Lea Nienhaus

List of Publications by Year
in descending order

66 papers	3,018 citations	236612 25 h-index	161609 54 g-index
79 all docs	79 docs citations	79 times ranked	4555 citing authors

#	Article	IF	Citations
1	Structure, function, and folding of phosphoglycerate kinase are strongly perturbed by macromolecular crowding. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17586-17591.	3.3	284
2	Searching for â€œDefect-Tolerantâ€•Photovoltaic Materials: Combined Theoretical and Experimental Screening. Chemistry of Materials, 2017, 29, 4667-4674.	3.2	275
3	Homogenized halides and alkali cation segregation in alloyed organic-inorganic perovskites. Science, 2019, 363, 627-631.	6.0	258
4	Enhanced charge carrier mobility and lifetime suppress hysteresis and improve efficiency in planar perovskite solar cells. Energy and Environmental Science, 2018, 11, 78-86.	15.6	246
5	Sensitization of silicon by singlet exciton fission in tetracene. Nature, 2019, 571, 90-94.	13.7	221
6	Strongly Enhanced Photovoltaic Performance and Defect Physics of Airâ€Stable Bismuth Oxyiodide (BiOI). Advanced Materials, 2017, 29, 1702176.	11.1	139
7	<i>A</i>-Site Cation in Inorganic <i>A</i>₃Sb₂I₉ Perovskite Influences Structural Dimensionality, Exciton Binding Energy, and Solar Cell Performance. Chemistry of Materials, 2018, 30, 3734-3742.	3.2	134
8	Speed Limit for Triplet-Exciton Transfer in Solid-State PbS Nanocrystal-Sensitized Photon Upconversion. ACS Nano, 2017, 11, 7848-7857.	7.3	130
9	Triplet-Sensitization by Lead Halide Perovskite Thin Films for Near-Infrared-to-Visible Upconversion. ACS Energy Letters, 2019, 4, 888-895.	8.8	117
10	High Tolerance to Iron Contamination in Lead Halide Perovskite Solar Cells. ACS Nano, 2017, 11, 7101-7109.	7.3	90
11	Role of Pressure in the Growth of Hexagonal Boron Nitride Thin Films from Ammonia-Borane. Chemistry of Materials, 2016, 28, 4169-4179.	3.2	85
12	Triplet Sensitization by Lead Halide Perovskite Thin Films for Efficient Solid-State Photon Upconversion at Subsolar Fluxes. Matter, 2019, 1, 705-719.	5.0	84
13	Using lead chalcogenide nanocrystals as spin mixers: a perspective on near-infrared-to-visible upconversion. Dalton Transactions, 2018, 47, 8509-8516.	1.6	65
14	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.	2.5	65
15	Influence of Triplet Diffusion on Lead Halide Perovskite-Sensitized Solid-State Upconversion. Journal of Physical Chemistry Letters, 2019, 10, 3806-3811.	2.1	51
16	Challenges, progress and prospects in solid state triplet fusion upconversion. Journal of Materials Chemistry C, 2022, 10, 7783-7798.	2.7	40
17	Precharging Photon Upconversion: Interfacial Interactions in Solution-Processed Perovskite Upconversion Devices. Journal of Physical Chemistry Letters, 2020, 11, 601-607.	2.1	36
18	Green-to-Blue Triplet Fusion Upconversion Sensitized by Anisotropic CdSe Nanoplatelets. Chemistry of Materials, 2020, 32, 4734-4742.	3.2	35

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19	Morphology of Passivating Organic Ligands around a Nanocrystal. Journal of Physical Chemistry C, 2018, 122, 26267-26274.	1.5	34
20	Bulk Metal Halide Perovskites as Triplet Sensitizers: Taking Charge of Upconversion. ACS Energy Letters, 2021, 6, 3686-3694.	8.8	33
21	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.	1.5	31
22	Colloidal atomic layer deposition growth of PbS/CdS core/shell quantum dots. Chemical Communications, 2017, 53, 869-872.	2.2	30
23	Multiexciton Lifetimes Reveal Triexciton Emission Pathway in CdSe Nanocrystals. Nano Letters, 2018, 18, 5153-5158.	4.5	27
24	Halide Heterogeneity Affects Local Charge Carrier Dynamics in Mixed-Ion Lead Perovskite Thin Films. Chemistry of Materials, 2019, 31, 3712-3721.	3.2	27
25	Red-to-Blue Photon Upconversion Enabled by One-Dimensional CdTe Nanorods. Chemistry of Materials, 2021, 33, 452-458.	3.2	27
26	Recent advancements in halide perovskite nanomaterials and their optoelectronic applications. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 962-986.	8.5	25
27	A Heterogeneous Kinetics Model for Triplet Exciton Transfer in Solid-State Upconversion. Journal of Physical Chemistry Letters, 2019, 10, 3147-3152.	2.1	24
28	Bulk halide perovskites as triplet sensitizers: progress and prospects in photon upconversion. Journal of Materials Chemistry C, 2021, 9, 2685-2694.	2.7	24
29	Ultrafast Triplet Generation at the Lead Halide Perovskite/Rubrene Interface. ACS Energy Letters, 2022, 7, 617-623.	8.8	24
30	Optoelectronic Switching of a Carbon Nanotube Chiral Junction Imaged with Nanometer Spatial Resolution. ACS Nano, 2015, 9, 10563-10570.	7.3	23
31	Phosphonic Acid Modification of the Electron Selective Contact: Interfacial Effects in Perovskite Solar Cells. ACS Applied Energy Materials, 2019, 2, 2402-2408.	2.5	23
32	Improving the Carrier Lifetime of Tin Sulfide via Prediction and Mitigation of Harmful Point Defects. Journal of Physical Chemistry Letters, 2017, 8, 3661-3667.	2.1	22
33	Perovskite-sensitized upconversion bingo: Stoichiometry, composition, solvent, or temperature?. Journal of Chemical Physics, 2020, 153, 084703.	1.2	21
34	Halide Perovskites: A Progress Report on Photon Interconversion. Advanced Optical Materials, 2021, 9, 2001470.	3.6	20
35	Imaging Excited Orbitals of Quantum Dots: Experiment and Electronic Structure Theory. Journal of the American Chemical Society, 2015, 137, 14743-14750.	6.6	18
36	Oneâ€Step Fabrication of Perovskiteâ€Based Upconversion Devices. ChemPhotoChem, 2020, 4, 704-712.	1.5	17

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37	Stressing Halide Perovskites with Light and Electric Fields. ACS Energy Letters, 2022, 7, 2211-2218.	8.8	16
38	Transparent Metal Films for Detection of Single-Molecule Optical Absorption by Scanning Tunneling Microscopy. Journal of Physical Chemistry C, 2014, 118, 13196-13202.	1.5	15
39	Plasmonic support-mediated activation of 1 nm platinum clusters for catalysis. Physical Chemistry Chemical Physics, 2017, 19, 30570-30577.	1.3	14
40	Probing Semiconductor Properties with Optical Scanning Tunneling Microscopy. Joule, 2020, 4, 524-538.	11.7	14
41	A perspective on triplet fusion upconversion: triplet sensitizers beyond quantum dots. MRS Communications, 2019, 9, 924-935.	0.8	13
42	Investigating the effect of electric fields on lead halide perovskites by scanning tunneling microscopy. Journal of Applied Physics, 2020, 128, .	1.1	13
43	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.	2.7	13
44	Efficiency of bulk perovskite-sensitized upconversion: Illuminating matters. Applied Physics Letters, 2021, 118, .	1.5	12
45	Up- and down-conversion in molecules and materials. Journal of Chemical Physics, 2021, 154, 070401.	1.2	11
46	Engineering 3D perovskites for photon interconversion applications. PLoS ONE, 2020, 15, e0230299.	1.1	10
47	Scratching the Surface: Passivating Perovskite Nanocrystals for Future Device Integration. Journal of Physical Chemistry Letters, 2022, 13, 982-990.	2.1	10
48	Sub-nanometer glass surface dynamics induced by illumination. Journal of Chemical Physics, 2015, 142, 234505.	1.2	9
49	Feeling blue no more: How TIPS-naphthalene enables efficient visible-to-UV upconversion. Matter, 2021, 4, 2625-2626.	5.0	8
50	Mixed halide bulk perovskite triplet sensitizers: Interplay between band alignment, mid-gap traps, and phonons. Journal of Chemical Physics, 2021, 155, 234706.	1.2	8
51	Nanoscale properties of lead halide perovskites by scanning tunneling microscopy. EcoMat, 2021, 3, e12081.	6.8	6
52	Widespread opportunities for materials engineering of nanocrystals: Synthetically tailorable effects and methodologies. Matter, 2022, 5, 1645-1669.	5.0	6
53	Solid-state infrared-to-visible upconversion for sub-bandgap sensitization of photovoltaics. , 2018, , .		5
54	Monodisperse and Water-Soluble Quantum Dots for SWIR Imaging via Carboxylic Acid Copolymer Ligands. ACS Applied Materials & Interfaces, 2020, 12, 35845-35855.	4.0	5

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55	Tailoring capping-layer composition for improved stability of mixed-halide perovskites. Journal of Materials Chemistry A, 2022, 10, 2957-2965.	5.2	5
56	Interplay of Grain Size, Crystal Orientation, and Performance in Mixedion Lead Halide Perovskite Films. , 2018, , .		4
57	Room-Temperature Phosphorescence and Low-Energy Induced Direct Triplet Excitation of Alq₃ Engineered Crystals. Journal of Physical Chemistry Letters, 2020, 11, 9364-9370.	2.1	4
58	Impact of Transition Metal Doping on the Structural and Optical Properties of Halide Perovskites. Chemistry of Materials, 2021, 33, 6099-6107.	3.2	3
59	Intramolecular energy transfer in a synthetic dendron-based light harvesting system. Journal of Photochemistry and Photobiology A: Chemistry, 2014, 295, 26-33.	2.0	2
60	Comment on â€œTremendously enhanced photocurrent enabled by tripletâ€“triplet annihilation up-conversion for high-performance perovskite solar cellsâ€•by W. Sheng, J. Yang, X. Li, G. Liu, Z. Lin, J. Long, S. Xiao, L. Tan and Y. Chen, <i>Energy Environ. Sci.</i>, 2021, 14, 3532. Energy and Environmental Science, 2021, 14, 6050-6052.	15.6	2
61	Au(111)-supported Platinum Nanoparticles: Ripening and Activity. MRS Advances, 2017, 2, 439-444.	0.5	1
62	Kitchen Spectroscopy: Shining a (UV) Light on Everyday Objects. Matter, 2020, 2, 1348-1351.	5.0	1
63	Relaxation on the nanoscale: Probing transient dynamics by trSMA-STM. Matter, 2021, 4, 2680-2682.	5.0	1
64	Trap States Impact Photon Upconversion in Rubrene Sensitized by Lead Halide Perovskite Thin Films. SSRN Electronic Journal, 0, , .	0.4	1
65	Photon Upconversion - Effect of Material Dimensionality. , 0, , .		0
66	Taking Charge of Upconversion: Mechanistic Insights into Perovskite-Sensitized Triplet-Triplet Annihilation. , 0, , .		0