

Kevin A Bush

List of Publications by Year in descending order

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29
papers

6,506
citations

236925

25
h-index

580821

25
g-index

29
all docs

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docs citations

29
times ranked

7110
citing authors

#	ARTICLE	IF	CITATIONS
1	23.6%-efficient monolithic perovskite/silicon tandem solar cells with improved stability. <i>Nature Energy</i> , 2017, 2, .	39.5	1,204
2	Perovskite-perovskite tandem photovoltaics with optimized band gaps. <i>Science</i> , 2016, 354, 861-865.	12.6	1,107
3	Opportunities and challenges for tandem solar cells using metal halide perovskite semiconductors. <i>Nature Energy</i> , 2018, 3, 828-838.	39.5	716
4	Thermal and Environmental Stability of Semi-transparent Perovskite Solar Cells for Tandems Enabled by a Solution-Processed Nanoparticle Buffer Layer and Sputtered ITO Electrode. <i>Advanced Materials</i> , 2016, 28, 3937-3943.	21.0	419
5	Compositional Engineering for Efficient Wide Band Gap Perovskites with Improved Stability to Photoinduced Phase Segregation. <i>ACS Energy Letters</i> , 2018, 3, 428-435.	17.4	344
6	Towards enabling stable lead halide perovskite solar cells; interplay between structural, environmental, and thermal stability. <i>Journal of Materials Chemistry A</i> , 2017, 5, 11483-11500.	10.3	319
7	Design and understanding of encapsulated perovskite solar cells to withstand temperature cycling. <i>Energy and Environmental Science</i> , 2018, 11, 144-150.	30.8	314
8	Engineering Stress in Perovskite Solar Cells to Improve Stability. <i>Advanced Energy Materials</i> , 2018, 8, 1802139.	19.5	271
9	Encapsulating perovskite solar cells to withstand damp heat and thermal cycling. <i>Sustainable Energy and Fuels</i> , 2018, 2, 2398-2406.	4.9	231
10	Minimizing Current and Voltage Losses to Reach 25% Efficient Monolithic Two-Terminal Perovskite-Silicon Tandem Solar Cells. <i>ACS Energy Letters</i> , 2018, 3, 2173-2180.	17.4	194
11	Impact of Surfaces on Photoinduced Halide Segregation in Mixed-Halide Perovskites. <i>ACS Energy Letters</i> , 2018, 3, 2694-2700.	17.4	184
12	Barrier Design to Prevent Metal-Induced Degradation and Improve Thermal Stability in Perovskite Solar Cells. <i>ACS Energy Letters</i> , 2018, 3, 1772-1778.	17.4	182
13	Tin-lead halide perovskites with improved thermal and air stability for efficient all-perovskite tandem solar cells. <i>Sustainable Energy and Fuels</i> , 2018, 2, 2450-2459.	4.9	167
14	Controlling Thin-Film Stress and Wrinkling during Perovskite Film Formation. <i>ACS Energy Letters</i> , 2018, 3, 1225-1232.	17.4	148
15	Structural Origins of Light-Induced Phase Segregation in Organic-Inorganic Halide Perovskite Photovoltaic Materials. <i>Matter</i> , 2020, 2, 207-219.	10.0	128
16	Optical modeling of wide-bandgap perovskite and perovskite/silicon tandem solar cells using complex refractive indices for arbitrary-bandgap perovskite absorbers. <i>Optics Express</i> , 2018, 26, 27441.	3.4	102
17	Improved light management in planar silicon and perovskite solar cells using PDMS scattering layer. <i>Solar Energy Materials and Solar Cells</i> , 2017, 173, 59-65.	6.2	82
18	Atomic layer deposition of vanadium oxide to reduce parasitic absorption and improve stability in n-i-p perovskite solar cells for tandems. <i>Sustainable Energy and Fuels</i> , 2019, 3, 1517-1525.	4.9	76

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19	Interfacial Effects of Tin Oxide Atomic Layer Deposition in Metal Halide Perovskite Photovoltaics. <i>Advanced Energy Materials</i> , 2018, 8, 1800591.	19.5	62
20	Series Resistance Measurements of Perovskite Solar Cells Using V_{oc} Measurements. <i>Solar Rrl</i> , 2019, 3, 1800378.	5.8	61
21	In Situ Measurement of Electric-Field Screening in Hysteresis-Free PTAA/FA _{0.83} Cs _{0.17} Pb(I _{0.83} Br _{0.17}) ₃ /C60 Perovskite Solar Cells Gives an Ion Mobility of $\sim 10^{-7}$ cm ² /(V s), 2 Orders of Magnitude Faster than Reported for Metal-Oxide-Contacted Perovskite Cells with Hysteresis. <i>Journal of the American Chemical Society</i> , 2018, 140, 12775-12784.	13.7	47
22	Cross-Linkable, Solvent-Resistant Fullerene Contacts for Robust and Efficient Perovskite Solar Cells with Increased J_{sc} and V_{oc} . <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 25896-25904.	8.0	45
23	Synthesis and use of a hyper-connecting cross-linking agent in the hole-transporting layer of perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 19267-19279.	10.3	38
24	Incorporating Electrochemical Halide Oxidation into Drift-Diffusion Models to Explain Performance Losses in Perovskite Solar Cells under Prolonged Reverse Bias. <i>Advanced Energy Materials</i> , 2021, 11, 2002614.	19.5	34
25	Developing a Robust Recombination Contact to Realize Monolithic Perovskite Tandems With Industrially Common p-Type Silicon Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2018, 8, 1023-1028.	2.5	27
26	Current-matching in two-terminal perovskite/silicon tandems employing wide-bandgap perovskites and varying light-management schemes. , 2018, , .		4
27	Cross-linkable styrene-functionalized fullerenes as electron-selective contacts for robust and efficient perovskite solar cells. , 2016, , .		0
28	Highly Efficient and Stable Perovskite-Silicon Tandem Solar Cells. , 2019, , .		0
29	Designing Contact Layers and Surface Treatments to Overcome Performance Challenges for Perovskite Tandems. , 0, , .		0