Ralph Ernstorfer

List of Publications by Year
in descending order

115 papers	6,339 citations	70961 41 h-index	64668 79 g-index
116 all docs	116 docs citations	116 times ranked	5751 citing authors

#	Article	IF	Citations
1	Coherent Modulation of Quasiparticle Scattering Rates in a Photoexcited Charge-Density-Wave System. Physical Review Letters, 2022, 128, 026406.	2.9	5
2	Polarization-Modulated Angle-Resolved Photoemission Spectroscopy: Toward Circular Dichroism without Circular Photons and Bloch Wave-function Reconstruction. Physical Review X, 2022, 12, .	2.8	10
3	Intrinsic energy flow in laser-excited <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>3</mml:mn><mml:mi>d</mml:mi></mml:math> ferromagnets. Physical Review Research, 2022, 4, .	1.3	11
4	Excited-state band structure mapping. Physical Review B, 2022, 105, .	1.1	8
5	Ultrafast Momentum-Resolved Hot Electron Dynamics in the Two-Dimensional Topological Insulator Bismuthene. Nano Letters, 2022, 22, 5420-5426.	4.5	9
6	Angle-resolved photoemission spectroscopy. Nature Reviews Methods Primers, 2022, 2, .	11.8	29
7	Traversing Double-Well Potential Energy Surfaces: Photoinduced Concurrent Intralayer and Interlayer Structural Transitions in XTe₂ (X = Mo, W). ACS Nano, 2022, 16, 11124-11135.	7.3	5
8	Lattice dynamics and ultrafast energy flow between electrons, spins, and phonons in a 3d ferromagnet. Physical Review Research, 2021, 3, .	1.3	21
9	Exchange-Striction Driven Ultrafast Nonthermal Lattice Dynamics in NiO. Physical Review Letters, 2021, 126, 147202.	2.9	10
10	Ultrafast dynamical Lifshitz transition. Science Advances, 2021, 7, .	4.7	38
11	Nonequilibrium charge-density-wave order beyond the thermal limit. Nature Communications, 2021, 12, 2499.	5.8	33
12	Nuclear dynamics of singlet exciton fission in pentacene single crystals. Science Advances, 2021, 7, .	4.7	31
13	Direct measurement of key exciton properties: Energy, dynamics, and spatial distribution of the wave function. Natural Sciences, 2021, 1, e10010.	1.0	52
14	Wave-Mechanical Electron-Optical Modeling of Field-Emission Electron Sources. Physical Review Applied, 2021, 15, .	1.5	2
15	Accessing the Anisotropic Nonthermal Phonon Populations in Black Phosphorus. Nano Letters, 2021, 21, 6171-6178.	4.5	25
16	Revealing momentum-dependent electronâ€“phonon and phononâ€“phonon coupling in complex materials with ultrafast electron diffuse scattering. MRS Bulletin, 2021, 46, 731-737.	1.7	7
17	Machine learning on neutron and x-ray scattering and spectroscopies. Chemical Physics Reviews, 2021, 2, .	2.6	49
18	Multiphonon diffuse scattering in solids from first principles: Application to layered crystals and two-dimensional materials. Physical Review B, 2021, 104, .	1.1	16

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19	Ultrafast lattice dynamics and electronâ€“phonon coupling in platinum extracted with a global fitting approach for time-resolved polycrystalline diffraction data. Structural Dynamics, 2021, 8, 064301.	0.9	6
20	Unveiling the orbital texture of 1T-TiTe2 using intrinsic linear dichroism in multidimensional photoemission spectroscopy. Npj Quantum Materials, 2021, 6, .	1.8	23
21	Efficient First-Principles Methodology for the Calculation of the All-Phonon Inelastic Scattering in Solids. Physical Review Letters, 2021, 127, 207401.	2.9	18
22	Probing the Energy Conversion Pathways between Light, Carriers, and Lattice in Real Time with Attosecond Core-Level Spectroscopy. Physical Review X, 2021, 11, .	2.8	10
23	Revealing Hidden Orbital Pseudospin Texture with Time-Reversal Dichroism in Photoelectron Angular Distributions. Physical Review Letters, 2020, 125, 216404.	2.9	50
24	Observation of an Excitonic Mott Transition Through Ultrafast Core- cum -Conduction Photoemission Spectroscopy. Physical Review Letters, 2020, 125, 096401.	2.9	35
25	Evidence of Large Polarons in Photoemission Band Mapping of the Perovskite Semiconductor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>CsPbBr</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>. Physical Review Letters, 2020, 124, 206402.	2.9	74
26	Anisotropic Nonequilibrium Lattice Dynamics of Black Phosphorus. Nano Letters, 2020, 20, 3728-3733.	4.5	27
27	Time- and momentum-resolved photoemission studies using time-of-flight momentum microscopy at a free-electron laser. Review of Scientific Instruments, 2020, 91, 013109.	0.6	72
28	An open-source, end-to-end workflow for multidimensional photoemission spectroscopy. Scientific Data, 2020, 7, 442.	2.4	14
29	A quantitative comparison of time-of-flight momentum microscopes and hemispherical analyzers for time- and angle-resolved photoemission spectroscopy experiments. Review of Scientific Instruments, 2020, 91, 123112.	0.6	36
30	Dynamical suppression of Coulomb interaction and sub-fs jitter correction in electron pulse compression. New Journal of Physics, 2020, 22, 093004.	1.2	2
31	Probing atomic motions accompanying singlet exciton fission in pentacene. , 2020, , .		0
32	Theory of exciton dynamics in time-resolved ARPES: Intra- and intervalley scattering in two-dimensional semiconductors. Physical Review B, 2019, 100, .	1.1	49
33	Ultrafast rotational motions of supported nanoclusters probed by electron diffraction. Nanoscale Horizons, 2019, 4, 1164-1173.	4.1	8
34	Symmetry-guided nonrigid registration: The case for distortion correction in multidimensional photoemission spectroscopy. Ultramicroscopy, 2019, 202, 133-139.	0.8	10
35	Excited-state band mapping and momentum-resolved ultrafast population dynamics in In/Si(111) nanowires investigated with XUV-based time- and angle-resolved photoemission spectroscopy. Physical Review B, 2019, 99, .	1.1	17
36	Time- and angle-resolved photoemission spectroscopy of solids in the extreme ultraviolet at 500 kHz repetition rate. Review of Scientific Instruments, 2019, 90, 023104.	0.6	80

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37	Terahertz Compression of Electron Pulses at a Planar Mirror Membrane. Physical Review Applied, 2019, 11, .	1.5	36
38	Multidimensional Contrast Limited Adaptive Histogram Equalization. IEEE Access, 2019, 7, 165437-165447.	2.6	40
39	Beyond the molecular movie: Dynamics of bands and bonds during a photoinduced phase transition. Science, 2018, 362, 821-825.	6.0	76
40	Ultrafast Heat Flow in Heterostructures of Au Nanoclusters on Thin Films: Atomic Disorder Induced by Hot Electrons. ACS Nano, 2018, 12, 7710-7720.	7.3	18
41	Coherent and incoherent structural dynamics in laser-excited antimony. Physical Review B, 2017, 95, .	1.1	35
42	Momentum-Resolved View of Electron-Phonon Coupling in Multilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2017, 119, 036803.	2.9	74
43	Sub-cycle optical control of current in a semiconductor: from the multiphoton to the tunneling regime. Optica, 2016, 3, 1358.	4.8	59
44	Generation and Evolution of Spin-, Valley-, and Layer-Polarized Excited Carriers in Inversion-Symmetric <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></</mml:mrow></mml:msub></mml:mrow></mml:math>. Physical Review Letters, 2016, 117, 277201.	2.9	129
45	Electron-Phonon Coupling and Energy Flow in a Simple Metal beyond the Two-Temperature Approximation. Physical Review X, 2016, 6, .	2.8	134
46	Revealing the role of electrons and phonons in the ultrafast recovery of charge density wave correlations in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn mathvariant="bold">1</mml:mn><mml:mi>T</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mi mathvariant="bold">TiSe</mml:mi><mml:mn mathvariant="bold">2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2016, 94, .	1.1	50
47	Nanofocused Plasmon-Driven Sub-10 fs Electron Point Source. ACS Photonics, 2016, 3, 611-619.	3.2	87
48	Compact femtosecond electron diffractometer with 100â€‰keV electron bunches approaching the single-electron pulse duration limit. Journal of Applied Physics, 2015, 117, .	1.1	70
49	Direct observation of electron propagation and dielectric screening on the atomic length scale. Nature, 2015, 517, 342-346.	13.7	145
50	Time-domain separation of optical properties from structural transitions in resonantly bondedÂmaterials. Nature Materials, 2015, 14, 991-995.	13.3	166
51	Real-time observation of collective excitations in photoemission. Physical Review B, 2015, 91, .	1.1	30
52	500 kHz OPCPA delivering tunable sub-20 fs pulses with 15 W average power based on an all-ytterbium laser. Optics Express, 2015, 23, 1491.	1.7	49
53	Competition Between Thermal and Non-Thermal Processes During Femtosecond Switching of Phase Change Materials. , 2014, , .		0
54	Solid-state light-phase detector. Nature Photonics, 2014, 8, 214-218.	15.6	75

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55	Femtosecond electrons probing currents and atomic structure in nanomaterials. Nature Communications, 2014, 5, 5292.	5.8	82
56	Addendum: Optical-field-induced current in dielectrics. Nature, 2014, 507, 386-387.	13.7	11
57	Visualization of Photocurrents in Nanoobjects by Ultrafast Low-Energy Electron Point-Projection Imaging. , 2014, , .		0
58	Probing ultrafast electron dynamics in condensed matter with attosecond photoemission. , 2013, , .		0
59	Optical-field-induced current in dielectrics. Nature, 2013, 493, 70-74.	13.7	592
60	Ultrafast Evolution of the Excited-State Potential Energy Surface of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>TiO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Single Crystals Induced by Carrier Cooling. Physical Review Letters, 2013, 110, 067402.	2.9	32
61	Microelectrode for energy and current control of nanotip field electron emitters. Applied Physics Letters, 2013, 103, 213506.	1.5	8
62	Interband excitation and carrier relaxation as displacive driving force for coherent phonons. EPJ Web of Conferences, 2013, 41, 04021.	0.1	0
63	Optical-field-induced current in dielectrics. , 2013, , .		0
64	Attosecond Time-Resolved Photoemission from Core and Valence States of Magnesium. Physical Review Letters, 2012, 109, 087401.	2.9	119
65	A molecular conveyor belt by controlled delivery of single molecules into ultrashort laser pulses. Nature Physics, 2012, 8, 238-242.	6.5	38
66	Coherent femtosecond low-energy single-electron pulses for time-resolved diffraction and imaging: A numerical study. Journal of Applied Physics, 2012, 112, .	1.1	66
67	A flexible apparatus for attosecond photoelectron spectroscopy of solids and surfaces. Review of Scientific Instruments, 2011, 82, 063104.	0.6	30
68	Light-field control of electric current in metal-dielectric nano-circuits. , 2011, , .		0
69	`Making the molecular movie': first frames. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, 137-156.	0.3	84
70	Delay in Photoemission. Science, 2010, 328, 1658-1662.	6.0	932
71	First attosecond pulse control by multilayer mirrors above 100 eV photon energy. , 2010, , .		0
72	Collinear generation of â€¨ultrashort UV and XUV pulses. Optics Express, 2010, 18, 9173.	1.7	15

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73	Excitation of longitudinal and transverse coherent acoustic phonons in nanometer free-standing films of (001) Si. Physical Review B, 2009, 79, .	1.1	81
74	Collinear Generation of Ultrashort UV and XUV Pulses for Pump/probe Spectroscopy. Materials Research Society Symposia Proceedings, 2009, 1230, 1.	0.1	0
75	Electronic acceleration of atomic motions and disordering in bismuth. Nature, 2009, 458, 56-59.	13.7	253
76	The Formation of Warm Dense Matter: Experimental Evidence for Electronic Bond Hardening in Gold. Science, 2009, 323, 1033-1037.	6.0	294
77	Direct Visualization of Electron Emission during Femtosecond Laser Ablation. Springer Series in Chemical Physics, 2009, , 693-695.	0.2	0
78	Atomic View of the Photoinduced Collapse of Gold and Bismuth. Springer Series in Chemical Physics, 2009, , 113-115.	0.2	0
79	Electronically Driven Structural Dynamics of Si Resolved by Femtosecond Electron Diffraction. Springer Series in Chemical Physics, 2009, , 158-160.	0.2	0
80	Grating Enhanced Ponderomotive Scattering for Characterization of Femtosecond Electron Pulses. Springer Series in Chemical Physics, 2009, , 994-996.	0.2	0
81	Grating enhanced ponderomotive scattering for visualization and full characterization of femtosecond electron pulses. Optics Express, 2008, 16, 3334.	1.7	93
82	Electronically Driven Structure Changes of Si Captured by Femtosecond Electron Diffraction. Physical Review Letters, 2008, 100, 155504.	2.9	150
83	Direct visualization of charge distributions during femtosecond laser ablation of a Si (100) surface. Physical Review B, 2008, 78, .	1.1	42
84	Non-Thermal Collapse of the Silicon Lattice Observed with Femtosecond Electron Diffraction. , 2007, , LTuA3.		0
85	Experimental basics for femtosecond electron diffraction studies. Journal of Modern Optics, 2007, 54, 923-942.	0.6	14
86	Different orientations of large rigid organic chromophores at the rutileTiO2surface controlled by different binding geometries of specific anchor groups. Physical Review B, 2007, 75, .	1.1	33
87	Photoinduced ultrafast interfacial electron transfer probed with two-photon-photoemission. , 2007, , .		0
88	Femtosecond electron diffraction: an atomic perspective of condensed phase dynamics. Journal of Modern Optics, 2007, 54, 905-922.	0.6	26
89	Pathway-Dependent Electron Transfer for Rod-Shaped Perylene-Derived Molecules Adsorbed in Nanometer-Size TiO₂ Cavities. Journal of Physical Chemistry C, 2007, 111, 13586-13594.	1.5	24
90	Ultrafast interfacial electron transfer from the excited state of anchored molecules into a semiconductor. Progress in Surface Science, 2007, 82, 355-377.	3.8	76

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91	Dynamics of photoinduced electron transfer from adsorbed molecules into solids. Applied Physics A: Materials Science and Processing, 2007, 88, 481-495.	1.1	22
92	Ultrafast dynamics of photoinduced processes at surfaces and interfaces. , 2007, , 387-484.		2
93	Dynamics of electron injection from the excited state of anchored molecules into semiconductors. Springer Series in Chemical Physics, 2007, , 270-272.	0.2	0
94	Escape dynamics of photoexcited electrons at catechol:TiO2(110). Physical Review B, 2006, 74, .	1.1	68
95	Quantum Chemical Calculations of the Influence of Anchor-Cum-Spacer Groups on Femtosecond Electron Transfer Times in Dye-Sensitized Semiconductor Nanocrystals. Journal of Chemical Theory and Computation, 2006, 2, 441-451.	2.3	249
96	Carrier Relaxation and Lattice Heating Dynamics in Silicon Revealed by Femtosecond Electron Diffractionâ€. Journal of Physical Chemistry B, 2006, 110, 25308-25313.	1.2	81
97	Role of Molecular Anchor Groups in Molecule-to-Semiconductor Electron Transferâ€. Journal of Physical Chemistry B, 2006, 110, 25383-25391.	1.2	102
98	Sub-20 fs visible pulses with 750 nJ energy from a 100 kHz noncollinear optical parametric amplifier. Optics Letters, 2006, 31, 1289.	1.7	56
99	Femtosecond electron pulse characterization using laser ponderomotive scattering. Optics Letters, 2006, 31, 3517.	1.7	73
100	Dynamics of electron injection from the excited state of anchored organic molecules into rutile (110)TiO 2. , 2006, 6325, 139.		0
101	Femtosecond electron diffraction: â€˜making the molecular movieâ€™. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 741-778.	1.6	176
102	Influence of different anchor-bridge groups on electron transfer from the molecular chromophore perylene to the wide gap semiconductor TiO2. , 2006, , 295-298.		1
103	Dynamics of electron injection from the excited state of anchored molecules into semiconductors. , 2006, , .		0
104	Characterization of ultrashort electron pulses. , 2006, , .		0
105	Electron transfer from molecular chromophores to semiconductors probed with two-photon-photoemission. , 2006, , 299-303.		0
106	Femtosecond Electron Diffraction Study on the Melting Dynamics of Gold. , 2006, , .		1
107	Distance dependence of heterogeneous electron transfer probed in ultra-high vacuum with femtosecond transient absorption. Research on Chemical Intermediates, 2005, 31, 643-647.	1.3	16
108	Femtosecond two-photon photoemission at 150 kHz utilizing two noncollinear optical parametric amplifiers for measuring ultrafast electron dynamics. Applied Physics B: Lasers and Optics, 2005, 80, 727-731.	1.1	30

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109	Femtosecond electron diffraction: atomic level "movies" of condensed phase dynamics. , 2005, , .		0
110	Femtosecond Transfer Dynamics of Photogenerated Electrons at a Surface Resonance of Reconstructed InP(100). Physical Review Letters, 2005, 94, 067601.	2.9	28
111	Absorption Spectra Related to Heterogeneous Electron Transfer Reactions:Â The Perylene TiO2System. Journal of Physical Chemistry B, 2005, 109, 9589-9595.	1.2	71
112	Dynamics of electron scattering between bulk states and the C 1 surface state of InP(100). Applied Physics A: Materials Science and Processing, 2004, 78, 239-239.	1.1	16
113	Primary and final charge separation in the nano-structured dye-sensitized electrochemical solar cell. Coordination Chemistry Reviews, 2004, 248, 1259-1270.	9.5	65
114	Generation of sub-20 fs Tunable Visible Pulses from a 100 kHz NOPA For Measuring Ultrafast Heterogeneous Electron Transfer. Springer Series in Optical Sciences, 2004, , 393-398.	0.5	1
115	Two-photon photoemission as a probe of unoccupied and occupied surface states of InP(100). Journal of Crystal Growth, 2003, 248, 206-210.	0.7	15