Sarah Wieghold

List of Publications by Year
in descending order

47	2,215	361413	243625
papers	citations	20 h-index	44 g-index

49	49	49	3477
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An interface stabilized perovskite solar cell with high stabilized efficiency and low voltage loss. Energy and Environmental Science, 2019, 12, 2192-2199.	30.8	542
2	Homogenized halides and alkali cation segregation in alloyed organic-inorganic perovskites. Science, 2019, 363, 627-631.	12.6	258
3	Sensitization of silicon by singlet exciton fission in tetracene. Nature, 2019, 571, 90-94.	27.8	221
4	A-Site Cation in Inorganic A₃Sb₂I₉ Perovskite Influences Structural Dimensionality, Exciton Binding Energy, and Solar Cell Performance. Chemistry of Materials, 2018, 30, 3734-3742.	6.7	134
5	Triplet-Sensitization by Lead Halide Perovskite Thin Films for Near-Infrared-to-Visible Upconversion. ACS Energy Letters, 2019, 4, 888-895.	17.4	117
6	Solvent-Engineering Method to Deposit Compact Bismuth-Based Thin Films: Mechanism and Application to Photovoltaics. Chemistry of Materials, 2018, 30, 336-343.	6.7	87
7	Revisiting thin silicon for photovoltaics: a technoeconomic perspective. Energy and Environmental Science, 2020, 13, 12-23.	30.8	85
8	Triplet Sensitization by Lead Halide Perovskite Thin Films for Efficient Solid-State Photon Upconversion at Subsolar Fluxes. Matter, 2019, 1, 705-719.	10.0	84
9	Precursor Concentration Affects Grain Size, Crystal Orientation, and Local Performance in Mixed-Ion Lead Perovskite Solar Cells. ACS Applied Energy Materials, 2018, 1, 6801-6808.	5.1	65
10	Influence of Triplet Diffusion on Lead Halide Perovskite-Sensitized Solid-State Upconversion. Journal of Physical Chemistry Letters, 2019, 10, 3806-3811.	4.6	51
11	Photoresponse of supramolecular self-assembled networks on grapheneâ€“diamond interfaces. Nature Communications, 2016, 7, 10700.	12.8	40
12	Precharging Photon Upconversion: Interfacial Interactions in Solution-Processed Perovskite Upconversion Devices. Journal of Physical Chemistry Letters, 2020, 11, 601-607.	4.6	36
13	Green-to-Blue Triplet Fusion Upconversion Sensitized by Anisotropic CdSe Nanoplatelets. Chemistry of Materials, 2020, 32, 4734-4742.	6.7	35
14	Is Disorder Beneficial in Perovskite-Sensitized Solid-State Upconversion? The Role of DBP Doping in Rubrene. Journal of Physical Chemistry C, 2020, 124, 18132-18140.	3.1	31
15	Halide Heterogeneity Affects Local Charge Carrier Dynamics in Mixed-Ion Lead Perovskite Thin Films. Chemistry of Materials, 2019, 31, 3712-3721.	6.7	27
16	Bulk halide perovskites as triplet sensitizers: progress and prospects in photon upconversion. Journal of Materials Chemistry C, 2021, 9, 2685-2694.	5.5	24
17	Ultrafast Triplet Generation at the Lead Halide Perovskite/Rubrene Interface. ACS Energy Letters, 2022, 7, 617-623.	17.4	24
18	Optoelectronic Switching of a Carbon Nanotube Chiral Junction Imaged with Nanometer Spatial Resolution. ACS Nano, 2015, 9, 10563-10570.	14.6	23

#	Article	IF	Citations
19	Solubility and Diffusivity: Important Metrics in the Search for the Root Cause of Light- and Elevated Temperature-Induced Degradation. IEEE Journal of Photovoltaics, 2018, 8, 448-455.	2.5	23
20	Phosphonic Acid Modification of the Electron Selective Contact: Interfacial Effects in Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 2402-2408.	5.1	23
21	Perovskite-sensitized upconversion bingo: Stoichiometry, composition, solvent, or temperature?. Journal of Chemical Physics, 2020, 153, 084703.	3.0	21
22	Three-Dimensional Bicomponent Supramolecular Nanoporous Self-Assembly on a Hybrid All-Carbon Atomically Flat and Transparent Platform. Nano Letters, 2014, 14, 4486-4492.	9.1	20
23	Halide Perovskites: A Progress Report on Photon Interconversion. Advanced Optical Materials, 2021, 9, 2001470.	7.3	20
24	Imaging Excited Orbitals of Quantum Dots: Experiment and Electronic Structure Theory. Journal of the American Chemical Society, 2015, 137, 14743-14750.	13.7	18
25	Oneâ€Step Fabrication of Perovskiteâ€Based Upconversion Devices. ChemPhotoChem, 2020, 4, 704-712.	3.0	17
26	Stressing Halide Perovskites with Light and Electric Fields. ACS Energy Letters, 2022, 7, 2211-2218.	17.4	16
27	Transparent Metal Films for Detection of Single-Molecule Optical Absorption by Scanning Tunneling Microscopy. Journal of Physical Chemistry C, 2014, 118, 13196-13202.	3.1	15
28	Detection of sub-500-Î¼m cracks in multicrystalline silicon wafer using edge-illuminated dark-field imaging to enable thin solar cell manufacturing. Solar Energy Materials and Solar Cells, 2019, 196, 70-77.	6.2	15
29	Probing Semiconductor Properties with Optical Scanning Tunneling Microscopy. Joule, 2020, 4, 524-538.	24.0	14
30	Design of a Submillimeter Crack-Detection Tool for Si Photovoltaic Wafers Using Vicinal Illumination and Dark-Field Scattering. IEEE Journal of Photovoltaics, 2018, 8, 1449-1456.	2.5	13
31	A perspective on triplet fusion upconversion: triplet sensitizers beyond quantum dots. MRS Communications, 2019, 9, 924-935.	1.8	13
32	Investigating the effect of electric fields on lead halide perovskites by scanning tunneling microscopy. Journal of Applied Physics, 2020, 128, .	2.5	13
33	Understanding the effect of light and temperature on the optical properties and stability of mixed-ion halide perovskites. Journal of Materials Chemistry C, 2020, 8, 9714-9723.	5.5	13
34	Efficiency of bulk perovskite-sensitized upconversion: Illuminating matters. Applied Physics Letters, 2021, 118, .	3.3	12
35	Crack detection in crystalline silicon solar cells using dark-field imaging. Energy Procedia, 2017, 124, 526-531.	1.8	10
36	Engineering 3D perovskites for photon interconversion applications. PLoS ONE, 2020, 15, e0230299.	2.5	10

#	Article	IF	Citations
37	Distribution and Charge State of Iron Impurities in Intentionally Contaminated Lead Halide Perovskites. IEEE Journal of Photovoltaics, 2018, 8, 156-161.	2.5	8
38	Mixed halide bulk perovskite triplet sensitizers: Interplay between band alignment, mid-gap traps, and phonons. Journal of Chemical Physics, 2021, 155, 234706.	3.0	8
39	Nanoscale properties of lead halide perovskites by scanning tunneling microscopy. EcoMat, 2021, 3, e12081.	11.9	6
40	Widespread opportunities for materials engineering of nanocrystals: Synthetically tailorable effects and methodologies. Matter, 2022, 5, 1645-1669.	10.0	6
41	Solid-state infrared-to-visible upconversion for sub-bandgap sensitization of photovoltaics. , 2018, , .		5
42	Interplay of Grain Size, Crystal Orientation, and Performance in Mixedion Lead Halide Perovskite Films. , 2018, , .		4
43	Impact of Transition Metal Doping on the Structural and Optical Properties of Halide Perovskites. Chemistry of Materials, 2021, 33, 6099-6107.	6.7	3
44	Au(111)-supported Platinum Nanoparticles: Ripening and Activity. MRS Advances, 2017, 2, 439-444.	0.9	1
45	Technoeconomic Analysis of Photovoltaics Module Manufacturing with Thin Silicon Wafers. , 2019, , .		1
46	Relaxation on the nanoscale: Probing transient dynamics by trSMA-STM. Matter, 2021, 4, 2680-2682.	10.0	1
47	Trap States Impact Photon Upconversion in Rubrene Sensitized by Lead Halide Perovskite Thin Films. SSRN Electronic Journal, 0, , .	0.4	1