pathways behind conductivity losses in Cs2AgBiBr6 thin films. *Applied Physics Letters*, **2021**, 119, 131908	3.4	3
8	Quantifying Strain and Dislocation Density at Nanocube Interfaces after Assembly and Epitaxy. *ACS Applied Materials & Interfaces*, **2020**, 12, 8788-8794	9.5	2
7	Intermittency of CsPbBr Perovskite Quantum Dots Analyzed by an Unbiased Statistical Analysis. *Journal of Physical Chemistry C*, **2021**, 125, 12061-12072	3.8	2
6	Direct Patterning of CsPbBr Nanocrystals via Electron-Beam Lithography.. *ACS Applied Energy Materials*, **2022**, 5, 1672-1680	6.1	1
5	Fano Lineshapes and Rabi Splittings: Can They Be Artificially Generated or Obscured by the Numerical Aperture?. *ACS Photonics*, **2021**, 8, 1271-1276	6.3	1
4	Localized photodeposition of catalysts using nanophotonic resonances in silicon photocathodes. *Beilstein Journal of Nanotechnology*, **2018**, 9, 2097-2105	3	0
3	Directional quantum dot emission by soft-stamping on silicon Mie resonators.. *Nanoscale Advances*, **2022**, 4, 1088-1097	5.1	0

2 Integrating Sphere Fourier Microscopy of Highly Directional Emission. *ACS Photonics*, **2021**, 8, 1143-11516.3 0

1 Enhanced thermoelectric performance of rough silicon nanowires **2010**, 111-115