

Aaron M Lindenberg

List of Publications by Year in descending order

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62
papers

5,474
citations

117625

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133252

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62
all docs

62
docs citations

62
times ranked

8428
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of a Novel Lattice Instability in Ultrafast Photoexcited SnSe. <i>Physical Review X</i> , 2022, 12, .	8.9	10
2	Interlayer magnetophononic coupling in MnBi ₂ Te ₄ . <i>Nature Communications</i> , 2022, 13, 1929.	12.8	22
3	Acceleration of Crystallization Kinetics in Ge ₂ Sb ₂ Te ₅ -Based Phase-Change Materials by Substitution of Ge by Sn. <i>Advanced Functional Materials</i> , 2021, 31, 2004803.	14.9	5
4	Visualization of dynamic polaronic strain fields in hybrid lead halide perovskites. <i>Nature Materials</i> , 2021, 20, 618-623.	27.5	96
5	Dynamic lattice distortions driven by surface trapping in semiconductor nanocrystals. <i>Nature Communications</i> , 2021, 12, 1860.	12.8	19
6	Nanoscale Disorder Generates Subdiffusive Heat Transport in Self-Assembled Nanocrystal Films. <i>Nano Letters</i> , 2021, 21, 3540-3547.	9.1	7
7	Subterahertz collective dynamics of polar vortices. <i>Nature</i> , 2021, 592, 376-380.	27.8	66
8	Electrochemical ion insertion from the atomic to the device scale. <i>Nature Reviews Materials</i> , 2021, 6, 847-867.	48.7	84
9	Universal phase dynamics in VO ₂ switches revealed by ultrafast operando diffraction. <i>Science</i> , 2021, 373, 352-355.	12.6	53
10	Highly Efficient Uniaxial In-Plane Stretching of a 2D Material via Ion Insertion. <i>Advanced Materials</i> , 2021, 33, e2101875.	21.0	16
11	Direct observation of ultrafast hydrogen bond strengthening in liquid water. <i>Nature</i> , 2021, 596, 531-535.	27.8	53
12	Dynamic structural views in solar energy materials by femtosecond electron diffraction. <i>MRS Bulletin</i> , 2021, 46, 704-710.	3.5	5
13	Twist-Angle-Dependent Ultrafast Charge Transfer in MoS ₂ -Graphene van der Waals Heterostructures. <i>Nano Letters</i> , 2021, 21, 8051-8057.	9.1	30
14	Steam-created grain boundaries for methane C-H activation in palladium catalysts. <i>Science</i> , 2021, 373, 1518-1523.	12.6	105
15	inq, a Modern GPU-Accelerated Computational Framework for (Time-Dependent) Density Functional Theory. <i>Journal of Chemical Theory and Computation</i> , 2021, 17, 7447-7467.	5.3	7
16	Dynamically Tunable Terahertz Emission Enabled by Anomalous Optical Phonon Responses in Lead Telluride. <i>ACS Photonics</i> , 2021, 8, 3633-3640.	6.6	7
17	Light-Induced Currents at Domain Walls in Multiferroic BiFeO ₃ . <i>Nano Letters</i> , 2020, 20, 145-151.	9.1	36
18	Synthesis of Macroscopic Single Crystals of Ge ₂ Sb ₂ Te ₅ via Single-Shot Femtosecond Optical Excitation. <i>Crystal Growth and Design</i> , 2020, 20, 6660-6667.	3.0	0

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19	Thermal Boundary Conductance: Visualizing Energy Transfer at Buried Interfaces in Layered Materials Using Picosecond X-rays (Adv. Funct. Mater. 34/2020). Advanced Functional Materials, 2020, 30, 2070232.	14.9	1
20	Nonequilibrium Thermodynamics of Colloidal Gold Nanocrystals Monitored by Ultrafast Electron Diffraction and Optical Scattering Microscopy. ACS Nano, 2020, 14, 4792-4804.	14.6	20
21	Berry curvature memory through electrically driven stacking transitions. Nature Physics, 2020, 16, 1028-1034.	16.7	100
22	Visualizing Energy Transfer at Buried Interfaces in Layered Materials Using Picosecond X-rays. Advanced Functional Materials, 2020, 30, 2002282.	14.9	11
23	Bulk and Nanocrystalline Cesium Lead-Halide Perovskites as Seen by Halide Magnetic Resonance. ACS Central Science, 2020, 6, 1138-1149.	11.3	43
24	Femtosecond x-ray diffraction reveals a liquid-liquid phase transition in phase-change materials. Science, 2019, 364, 1062-1067.	12.6	120
25	Anisotropic structural dynamics of monolayer crystals revealed by femtosecond surface X-ray scattering. Nature Photonics, 2019, 13, 425-430.	31.4	28
26	Recording interfacial currents on the subnanometer length and femtosecond time scale by terahertz emission. Science Advances, 2019, 5, eaau0073.	10.3	50
27	An ultrafast symmetry switch in a Weyl semimetal. Nature, 2019, 565, 61-66.	27.8	307
28	Monitoring Charge Separation Dynamics Using THz Emission Spectroscopy. , 2019, , .		0
29	Terahertz Emission from Hybrid Perovskites Driven by Ultrafast Charge Separation and Strong Electron-Phonon Coupling. Advanced Materials, 2018, 30, 1704737.	21.0	86
30	Terahertz Emission: Terahertz Emission from Hybrid Perovskites Driven by Ultrafast Charge Separation and Strong Electron-Phonon Coupling (Adv. Mater. 11/2018). Advanced Materials, 2018, 30, 1870079.	21.0	2
31	Atomic-scale imaging of ultrafast materials dynamics. MRS Bulletin, 2018, 43, 485-490.	3.5	10
32	Ultrafast light-induced symmetry changes in single BaTiO ₃ nanowires. Journal of Materials Chemistry C, 2017, 5, 1522-1528.	5.5	16
33	Visualization of Atomic-Scale Motions in Materials via Femtosecond X-Ray Scattering Techniques. Annual Review of Materials Research, 2017, 47, 425-449.	9.3	39
34	Structural origins of broadband emission from layered Pb-Br hybrid perovskites. Chemical Science, 2017, 8, 4497-4504.	7.4	419
35	Light-induced picosecond rotational disordering of the inorganic sublattice in hybrid perovskites. Science Advances, 2017, 3, e1602388.	10.3	149
36	Dynamic Optical Tuning of Interlayer Interactions in the Transition Metal Dichalcogenides. Nano Letters, 2017, 17, 7761-7766.	9.1	46

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37	Structural imaging of nanoscale phonon transport in ferroelectrics excited by metamaterial-enhanced terahertz fields. <i>Physical Review Materials</i> , 2017, 1, .	2.4	5
38	Time- and Temperature-Independent Local Carrier Mobility and Effects of Regioregularity in Polymer-Fullerene Organic Semiconductors. <i>Advanced Electronic Materials</i> , 2016, 2, 1500351.	5.1	23
39	Transient terahertz photoconductivity measurements of minority-carrier lifetime in tin sulfide thin films: Advanced metrology for an early stage photovoltaic material. <i>Journal of Applied Physics</i> , 2016, 119, .	2.5	47
40	Picosecond Electric-Field-Induced Threshold Switching in Phase-Change Materials. <i>Physical Review Letters</i> , 2016, 117, 067601.	7.8	59
41	Mechanism for Broadband White-Light Emission from Two-Dimensional (110) Hybrid Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 2258-2263.	4.6	428
42	A Bismuth-Halide Double Perovskite with Long Carrier Recombination Lifetime for Photovoltaic Applications. <i>Journal of the American Chemical Society</i> , 2016, 138, 2138-2141.	13.7	1,514
43	THz-Pulse-Induced Selective Catalytic CO Oxidation on Ru. <i>Physical Review Letters</i> , 2015, 115, 036103.	7.8	46
44	Ultrafast Terahertz Gating of the Polarization and Giant Nonlinear Optical Response in BiFeO ₃ Thin Films. <i>Advanced Materials</i> , 2015, 27, 6371-6375.	21.0	47
45	Color Switching with Enhanced Optical Contrast in Ultrathin Phase-Change Materials and Semiconductors Induced by Femtosecond Laser Pulses. <i>ACS Photonics</i> , 2015, 2, 178-182.	6.6	74
46	How Supercooled Liquid Phase-Change Materials Crystallize: Snapshots after Femtosecond Optical Excitation. <i>Chemistry of Materials</i> , 2015, 27, 5641-5646.	6.7	44
47	Visualization of nanocrystal breathing modes at extreme strains. <i>Nature Communications</i> , 2015, 6, 6577.	12.8	26
48	Dynamic Structural Response and Deformations of Monolayer MoS ₂ Visualized by Femtosecond Electron Diffraction. <i>Nano Letters</i> , 2015, 15, 6889-6895.	9.1	93
49	Ultrafast terahertz-induced response of GeSbTe phase-change materials. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	38
50	Ultrafast Electronic and Structural Response of Monolayer MoS ₂ under Intense Photoexcitation Conditions. <i>ACS Nano</i> , 2014, 8, 10734-10742.	14.6	49
51	Reversible Optical Switching of Infrared Antenna Resonances with Ultrathin Phase-Change Layers Using Femtosecond Laser Pulses. <i>ACS Photonics</i> , 2014, 1, 833-839.	6.6	181
52	Ultrafast Polarization Response of an Optically Trapped Single Ferroelectric Nanowire. <i>Nano Letters</i> , 2014, 14, 4322-4327.	9.1	13
53	Real-Time Visualization of Nanocrystal Solid-Solid Transformation Pathways. <i>Nano Letters</i> , 2014, 14, 1995-1999.	9.1	24
54	High-pressure Raman spectroscopy of phase change materials. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	21

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55	Ultrafast Photovoltaic Response in Ferroelectric Nanolayers. Physical Review Letters, 2012, 108, 087601.	7.8	150
56	Single-cycle terahertz pulses with $>0.2 \text{ V/\AA}$ field amplitudes via coherent transition radiation. Applied Physics Letters, 2011, 99, .	3.3	74
57	Observation of Transient Structural-Transformation Dynamics in a Cu_2S Nanorod. Science, 2011, 333, 206-209.	12.6	220
58	High-speed all-optical terahertz polarization switching by a transient plasma phase modulator. Applied Physics Letters, 2010, 96, 161103.	3.3	22
59	Ultrafast conversions between hydrogen bonded structures in liquid water observed by femtosecond x-ray spectroscopy. Journal of Chemical Physics, 2009, 131, 234505.	3.0	46
60	Probing the hydrogen-bond network of water via time-resolved soft X-ray spectroscopy. Physical Chemistry Chemical Physics, 2009, 11, 3951.	2.8	71
61	A setup for ultrafast time-resolved x-ray absorption spectroscopy. Review of Scientific Instruments, 2004, 75, 24-30.	1.3	91
62	Measuring Electron-Phonon Coupling induced Lattice Reorganization in Lead Halide Perovskite Nanocrystals through Femto-Second Resolved Optical-pump Diffraction-probe experiments. , 0, , .		0