

# Robert W Schoenlein

## List of Publications by Citations

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108  
papers

8,983  
citations

46  
h-index

94  
g-index

123  
ext. papers

9,840  
ext. citations

7.8  
avg. IF

5.35  
L-index

#	Paper	IF	Citations
108	The first step in vision: femtosecond isomerization of rhodopsin. <i>Science</i> , <b>1991</b> , 254, 412-5	33.3	715
107	Femtosecond studies of nonequilibrium electronic processes in metals. <i>Physical Review Letters</i> , <b>1987</b> , 58, 1680-1683	7.4	555
106	Vibrationally coherent photochemistry in the femtosecond primary event of vision. <i>Science</i> , <b>1994</b> , 266, 422-4	33.3	551
105	Evidence for a structurally-driven insulator-to-metal transition in VO <sub>2</sub> : A view from the ultrafast timescale. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	514
104	Generation of femtosecond pulses of synchrotron radiation. <i>Science</i> , <b>2000</b> , 287, 2237-40	33.3	493
103	Control of the electronic phase of a manganite by mode-selective vibrational excitation. <i>Nature</i> , <b>2007</b> , 449, 72-4	50.4	418
102	Femtosecond X-ray Pulses at 0.4 Å Generated by 90° Thomson Scattering: A Tool for Probing the Structural Dynamics of Materials. <i>Science</i> , <b>1996</b> , 274, 236-238	33.3	363
101	Quantum size dependence of femtosecond electronic dephasing and vibrational dynamics in CdSe nanocrystals. <i>Physical Review B</i> , <b>1994</b> , 49, 14435-14447	3.3	257
100	Observation of laser assisted photoelectric effect and femtosecond high order harmonic radiation. <i>Physical Review Letters</i> , <b>1996</b> , 76, 2468-2471	7.4	244
99	Band-selective measurements of electron dynamics in VO <sub>2</sub> using femtosecond near-edge x-ray absorption. <i>Physical Review Letters</i> , <b>2005</b> , 95, 067405	7.4	218
98	The first step in vision occurs in femtoseconds: complete blue and red spectral studies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1993</b> , 90, 11762-6	11.5	174
97	Non-Markovian dephasing of molecules in solution measured with three-pulse femtosecond photon echoes. <i>Physical Review Letters</i> , <b>1991</b> , 66, 1138-1141	7.4	164
96	Femtosecond Soft X-ray Spectroscopy of Solvated Transition-Metal Complexes: Deciphering the Interplay of Electronic and Structural Dynamics. <i>Journal of Physical Chemistry Letters</i> , <b>2011</b> , 2, 880-4	6.4	159
95	Investigation of femtosecond electronic dephasing in CdSe nanocrystals using quantum-beat-suppressed photon echoes. <i>Physical Review Letters</i> , <b>1993</b> , 70, 1014-1017	7.4	159
94	Ultrafast Structural Dynamics in InSb Probed by Time-Resolved X-Ray Diffraction. <i>Physical Review Letters</i> , <b>1999</b> , 83, 336-339	7.4	158
93	Picosecond X-ray absorption spectroscopy of a photoinduced iron(II) spin crossover reaction in solution. <i>Journal of Physical Chemistry A</i> , <b>2006</b> , 110, 38-44	2.8	152
92	Photoinduced phase transition in VO <sub>2</sub> nanocrystals: ultrafast control of surface-plasmon resonance. <i>Optics Letters</i> , <b>2005</b> , 30, 558-60	3	150

91	. <i>IEEE Journal of Quantum Electronics</i> , <b>1988</b> , 24, 267-275	2	149
90	Femtosecond studies of image-potential dynamics in metals. <i>Physical Review Letters</i> , <b>1988</b> , 61, 2596-2599	4	148
89	Corneal ablation by nanosecond, picosecond, and femtosecond lasers at 532 and 625 nm. <i>JAMA Ophthalmology</i> , <b>1989</b> , 107, 587-92		145
88	Ultra-fast and ultra-intense x-ray sciences: first results from the Linac Coherent Light Source free-electron laser. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , <b>2013</b> , 46, 164003	1.3	143
87	X-Ray Based Subpicosecond Electron Bunch Characterization Using 90 degrees Thomson Scattering. <i>Physical Review Letters</i> , <b>1996</b> , 77, 4182-4185	7.4	132
86	Coherent orbital waves in the photo-induced insulator-metal dynamics of a magnetoresistive manganite. <i>Nature Materials</i> , <b>2007</b> , 6, 643-7	27	130
85	Photo-induced spin-state conversion in solvated transition metal complexes probed via time-resolved soft X-ray spectroscopy. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 6809-16	16.4	122
84	Optical switching in VO2 films by below-gap excitation. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 181904	3.4	115
83	Two-dimensional carrier-carrier screening in a quantum well. <i>Physical Review Letters</i> , <b>1991</b> , 67, 636-639	7.4	106
82	Femtosecond relaxation dynamics of image-potential states. <i>Physical Review B</i> , <b>1991</b> , 43, 4688-4698	3.3	100
81	A setup for ultrafast time-resolved x-ray absorption spectroscopy. <i>Review of Scientific Instruments</i> , <b>2004</b> , 75, 24-30	1.7	90
80	Tracking the motion of charges in a terahertz light field by femtosecond X-ray diffraction. <i>Nature</i> , <b>2006</b> , 442, 664-6	50.4	85
79	Femtosecond dynamics of cis-trans isomerization in a visual pigment analog: isorhodopsin. <i>The Journal of Physical Chemistry</i> , <b>1993</b> , 97, 12087-12092		85
78	Femtosecond hot-carrier energy relaxation in GaAs. <i>Applied Physics Letters</i> , <b>1987</b> , 51, 1442-1444	3.4	85
77	Electronic and nuclear contributions to time-resolved optical and X-ray absorption spectra of hematite and insights into photoelectrochemical performance. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 3754-3769	35.4	82
76	Phase fluctuations and the absence of topological defects in a photo-excited charge-ordered nickelate. <i>Nature Communications</i> , <b>2012</b> , 3, 838	17.4	74
75	Atomic-Scale Perspective of Ultrafast Charge Transfer at a Dye-Semiconductor Interface. <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 2753-9	6.4	73
74	Generation of femtosecond X-ray pulses via laser-electron beam interaction. <i>Applied Physics B: Lasers and Optics</i> , <b>2000</b> , 71, 1-10	1.9	69

73	Picosecond soft x-ray absorption measurement of the photoinduced insulator-to-metal transition in VO <sub>2</sub> . <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	68
72	Probing the hydrogen-bond network of water via time-resolved soft X-ray spectroscopy. <i>Physical Chemistry Chemical Physics</i> , <b>2009</b> , 11, 3951-7	3.6	64
71	Coupled Skyrmion sublattices in Cu(2)OSeO(3). <i>Physical Review Letters</i> , <b>2014</b> , 112, 167202	7.4	60
70	Femtosecond Spectroscopy of a 13-Demethylrhodopsin Visual Pigment Analogue: The Role of Nonbonded Interactions in the Isomerization Process. <i>The Journal of Physical Chemistry</i> , <b>1996</b> , 100, 17388-17394 <sup>58</sup>	5.8	58
69	Probing the Electronic Structure of a Photoexcited Solar Cell Dye with Transient X-ray Absorption Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , <b>2012</b> , 3, 1695-700	6.4	54
68	Femtosecond dynamics of the n=2 image-potential state on Ag(100). <i>Physical Review B</i> , <b>1990</b> , 41, 5436-5439	4.39	54
67	Generation of blue-green 10 fs pulses using an excimer pumped dye amplifier. <i>Applied Physics Letters</i> , <b>1991</b> , 58, 801-803	3.4	53
66	Recent advances in ultrafast X-ray sources. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2019</b> , 377, 20180384	3	51
65	Simulating Ru L3-edge X-ray absorption spectroscopy with time-dependent density functional theory: model complexes and electron localization in mixed-valence metal dimers. <i>Journal of Physical Chemistry A</i> , <b>2013</b> , 117, 4444-54	2.8	50
64	Interaction of relativistic electrons with ultrashort laser pulses: generation of femtosecond X-rays and microprobing of electron beams. <i>IEEE Journal of Quantum Electronics</i> , <b>1997</b> , 33, 1925-1934	2	48
63	k-space carrier dynamics in GaAs. <i>Applied Physics Letters</i> , <b>1992</b> , 60, 2123-2125	3.4	48
62	Ligand-field symmetry effects in Fe(II) polypyridyl compounds probed by transient X-ray absorption spectroscopy. <i>Faraday Discussions</i> , <b>2012</b> , 157, 463-74; discussion 475-500	3.6	46
61	Femtosecond laser-tissue interactions: Retinal injury studies. <i>IEEE Journal of Quantum Electronics</i> , <b>1987</b> , 23, 1836-1844	2	46
60	Ultra-Broadband Femtosecond Measurements of the Photo-Induced Phase Transition in VO <sub>2</sub> : From the Mid-IR to the Hard X-rays. <i>Journal of the Physical Society of Japan</i> , <b>2006</b> , 75, 011004	1.5	44
59	Observation of a nearly isotropic, high-energy Coulomb explosion group in the fragmentation of D <sub>2</sub> by short laser pulses. <i>Physical Review A</i> , <b>2002</b> , 65,	2.6	44
58	Time-Resolved X-ray Spectroscopy in the Water Window: Elucidating Transient Valence Charge Distributions in an Aqueous Fe(II) Complex. <i>Journal of Physical Chemistry Letters</i> , <b>2016</b> , 7, 465-70	6.4	41
57	Ultrafast conversions between hydrogen bonded structures in liquid water observed by femtosecond x-ray spectroscopy. <i>Journal of Chemical Physics</i> , <b>2009</b> , 131, 234505	3.9	41
56	Real-time manifestation of strongly coupled spin and charge order parameters in stripe-ordered La(1.75)Sr(0.25)NiO(4) nickelate crystals using time-resolved resonant x-ray diffraction. <i>Physical Review Letters</i> , <b>2013</b> , 110, 127404	7.4	40

55	Tailored terahertz pulses from a laser-modulated electron beam. <i>Physical Review Letters</i> , <b>2006</b> , 96, 16480-1	7.4	37
54	Metal-insulator transitions in an expanding metallic fluid: particle formation kinetics. <i>Physical Review Letters</i> , <b>2003</b> , 90, 236102	7.4	37
53	Resonant intervalley scattering in GaAs. <i>Physical Review Letters</i> , <b>1990</b> , 65, 3429-3432	7.4	31
52	Element-specific characterization of transient electronic structure of solvated Fe(II) complexes with time-resolved soft X-ray absorption spectroscopy. <i>Accounts of Chemical Research</i> , <b>2015</b> , 48, 2957-66	24.3	28
51	Ultrafast charge localization in a stripe-phase nickelate. <i>Nature Communications</i> , <b>2013</b> , 4, 2643	17.4	28
50	The Linac Coherent Light Source: Recent Developments and Future Plans. <i>Applied Sciences (Switzerland)</i> , <b>2017</b> , 7, 850	2.6	27
49	Comprehensive Experimental and Computational Spectroscopic Study of Hexacyanoferrate Complexes in Water: From Infrared to X-ray Wavelengths. <i>Journal of Physical Chemistry B</i> , <b>2018</b> , 122, 5075-5086	3.4	27
48	Femtosecond excited-state dynamics of polydiacetylene. <i>Applied Physics Letters</i> , <b>1990</b> , 56, 1600-1602	3.4	27
47	Tracking reaction dynamics in solution by pump-probe X-ray absorption spectroscopy and X-ray liquidography (solution scattering). <i>Chemical Communications</i> , <b>2016</b> , 52, 3734-49	5.8	26
46	Sub-nanosecond time-resolved ambient-pressure X-ray photoelectron spectroscopy setup for pulsed and constant wave X-ray light sources. <i>Review of Scientific Instruments</i> , <b>2014</b> , 85, 093102	1.7	24
45	Ferromagnetic enhancement of CE-type spin ordering in (Pr,Ca)MnO <sub>3</sub> . <i>Physical Review Letters</i> , <b>2011</b> , 106, 186404	7.4	24
44	Direct observation of coherent femtosecond solvent reorganization coupled to intramolecular electron transfer. <i>Nature Chemistry</i> , <b>2021</b> , 13, 343-349	17.6	21
43	Light-Induced Radical Formation and Isomerization of an Aromatic Thiol in Solution Followed by Time-Resolved X-ray Absorption Spectroscopy at the Sulfur K-Edge. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 4797-4804	16.4	20
42	Generation of 312 nm, femtosecond pulses using a poled copolymer film. <i>IEEE Journal of Quantum Electronics</i> , <b>1992</b> , 28, 2398-2403	2	20
41	UV-Photochemistry of the Disulfide Bond: Evolution of Early Photoproducts from Picosecond X-ray Absorption Spectroscopy at the Sulfur K-Edge. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 6554-6561	16.4	19
40	Using Ultrafast X-ray Spectroscopy To Address Questions in Ligand-Field Theory: The Excited State Spin and Structure of [Fe(dcpp)]. <i>Inorganic Chemistry</i> , <b>2019</b> , 58, 9341-9350	5.1	18
39	Electronic and Molecular Structure of the Transient Radical Photocatalyst Mn(CO) <sub>5</sub> and Its Parent Compound Mn <sub>2</sub> (CO) <sub>10</sub> . <i>Inorganic Chemistry</i> , <b>2016</b> , 55, 5895-903	5.1	17
38	Transient electronic structure of the photoinduced phase of Pr <sub>0.7</sub> Ca <sub>0.3</sub> MnO <sub>3</sub> probed with soft x-ray pulses. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	17

37	Laser seeding of the storage-ring microbunching instability for high-power coherent terahertz radiation. <i>Physical Review Letters</i> , <b>2006</b> , 97, 074802	7.4	17
36	Measurement of synchrotron pulse durations using surface photovoltage transients. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2001</b> , 467-468, 1438-1440	1.2	17
35	Femtosecond hot carrier energy redistribution in GaAs and AlGaAs. <i>Solid-State Electronics</i> , <b>1988</b> , 31, 443-446	17.4	17
34	Transient metal-centered states mediate isomerization of a photochromic ruthenium-sulfoxide complex. <i>Nature Communications</i> , <b>2018</b> , 9, 1989	23.6	16
33	Using X-ray free-electron lasers for spectroscopy of molecular catalysts and metalloenzymes. <i>Nature Reviews Physics</i> , <b>2021</b> , 3, 264-282	3.2	13
32	Picosecond sulfur K-edge X-ray absorption spectroscopy with applications to excited state proton transfer. <i>Structural Dynamics</i> , <b>2017</b> , 4, 044021	7.4	13
31	Observation of coherent helimagnons and gilbert damping in an itinerant magnet. <i>Physical Review Letters</i> , <b>2012</b> , 109, 247204	3	13
30	Amplification of femtosecond pulses in Ti:Al(2)O(3) using an injection-seeded laser. <i>Optics Letters</i> , <b>1989</b> , 14, 1347-9	4.9	12
29	Glass-like recovery of antiferromagnetic spin ordering in a photo-excited manganite Pr <sub>1-x</sub> Ta <sub>x</sub> MnO <sub>3</sub> . <i>Scientific Reports</i> , <b>2014</b> , 4, 4050	3.8	9
28	Femtosecond X-Rays and Structural Dynamics in Condensed Matter. <i>Topics in Applied Physics</i> , <b>2004</b> , 309-338	9.4	9
27	Nonlinear Ultrafast Spin Scattering in the Skyrmion Phase of Cu <sub>2</sub> OSeO <sub>3</sub> . <i>Physical Review Letters</i> , <b>2017</b> , 119, 107204	3.9	8
26	Advances in Ultrafast Control and Probing of Correlated-Electron Materials. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2012</b> , 18, 81-91	1.2	8
25	Revealing the bonding of solvated Ru complexes with valence-to-core resonant inelastic X-ray scattering. <i>Chemical Science</i> , <b>2021</b> , 12, 3713-3725	0.3	7
24	Double core hole valence-to-core x-ray emission spectroscopy: A theoretical exploration using time-dependent density functional theory. <i>Journal of Chemical Physics</i> , <b>2019</b> , 151, 144114	2.6	7
23	Ultrafast X-ray diffraction of laser-irradiated crystals. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2001</b> , 467-468, 986-989	6.4	7
22	Probing reaction dynamics of transition-metal complexes in solution via time-resolved X-ray spectroscopy. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 148, 012043		
21	High-order harmonic pulse broadening in an ionizing medium. <i>Physical Review A</i> , <b>2001</b> , 63,		
20	Excited-State Charge Distribution of a Donor-Acceptor Zn Porphyrin Probed by N K-Edge Transient Absorption Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , <b>2021</b> , 12, 1182-1188		

19	Time-resolved x-ray photoelectron spectroscopy techniques for real-time studies of interfacial charge transfer dynamics <b>2013</b> ,		6
18	Femtosecond studies of intervalley scattering in GaAs and Al <sub>x</sub> Ga <sub>1-x</sub> As. <i>Solid-State Electronics</i> , <b>1989</b> , 32, 1491-1495	1.7	6
17	Time-resolved studies of phase transition dynamics in strongly correlated manganites. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 148, 012013	0.3	3
16	Femtosecond X-rays from relativistic electrons: new tools for probing structural dynamics. <i>Comptes Rendus Physique</i> , <b>2001</b> , 2, 1373-1388		3
15	Ultrafast dynamics of photoexcited C6O <b>1993</b> ,		3
14	Following Metal-to-Ligand Charge-Transfer Dynamics with Ligand and Spin Specificity Using Femtosecond Resonant Inelastic X-ray Scattering at the Nitrogen K-Edge. <i>Journal of Physical Chemistry Letters</i> , <b>2021</b> , 12, 6676-6683	6.4	3
13	Femtosecond X-ray generation through relativistic electron beam laser interaction. <i>Comptes Rendus Physique</i> , <b>2000</b> , 1, 279-296		2
12	Ultrafast x-ray pump x-ray probe transient absorption spectroscopy: A computational study and proposed experiment probing core-valence electronic correlations in solvated complexes. <i>Journal of Chemical Physics</i> , <b>2021</b> , 154, 214107	3.9	2
11	Successful completion of the femtosecond slicing upgrade at the ALS <b>2007</b> ,		1
10	A high-average power femtosecond laser for synchrotron light source applications <b>2007</b> ,		1
9	Excited State Structural Dynamics Probed with Time-Resolved Sulfur K-Edge X-Ray Absorption Spectroscopy. <i>Springer Proceedings in Physics</i> , <b>2015</b> , 403-406	0.2	1
8	Monitoring Excited State Charge Transfer of Transition Metal Mixed-Valence Complexes with Femtosecond X-ray Absorption and Emission Spectroscopy <b>2016</b> ,		1
7	Femtosecond X-ray Spectroscopy Directly Quantifies Transient Excited-State Mixed Valency.. <i>Journal of Physical Chemistry Letters</i> , <b>2022</b> , 378-386	6.4	0
6	UV-photochemistry of the biologically relevant thiol group and the disulfide bond: Evolution of early photoproducts from picosecond X-ray absorption spectroscopy at the sulfur K-Edge. <i>EPJ Web of Conferences</i> , <b>2019</b> , 205, 09006	0.3	
5	Elucidating Charge Delocalization in the High-Spin State of aqueous FeII Spin-Crossover Compounds via Time-Resolved Spectroscopy in the X-ray Water Window. <i>EPJ Web of Conferences</i> , <b>2013</b> , 41, 05037	0.3	
4	Picosecond X-ray Absorption Spectroscopy of Photochemical Transient Species in Solution. <i>Springer Series in Chemical Physics</i> , <b>2007</b> , 722-724	0.3	
3	Probing Reaction Dynamics of Transition-Metal Complexes in Solution via Time-Resolved Soft X-ray Spectroscopy. <i>Springer Series in Chemical Physics</i> , <b>2009</b> , 125-127	0.3	
2	Ultrafast Mid-infrared Spectroscopy of the Charge- and Spin-Ordered Nickelate La <sub>1.75</sub> Sr <sub>0.25</sub> NiO <sub>4</sub> . <i>EPJ Web of Conferences</i> , <b>2013</b> , 41, 03016	0.3	

- 1 The magnetic order in multiferroic DyMnO<sub>3</sub>. *Journal of Electron Spectroscopy and Related Phenomena*, **2021**, 246, 147013

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