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	Tailoring capping-layer composition for improved stability of mixed-halide perovskites. Journal of Materials Chemistry A, 2022, 10, 2957-2965.	5.2	5
2	Ultrafast Triplet Generation at the Lead Halide Perovskite/Rubrene Interface. ACS Energy Letters, 2022, 7, 617-623.	8.8	24
3	Scratching the Surface: Passivating Perovskite Nanocrystals for Future Device Integration. Journal of Physical Chemistry Letters, 2022, 13, 982-990.	2.1	10
4	Challenges, progress and prospects in solid state triplet fusion upconversion. Journal of Materials Chemistry C, 2022, 10, 7783-7798.	2.7	40
5	Widespread opportunities for materials engineering of nanocrystals: Synthetically tailorable effects and methodologies. Matter, 2022, 5, 1645-1669.	5.0	6
6	Stressing Halide Perovskites with Light and Electric Fields. ACS Energy Letters, 2022, 7, 2211-2218.	8.8	16
7	Halide Perovskites: A Progress Report on Photon Interconversion. Advanced Optical Materials, 2021, 9, 2001470.	3.6	20
8	Bulk halide perovskites as triplet sensitizers: progress and prospects in photon upconversion. Journal of Materials Chemistry C, 2021, 9, 2685-2694.	2.7	24
9	Nanoscale properties of lead halide perovskites by scanning tunneling microscopy. EcoMat, 2021, 3, e12081.	6.8	6
10	Up- and down-conversion in molecules and materials. Journal of Chemical Physics, 2021, 154, 070401.	1.2	11
11	Recent advancements in halide perovskite nanomaterials and their optoelectronic applications. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 962-986.	8.5	25
12	Efficiency of bulk perovskite-sensitized upconversion: Illuminating matters. Applied Physics Letters, 2021, 118, .	1.5	12
13	Impact of Transition Metal Doping on the Structural and Optical Properties of Halide Perovskites. Chemistry of Materials, 2021, 33, 6099-6107.	3.2	3
14	Feeling blue no more: How TIPS-naphthalene enables efficient visible-to-UV upconversion. Matter, 2021, 4, 2625-2626.	5.0	8
15	Relaxation on the nanoscale: Probing transient dynamics by trSMA-STM. Matter, 2021, 4, 2680-2682.	5.0	1
16	Bulk Metal Halide Perovskites as Triplet Sensitizers: Taking Charge of Upconversion. ACS Energy Letters, 2021, 6, 3686-3694.	8.8	33
17	Red-to-Blue Photon Upconversion Enabled by One-Dimensional CdTe Nanorods. Chemistry of Materials, 2021, 33, 452-458.	3.2	27
18	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

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19	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
20	Precharging Photon Upconversion: Interfacial Interactions in Solution-Processed Perovskite Upconversion Devices. Journal of Physical Chemistry Letters, 2020, 11, 601-607.	2.1	36
21	Investigating the effect of electric fields on lead halide perovskites by scanning tunneling microscopy. Journal of Applied Physics, 2020, 128, .	1.1	13
22	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
23	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
24	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
25	Perovskite-sensitized upconversion bingo: Stoichiometry, composition, solvent, or temperature?. Journal of Chemical Physics, 2020, 153, 084703.	1.2	21
26	Green-to-Blue Triplet Fusion Upconversion Sensitized by Anisotropic CdSe Nanoplatelets. Chemistry of Materials, 2020, 32, 4734-4742.	3.2	35
27	Oneâ€Step Fabrication of Perovskiteâ€Based Upconversion Devices. ChemPhotoChem, 2020, 4, 704-712.	1.5	17
28	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
29	Probing Semiconductor Properties with Optical Scanning Tunneling Microscopy. Joule, 2020, 4, 524-538.	11.7	14
30	Engineering 3D perovskites for photon interconversion applications. PLoS ONE, 2020, 15, e0230299.	1.1	10
31	Kitchen Spectroscopy: Shining a (UV) Light on Everyday Objects. Matter, 2020, 2, 1348-1351.	5.0	1
32	Sensitization of silicon by singlet exciton fission in tetracene. Nature, 2019, 571, 90-94.	13.7	221
33	A perspective on triplet fusion upconversion: triplet sensitizers beyond quantum dots. MRS Communications, 2019, 9, 924-935.	0.8	13
34	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
35	Influence of Triplet Diffusion on Lead Halide Perovskite-Sensitized Solid-State Upconversion. Journal of Physical Chemistry Letters, 2019, 10, 3806-3811.	2.1	51
36	A Heterogeneous Kinetics Model for Triplet Exciton Transfer in Solid-State Upconversion. Journal of Physical Chemistry Letters, 2019, 10, 3147-3152.	2.1	24

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37	Halide Heterogeneity Affects Local Charge Carrier Dynamics in Mixed-Ion Lead Perovskite Thin Films. Chemistry of Materials, 2019, 31, 3712-3721.	3.2	27
38	Triplet-Sensitization by Lead Halide Perovskite Thin Films for Near-Infrared-to-Visible Upconversion. ACS Energy Letters, 2019, 4, 888-895.	8.8	117
39	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
40	Homogenized halides and alkali cation segregation in alloyed organic-inorganic perovskites. Science, 2019, 363, 627-631.	6.0	258
41	Using lead chalcogenide nanocrystals as spin mixers: a perspective on near-infrared-to-visible upconversion. Dalton Transactions, 2018, 47, 8509-8516.	1.6	65
42	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
43	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
44	Solid-state infrared-to-visible upconversion for sub-bandgap sensitization of photovoltaics. , 2018, , .		5
45	Interplay of Grain Size, Crystal Orientation, and Performance in Mixedion Lead Halide Perovskite Films. , 2018, , .		4
46	Morphology of Passivating Organic Ligands around a Nanocrystal. Journal of Physical Chemistry C, 2018, 122, 26267-26274.	1.5	34
47	<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
48	Multiexciton Lifetimes Reveal Triexciton Emission Pathway in CdSe Nanocrystals. Nano Letters, 2018, 18, 5153-5158.	4.5	27
49	Searching for â€œDefect-Tolerantâ€•Photovoltaic Materials: Combined Theoretical and Experimental Screening. Chemistry of Materials, 2017, 29, 4667-4674.	3.2	275
50	Au(111)-supported Platinum Nanoparticles: Ripening and Activity. MRS Advances, 2017, 2, 439-444.	0.5	1
51	Colloidal atomic layer deposition growth of PbS/CdS core/shell quantum dots. Chemical Communications, 2017, 53, 869-872.	2.2	30
52	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
53	Strongly Enhanced Photovoltaic Performance and Defect Physics of Airâ€Stable Bismuth Oxyiodide (BiOI). Advanced Materials, 2017, 29, 1702176.	11.1	139
54	Speed Limit for Triplet-Exciton Transfer in Solid-State PbS Nanocrystal-Sensitized Photon Upconversion. ACS Nano, 2017, 11, 7848-7857.	7.3	130

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55	Plasmonic support-mediated activation of 1 nm platinum clusters for catalysis. Physical Chemistry Chemical Physics, 2017, 19, 30570-30577.	1.3	14
56	High Tolerance to Iron Contamination in Lead Halide Perovskite Solar Cells. ACS Nano, 2017, 11, 7101-7109.	7.3	90
57	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
58	Sub-nanometer glass surface dynamics induced by illumination. Journal of Chemical Physics, 2015, 142, 234505.	1.2	9
59	Imaging Excited Orbitals of Quantum Dots: Experiment and Electronic Structure Theory. Journal of the American Chemical Society, 2015, 137, 14743-14750.	6.6	18
60	Optoelectronic Switching of a Carbon Nanotube Chiral Junction Imaged with Nanometer Spatial Resolution. ACS Nano, 2015, 9, 10563-10570.	7.3	23
61	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
62	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
63	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
64	Photon Upconversion - Effect of Material Dimensionality. , 0, , .		0
65	Taking Charge of Upconversion: Mechanistic Insights into Perovskite-Sensitized Triplet-Triplet Annihilation. , 0, , .		0
66	Trap States Impact Photon Upconversion in Rubrene Sensitized by Lead Halide Perovskite Thin Films. SSRN Electronic Journal, 0, , .	0.4	1