Renkai Li

List of Publications by Year
in descending order

88 papers	3,489 citations	147801 31 h-index	138484 58 g-index
90 all docs	90 docs citations	90 times ranked	4199 citing authors

#	Article	IF	Citations
1	Mega-electron-volt ultrafast electron diffraction at SLAC National Accelerator Laboratory. Review of Scientific Instruments, 2015, 86, 073702.	1.3	322
2	An ultrafast symmetry switch in a Weyl semimetal. Nature, 2019, 565, 61-66.	27.8	307
3	Imaging CF ₃ I conical intersection and photodissociation dynamics with ultrafast electron diffraction. Science, 2018, 361, 64-67.	12.6	170
4	The photochemical ring-opening of 1,3-cyclohexadiene imaged by ultrafast electron diffraction. Nature Chemistry, 2019, 11, 504-509.	13.6	157
5	Light-induced charge density wave in LaTe3. Nature Physics, 2020, 16, 159-163.	16.7	157
6	Light-induced picosecond rotational disordering of the inorganic sublattice in hybrid perovskites. Science Advances, 2017, 3, e1602388.	10.3	149
7	Heterogeneous to homogeneous melting transition visualized with ultrafast electron diffraction. Science, 2018, 360, 1451-1455.	12.6	133
8	Diffractive Imaging of Coherent Nuclear Motion in Isolated Molecules. Physical Review Letters, 2016, 117, 153002.	7.8	124
9	Dynamic Structural Response and Deformations of Monolayer MoS₂ Visualized by Femtosecond Electron Diffraction. Nano Letters, 2015, 15, 6889-6895.	9.1	93
10	Simultaneous observation of nuclear and electronic dynamics by ultrafast electron diffraction. Science, 2020, 368, 885-889.	12.6	92
11	Diffractive imaging of a rotational wavepacket in nitrogen molecules with femtosecond megaelectronvolt electron pulses. Nature Communications, 2016, 7, 11232.	12.8	92
12	Surface-Plasmon Resonance-Enhanced Multiphoton Emission of High-Brightness Electron Beams from a Nanostructured Copper Cathode. Physical Review Letters, 2013, 110, 074801.	7.8	88
13	Generation of first hard X-ray pulse at Tsinghua Thomson Scattering X-ray Source. Review of Scientific Instruments, 2013, 84, 053301.	1.3	81
14	Experimental demonstration of high quality MeV ultrafast electron diffraction. Review of Scientific Instruments, 2009, 80, 083303.	1.3	78
15	Ultrafast manipulation of mirror domain walls in a charge density wave. Science Advances, 2018, 4, eaau5501.	10.3	70
16	Femtosecond Compression Dynamics and Timing Jitter Suppression in a THz-driven Electron Bunch Compressor. Physical Review Letters, 2020, 124, 054801.	7.8	68
17	Note: Single-shot continuously time-resolved MeV ultrafast electron diffraction. Review of Scientific Instruments, 2010, 81, 036110.	1.3	58
18	Nonequilibrium electron and lattice dynamics of strongly correlated Bi ₂ Sr ₂ CaCu ₂ O _{8+Î´} single crystals. Science Advances, 2018, 4, eaap7427.	10.3	58

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19	Capturing ultrafast structural evolutions with a single pulse of MeV electrons: Radio frequency streak camera based electron diffraction. Journal of Applied Physics, 2010, 108, .	2.5	52
20	Ultrafast non-radiative dynamics of atomically thin MoSe2. Nature Communications, 2017, 8, 1745.	12.8	52
21	Femtosecond mega-electron-volt electron microdiffraction. Ultramicroscopy, 2018, 184, 172-176.	1.9	51
22	Dynamical Slowing-Down in an Ultrafast Photoinduced Phase Transition. Physical Review Letters, 2019, 123, 097601.	7.8	50
23	Nonlinear Longitudinal Space Charge Oscillations in Relativistic Electron Beams. Physical Review Letters, 2011, 106, 184801.	7.8	48
24	Beyond a phenomenological description of magnetostriction. Nature Communications, 2018, 9, 388.	12.8	48
25	Tsinghua Thomson scattering X-ray source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 608, S70-S74.	1.6	47
26	Cascaded high-gradient terahertz-driven acceleration of relativistic electron beams. Nature Photonics, 2021, 15, 426-430.	31.4	44
27	Tracking the ultrafast nonequilibrium energy flow between electronic and lattice degrees of freedom in crystalline nickel. Physical Review B, 2020, 101, .	3.2	41
28	High-quality electron beams from a helical inverse free-electron laser accelerator. Nature Communications, 2014, 5, 4928.	12.8	39
29	Nanometer emittance ultralow charge beams from rf photoinjectors. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	37
30	Femtosecond gas-phase mega-electron-volt ultrafast electron diffraction. Structural Dynamics, 2019, 6, 054305.	2.3	36
31	Efficient Purification of Ginkgolic Acids from Ginkgo biloba Leaves by Selective Adsorption on Fe₃O₄ Magnetic Nanoparticles. Journal of Natural Products, 2014, 77, 571-575.	3.0	34
32	Imaging single electrons to enable the generation of ultrashort beams for single-shot femtosecond relativistic electron diffraction. Journal of Applied Physics, 2011, 110, .	2.5	30
33	Demonstration of Single-Shot Picosecond Time-Resolved MeV Electron Imaging Using a Compact Permanent Magnet Quadrupole Based Lens. Physical Review Letters, 2016, 117, 024801.	7.8	30
34	Carrier-Specific Femtosecond XUV Transient Absorption of PbI₂ Reveals Ultrafast Nonradiative Recombination. Journal of Physical Chemistry C, 2017, 121, 27886-27893.	3.1	30
35	Electron-lattice energy relaxation in laser-excited thin-film Au-insulator heterostructures studied by ultrafast MeV electron diffraction. Structural Dynamics, 2017, 4, 054501.	2.3	29
36	Thickness-dependent electronâ€“lattice equilibration in laser-excited thin bismuth films. New Journal of Physics, 2015, 17, 113047.	2.9	28

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37	Stacking order dynamics in the quasi-two-dimensional dichalcogenide 1T-TaS2 probed with MeV ultrafast electron diffraction. Structural Dynamics, 2017, 4, 044020.	2.3	28
38	Efficiency enhancement using electron energy detuning in a laser seeded free electron laser amplifier. Applied Physics Letters, 2007, 91, 181115.	3.3	27
39	Optical Control of Non-Equilibrium Phonon Dynamics. Nano Letters, 2019, 19, 4981-4989.	9.1	27
40	Inverse free electron laser accelerator for advanced light sources. Physical Review Special Topics: Accelerators and Beams, 2012, 15, .	1.8	26
41	Single-shot 35 fs temporal resolution electron shadowgraphy. Applied Physics Letters, 2013, 102, .	3.3	23
42	Measurement of femtosecond electron pulse length and the temporal broadening due to space charge. Review of Scientific Instruments, 2009, 80, 013902.	1.3	21
43	Effect of an ultrafast laser induced plasma on a relativistic electron beam to determine temporal overlap in pumpâ€“probe experiments. Ultramicroscopy, 2013, 127, 14-18.	1.9	21
44	Femtosecond gas phase electron diffraction with MeV electrons. Faraday Discussions, 2016, 194, 563-581.	3.2	21
45	Diffractive imaging of dissociation and ground-state dynamics in a complex molecule. Physical Review A, 2019, 100, .	2.5	21
46	Visualization of ultrafast melting initiated from radiation-driven defects in solids. Science Advances, 2019, 5, eaaw0392.	10.3	19
47	Single-shot mega-electronvolt ultrafast electron diffraction for structure dynamic studies of warm dense matter. Review of Scientific Instruments, 2016, 87, 11D810.	1.3	17
48	Controlling nonlinear longitudinal space charge oscillations for high peak current bunch train generation. Physical Review Special Topics: Accelerators and Beams, 2013, 16, .	1.8	16
49	High-brightness beam tests of the very high frequency gun at the Advanced Photo-injector EXperiment test facility at the Lawrence Berkeley National Laboratory. Review of Scientific Instruments, 2019, 90, 033304.	1.3	16
50	Role of Equilibrium Fluctuations in Light-Induced Order. Physical Review Letters, 2021, 127, 227401.	7.8	16
51	A direct electron detector for time-resolved MeV electron microscopy. Review of Scientific Instruments, 2017, 88, 033702.	1.3	15
52	Dynamics of Electronâ€“Phonon Coupling in Bicontinuous Nanoporous Gold. Journal of Physical Chemistry C, 2018, 122, 16368-16373.	3.1	15
53	Photoinduced dynamics of nematic order parameter in FeSe. Physical Review B, 2019, 99, .	3.2	14
54	Parallel-plate waveguides for terahertz-driven MeV electron bunch compression. Optics Express, 2019, 27, 23791.	3.4	14

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55	Study of RF-asymmetry in photo-injector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 574, 17-21.	1.6	13
56	Spectroscopic and Structural Probing of Excited-State Molecular Dynamics with Time-Resolved Photoelectron Spectroscopy and Ultrafast Electron Diffraction. Physical Review X, 2020, 10, .	8.9	11
57	Soft X-ray generation experiment at the Tsinghua Thomson scattering X-ray source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 637, S168-S171.	1.6	8
58	Determination of the electron-lattice coupling strength of copper with ultrafast MeV electron diffraction. Review of Scientific Instruments, 2018, 89, 10C108.	1.3	8
59	Ultrafast formation of a transient two-dimensional diamondlike structure in twisted bilayer graphene. Physical Review B, 2020, 102, .	3.2	8
60	Single-shot spatial-temporal electric field measurement of intense terahertz pulses from coherent transition radiation. Physical Review Accelerators and Beams, 2020, 23, .	1.6	8
61	Ultrafast visualization of incipient plasticity in dynamically compressed matter. Nature Communications, 2022, 13, 1055.	12.8	7
62	Concurrent probing of electron-lattice dephasing induced by photoexcitation in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi>T</mml:mi></mml:mrow></mml:m -TaSeTe using ultrafast electron diffraction. Physical Review B, 2020, 101, .	3.2	6
63	The Compact Pulsed Hadron Source: A Design Perspective. Journal of the Korean Physical Society, 2010, 56, 1928-1936.	0.7	6
64	Coherent Lattice Wobbling and Out-of-Phase Intensity Oscillations of Friedel Pairs Observed by Ultrafast Electron Diffraction. ACS Nano, 2020, 14, 8449-8458.	14.6	5
65	Generation of Tunable 10-mJ-Level Terahertz Pulses through Nonlinear Plasma Wakefield Modulation. Physical Review Applied, 2021, 15, .	3.8	5
66	Development of an L-band photocathode RF gun at Tsinghua University. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 985, 164675.	1.6	3
67	High-Energy Time-Resolved Electron Diffraction. Springer Handbooks, 2019, , 971-1008.	0.6	3
68	Simulation optimization of single-shot continuously time-resolved MeV ultra-fast electron diffraction. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 637, S15-S19.	1.6	2
69	Longitudinal phase space manipulation of an ultrashort electron beam via THz IFEL interaction. AIP Conference Proceedings, 2013, , .	0.4	2
70	High brightness electron sources for MeV ultrafast diffraction and microscopy. , 2014, , .		2
71	Fast attenuation of high-frequency acoustic waves in bicontinuous nanoporous gold. Applied Physics Letters, 2021, 119, .	3.3	2
72	Parallel-Plate THz Waveguides for Relativistic Electron Bunch Compression. , 2019, , .		2

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73	Analysis of slice transverse emittance evolution in a very-high-frequency gun photoinjector. Physical Review Accelerators and Beams, 2021, 24, .	1.6	2
74	High-Gradient High-Energy-Gain Inverse Free Electron Laser Experiment Using a Helical Undulator. AIP Conference Proceedings, 2010, , .	0.4	1
75	Helical inverse free electron laser accelerator for efficient production of high quality electron beams. AIP Conference Proceedings, 2016, , .	0.4	1
76	Longitudinal phase space manipulation with planar corrugated wakefield structures. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 987, 164819.	1.6	1
77	Quantitative agreement between dynamical rocking curves in ultrafast electron diffraction for x-ray lasers. Ultramicroscopy, 2021, 223, 113211.	1.9	1
78	Design of a source to supply ultra-fast electron and X-ray pulses. , 2007, , .		0
79	Imaging nanometer-scale beamlets arrays of relativistic electron beams. , 2013, , .		0
80	Preparations for a high gradient inverse free electron laser experiment at Brookhaven national laboratory. , 2013, , .		0
81	Mega-electron-volt Femtosecond Electron Micro-diffraction.. Microscopy and Microanalysis, 2016, 22, 514-515.	0.4	0
82	Modeling of THz Pump Induced Plasmonic Oscillations in Silicon Membranes. , 2018, , .		0
83	Development of a THz Pump MeV Ultrafast Electron Diffraction Probe Apparatus. , 2018, , .		0
84	Imaging the ring opening reaction of 1,3-cyclohexadiene with MeV ultrafast electron diffraction. EPJ Web of Conferences, 2019, 205, 07006.	0.3	0
85	THz-driven bunch compression and timing stabilization of a relativistic electron beam. , 2019, , .		0
86	Photo-induced ultrafast phase transition in twisted bilayer graphene. Microscopy and Microanalysis, 2021, 27, 2954-2956.	0.4	0
87	Toward unifying chemical function with molecular structure using strong fields, x-rays, and electrons. , 2016, , .		0
88	Thickness dependent electron-lattice equilibration in thin Bi films studied by time-resolved MeV electron diffraction. , 2016, , .		0