R J Dwayne Miller

List of Publications by Year
in descending order

223 papers	12,781 citations	23500 58 h-index	26548 107 g-index
394 all docs	394 docs citations	394 times ranked	9553 citing authors

#	Article	IF	Citations
1	An Atomic-Level View of Melting Using Femtosecond Electron Diffraction. Science, 2003, 302, 1382-1385.	6.0	802
2	Ultrafast memory loss and energy redistribution in the hydrogen bond network of liquid H2O. Nature, 2005, 434, 199-202.	13.7	691
3	Femtosecond electron diffraction: heralding the era of atomically resolved dynamics. Reports on Progress in Physics, 2011, 74, 096101.	8.1	402
4	Snapshots of cooperative atomic motions in the optical suppression of charge density waves. Nature, 2010, 468, 799-802.	13.7	373
5	Coherent Control of Retinal Isomerization in Bacteriorhodopsin. Science, 2006, 313, 1257-1261.	6.0	343
6	The Formation of Warm Dense Matter: Experimental Evidence for Electronic Bond Hardening in Gold. Science, 2009, 323, 1033-1037.	6.0	294
7	Two-dimensional spectroscopy using diffractive optics based phased-locked photon echoes. Chemical Physics Letters, 2004, 386, 184-189.	1.2	290
8	Ultrafast electron optics: Propagation dynamics of femtosecond electron packets. Journal of Applied Physics, 2002, 92, 1643-1648.	1.1	285
9	Quantum biology revisited. Science Advances, 2020, 6, eaaz4888.	4.7	266
10	Femtosecond Crystallography with Ultrabright Electrons and X-rays: Capturing Chemistry in Action. Science, 2014, 343, 1108-1116.	6.0	260
11	Electronic acceleration of atomic motions and disordering in bismuth. Nature, 2009, 458, 56-59.	13.7	253
12	Ultrafast heterodyne-detected transient-grating spectroscopy using diffractive optics. Journal of the Optical Society of America B: Optical Physics, 1998, 15, 1791.	0.9	245
13	Temperature dependence of the two-dimensional infrared spectrum of liquid H₂O. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 437-442.	3.3	242
14	Mapping molecular motions leading to charge delocalization with ultrabright electrons. Nature, 2013, 496, 343-346.	13.7	240
15	Nature does not rely on long-lived electronic quantum coherence for photosynthetic energy transfer. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8493-8498.	3.3	235
16	Optical generation of tunable ultrasonic waves. Journal of Applied Physics, 1982, 53, 1144-1149.	1.1	221
17	Two-dimensional spectroscopy of a molecular dimer unveils the effects of vibronic coupling on exciton coherences. Nature Chemistry, 2014, 6, 196-201.	6.6	219
18	Laserâ€induced excited state and ultrasonic wave gratings: Amplitude and phase grating contributions to diffraction. Journal of Chemical Physics, 1982, 77, 1144-1152.	1.2	191

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19	Femtosecond electron diffraction: â€˜making the molecular movieâ€™. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 741-778.	1.6	176
20	Ultrafast Mid-IR Laser Scalpel: Protein Signals of the Fundamental Limits to Minimally Invasive Surgery. PLoS ONE, 2010, 5, e13053.	1.1	165
21	Local vibrational coherences drive the primary photochemistry of vision. Nature Chemistry, 2015, 7, 980-986.	6.6	162
22	Electronically Driven Structure Changes of Si Captured by Femtosecond Electron Diffraction. Physical Review Letters, 2008, 100, 155504.	2.9	150
23	Vibrational Energy Relaxation and Structural Dynamics of Heme Proteins. Annual Review of Physical Chemistry, 1991, 42, 581-614.	4.8	127
24	Picosecond dynamics of surface electron transfer processes: Surface restricted transient grating studies of the nâ€TiO2/H2O interface. Journal of Chemical Physics, 1989, 90, 1253-1269.	1.2	125
25	Energy Dependence of Electron Lifetime in Graphite Observed with Femtosecond Photoemission Spectroscopy. Physical Review Letters, 1996, 76, 483-486.	2.9	120
26	Direct observation of collective modes coupled to molecular orbitalâ€“driven charge transfer. Science, 2015, 350, 1501-1505.	6.0	114
27	Mapping Atomic Motions with Ultrabright Electrons: The Chemists' Gedanken Experiment Enters the Lab Frame. Annual Review of Physical Chemistry, 2014, 65, 583-604.	4.8	111
28	Capturing Chemistry in Action with Electrons: Realization of Atomically Resolved Reaction Dynamics. Chemical Reviews, 2017, 117, 11066-11124.	23.0	108
29	Full characterization of RF compressed femtosecond electron pulses using ponderomotive scattering. Optics Express, 2012, 20, 12048.	1.7	106
30	Picosecond transient thermal phase grating spectroscopy: A new approach to the study of vibrational energy relaxation processes in proteins. Chemical Physics, 1989, 131, 81-97.	0.9	102
31	Fixed target matrix for femtosecond time-resolved and in situ serial micro-crystallography. Structural Dynamics, 2015, 2, 054302.	0.9	102
32	Diffractive optics-based six-wave mixing: Heterodyne detection of the full Ï‡(5) tensor of liquid CS2. Journal of Chemical Physics, 2002, 116, 2016-2042.	1.2	96
33	Femtosecond Dynamics of the Ring Closing Process of Diarylethene: A Case Study of Electrocyclic Reactions in Photochromic Single Crystals. Journal of Physical Chemistry A, 2011, 115, 13158-13168.	1.1	96
34	Interrogation of Vibrational Structure and Line Broadening of Liquid Water by Raman-Induced Kerr Effect Measurements within the Multimode Brownian Oscillator Model. The Journal of Physical Chemistry, 1996, 100, 10380-10388.	2.9	95
35	Grating enhanced ponderomotive scattering for visualization and full characterization of femtosecond electron pulses. Optics Express, 2008, 16, 3334.	1.7	93
36	Low-dose fixed-target serial synchrotron crystallography. Acta Crystallographica Section D: Structural Biology, 2017, 73, 373-378.	1.1	91

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37	`Making the molecular movie': first frames. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, 137-156.	0.3	84
38	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
39	Excitation of longitudinal and transverse coherent acoustic phonons in nanometer free-standing films of (001) Si. Physical Review B, 2009, 79, .	1.1	81
40	Mapping atomic motions with ultrabright electrons: towards fundamental limits in space-time resolution. Faraday Discussions, 2015, 177, 467-491.	1.6	81
41	Ring-Closing Reaction in Diarylethene Captured by Femtosecond Electron Crystallography. Journal of Physical Chemistry B, 2013, 117, 15894-15902.	1.2	79
42	Time-resolved crystallography reveals allosteric communication aligned with molecular breathing. Science, 2019, 365, 1167-1170.	6.0	78
43	Anharmonic Couplings Underlying the Ultrafast Vibrational Dynamics of Hydrogen Bonds in Liquids. Physical Review Letters, 2005, 95, 147402.	2.9	75
44	Coherently-controlled two-dimensional photon echo electronic spectroscopy. Optics Express, 2009, 17, 9764.	1.7	75
45	Electronic excited state transport and trapping in disordered systems: Picosecond fluorescence mixing, transient grating, and probe pulse experiments. Journal of Chemical Physics, 1983, 78, 5138-5146.	1.2	74
46	Liquid application method for time-resolved analyses by serial synchrotron crystallography. Nature Methods, 2019, 16, 979-982.	9.0	74
47	Femtosecond electron pulse characterization using laser ponderomotive scattering. Optics Letters, 2006, 31, 3517.	1.7	73
48	Laser selective cutting of biological tissues by impulsive heat deposition through ultrafastâ€¨ vibrational excitations. Optics Express, 2009, 17, 22937.	1.7	73
49	Fixed target combined with spectral mapping: approaching 100% hit rates for serial crystallography. Acta Crystallographica Section D: Structural Biology, 2016, 72, 944-955.	1.1	71
50	Crystallography on a chip. Acta Crystallographica Section D: Biological Crystallography, 2012, 68, 321-323.	2.5	70
51	Serial protein crystallography in an electron microscope. Nature Communications, 2020, 11, 996.	5.8	69
52	The hit-and-return system enables efficient time-resolved serial synchrotron crystallography. Nature Methods, 2018, 15, 901-904.	9.0	67
53	Energetics and Dynamics of Deterministic Protein Motion. Accounts of Chemical Research, 1994, 27, 145-150.	7.6	65
54	Effects of femtosecond laser irradiation on osseous tissues. Lasers in Surgery and Medicine, 2007, 39, 273-285.	1.1	65

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55	Fifth-order two-dimensional Raman spectroscopy: A new direct probe of the liquid state. International Reviews in Physical Chemistry, 2003, 22, 497-532.	0.9	63
56	New Insights into the Photophysics of DNA Nucleobases. Journal of Physical Chemistry Letters, 2016, 7, 4445-4450.	2.1	62
57	Ultrafast charge-transfer dynamics at tin disulfide surfaces. The Journal of Physical Chemistry, 1992, 96, 2820-2826.	2.9	61
58	Nanofluidic Cells with Controlled Pathlength and Liquid Flow for Rapid, High-Resolution In Situ Imaging with Electrons. Journal of Physical Chemistry Letters, 2013, 4, 2339-2347.	2.1	60
59	Diffractive optics implementation of six-wave mixing. Optics Letters, 2000, 25, 853.	1.7	59
60	Structural Monitoring of the Onset of Excited-State Aromaticity in a Liquid Crystal Phase. Journal of the American Chemical Society, 2017, 139, 15792-15800.	6.6	59
61	Low-dose cryo electron ptychography via non-convex Bayesian optimization. Scientific Reports, 2017, 7, 9883.	1.6	59
62	Subpicosecond reflective electroâ€optic sampling of electronâ€hole vertical transport in surfaceâ€spaceâ€charge fields. Applied Physics Letters, 1990, 56, 524-526.	1.5	57
63	Diffractive optics-based heterodyne-detected four-wave mixing signals of protein motion: From "protein quakes" to ligand escape for myoglobin. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 6110-6115.	3.3	57
64	Direct Observation of Ultrafast Exciton Dissociation in Lead Iodide Perovskite by 2D Electronic Spectroscopy. ACS Photonics, 2018, 5, 852-860.	3.2	57
65	Observation of the cascaded atomic-to-global length scales driving protein motion. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 4990-4994.	3.3	56
66	Single shot time stamping of ultrabright radio frequency compressed electron pulses. Applied Physics Letters, 2013, 103, .	1.5	56
67	A modular and compact portable mini-endstation for high-precision, high-speed fixed target serial crystallography at FEL and synchrotron sources. Journal of Synchrotron Radiation, 2015, 22, 1372-1378.	1.0	55
68	Characterization of ultrashort electron pulses by electron-laser pulse cross correlation. Optics Letters, 2005, 30, 1057.	1.7	54
69	Two-Dimensional Electronic Spectroscopy of Light-Harvesting Complex II at Ambient Temperature: A Joint Experimental and Theoretical Study. Journal of Physical Chemistry B, 2015, 119, 12017-12027.	1.2	54
70	Ultrafast Phase Grating Studies of Heme Proteins:Â Observation of the Low-Frequency Modes Directing Functionally Important Protein Motions. Journal of Physical Chemistry B, 1998, 102, 6621-6634.	1.2	53
71	Versatile 7-fs optical parametric pulse generation and compression by use of adaptive optics. Optics Letters, 2001, 26, 1152.	1.7	53
72	Vibrationally excited ultrafast thermodynamic phase transitions at the water/air interface. Physical Chemistry Chemical Physics, 2010, 12, 5225.	1.3	51

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73	Femtosecond Heterodyne-Detected Four-Wave-Mixing Studies of Deterministic Protein Motions. 2. Protein Response. Journal of Physical Chemistry A, 1999, 103, 10630-10643.	1.1	50
74	Ambient Mass Spectrometry Imaging with Picosecond Infrared Laser Ablation Electrospray Ionization (PIR-LAESI). Analytical Chemistry, 2015, 87, 12071-12079.	3.2	49
75	Diffractive Optics-Based Heterodyne-Detected Grating Spectroscopy:â€‰ Application to Ultrafast Protein Dynamics. Journal of Physical Chemistry B, 1999, 103, 603-607.	1.2	48
76	Two-dimensional fifth-order Raman spectroscopy of liquid formamide: Experiment and Theory. Journal of Chemical Physics, 2008, 128, 234507.	1.2	48
77	Coherent control of the isomerization of retinal in bacteriorhodopsin in the high intensity regime. Journal of Chemical Physics, 2011, 134, 085105.	1.2	46
78	Ultrafast Extraction of Proteins from Tissues Using Desorption by Impulsive Vibrational Excitation. Angewandte Chemie - International Edition, 2015, 54, 285-288.	7.2	44
79	Structural Dynamics upon Photoexcitation in a Spin Crossover Crystal Probed with Femtosecond Electron Diffraction. Angewandte Chemie - International Edition, 2017, 56, 7130-7134.	7.2	43
80	Direct visualization of charge distributions during femtosecond laser ablation of a Si (100) surface. Physical Review B, 2008, 78, .	1.1	42
81	The Primary Photochemistry of Vision Occurs at the Molecular Speed Limit. Journal of Physical Chemistry B, 2017, 121, 4040-4047.	1.2	42
82	Intermolecular vibrations mediate ultrafast singlet fission. Science Advances, 2020, 6, .	4.7	42
83	Cold ablation driven by localized forces in alkali halides. Nature Communications, 2014, 5, 3863.	5.8	41
84	Bone Ablation without Thermal or Acoustic Mechanical Injury via a Novel Picosecond Infrared Laser (PIRL). Otolaryngology - Head and Neck Surgery, 2014, 150, 385-393.	1.1	40
85	Femtosecond Heterodyne-Detected Four-Wave-Mixing Studies of Deterministic Protein Motions. 1. Theory and Experimental Technique of Diffractive Optics-Based Spectroscopy. Journal of Physical Chemistry A, 1999, 103, 10619-10629.	1.1	39
86	Do we live in a quantum world? Advances in multidimensional coherent spectroscopies refine our understanding of quantum coherences and structural dynamics of biological systems. Current Opinion in Structural Biology, 2006, 16, 654-663.	2.6	39
87	The HARE chip for efficient time-resolved serial synchrotron crystallography. Journal of Synchrotron Radiation, 2020, 27, 360-370.	1.0	39
88	Three-dimensional view of ultrafast dynamics in photoexcited bacteriorhodopsin in the multiphoton regime and biological relevance. Nature Communications, 2020, 11, 1240.	5.8	38
89	The photocycle and ultrafast vibrational dynamics of bacteriorhodopsin in lipid nanodiscs. Physical Chemistry Chemical Physics, 2014, 16, 21310-21320.	1.3	37
90	Automatic quantification and classification of microplastics in scanning electron micrographs via deep learning. Science of the Total Environment, 2022, 825, 153903.	3.9	37

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91	Optical generation of highâ€frequency acoustic waves in GaAs/AlxGa1â^'xAs periodic multilayer structures. Journal of Applied Physics, 1994, 75, 2761-2768.	1.1	36
92	Heterodyne detected fifth-order Raman response of liquid CS2: â€˜Dutch Crossâ€™ polarization. Chemical Physics Letters, 2003, 369, 635-642.	1.2	36
93	Stable UV to IR supercontinuum generation in calcium fluoride with conserved circular polarization states. Optics Express, 2009, 17, 21488.	1.7	36
94	Raman gain from waveguides inscribed in KGd(WO4)2 by high repetition rate femtosecond laser. Applied Physics Letters, 2008, 92, 081105.	1.5	35
95	TakeTwo: an indexing algorithm suited to still images with known crystal parameters. Acta Crystallographica Section D: Structural Biology, 2016, 72, 956-965.	1.1	35
96	Pyrene, a Test Case for Deep-Ultraviolet Molecular Photophysics. Journal of Physical Chemistry Letters, 2019, 10, 3481-3487.	2.1	35
97	Primary Charge Separation in the Photosystem II Reaction Center Revealed by a Global Analysis of the Two-dimensional Electronic Spectra. Scientific Reports, 2017, 7, 12347.	1.6	34
98	Nonlinear optical studies of heme protein dynamics: Implications for proteins as hybrid states of matter. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2005, 1749, 148-172.	1.1	33
99	Comparative study of wound healing in rat skin following incision with a novel picosecond infrared laser (PIRL) and different surgical modalities. Lasers in Surgery and Medicine, 2016, 48, 385-391.	1.1	33
100	Homogenization of tissues via picosecond-infrared laser (PIRL) ablation: Giving a closer view on the in-vivo composition of protein species as compared to mechanical homogenization. Journal of Proteomics, 2016, 134, 193-202.	1.2	33
101	Monte Carlo study of photogenerated carrier transport in GaAs surface spaceâ€charge fields. Journal of Applied Physics, 1989, 66, 3066-3073.	1.1	32
102	Visualization of Multimerization and Self-Assembly of DNA-Functionalized Gold Nanoparticles Using In-Liquid Transmission Electron Microscopy. Journal of Physical Chemistry Letters, 2015, 6, 4487-4492.	2.1	31
103	Photoinduced Vibrations Drive Ultrafast Structural Distortion in Lead Halide Perovskite. Journal of the American Chemical Society, 2020, 142, 16569-16578.	6.6	30
104	Hot electron injection driven phase transitions. Physical Review B, 2012, 86, .	1.1	29
105	Early Events in the Nonadiabatic Relaxation Dynamics of 4-(N,N-Dimethylamino)benzonitrile. Journal of Chemical Theory and Computation, 2015, 11, 1118-1128.	2.3	29
106	Ultrafast electron diffraction optimized for studying structural dynamics in thin films and monolayers. Structural Dynamics, 2016, 3, 034302.	0.9	29
107	Dynamics of Ligand Escape in Myoglobin:Â Q-Band Transient Absorption and Four-Wave Mixing Studies. Journal of Physical Chemistry B, 2002, 106, 10460-10467.	1.2	28
108	Heat Generation During Ablation of Porcine Skin With Erbium:YAG Laser vs a Novel Picosecond Infrared Laser. JAMA Otolaryngology - Head and Neck Surgery, 2013, 139, 828.	1.2	28

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109	Femtosecond electron diffraction: an atomic perspective of condensed phase dynamics. Journal of Modern Optics, 2007, 54, 905-922.	0.6	26
110	Towards instantaneous cellular level bio diagnosis: laser extraction and imaging of biological entities with conserved integrity and activity. Nanotechnology, 2015, 26, 284001.	1.3	26
111	Fixed-target serial oscillation crystallography at room temperature. IUCrJ, 2019, 6, 305-316.	1.0	26
112	Impact of Vibrational Coherence on the Quantum Yield at a Conical Intersection. Journal of Physical Chemistry Letters, 2016, 7, 3491-3496.	2.1	25
113	Serial femtosecond and serial synchrotron crystallography can yield data of equivalent quality: A systematic comparison. Science Advances, 2021, 7, .	4.7	25
114	Fifth-Order Raman Spectroscopy of Liquid Benzene:Â Experiment and Theoryâ€. Journal of Physical Chemistry B, 2006, 110, 19867-19876.	1.2	24
115	Spectral Signatures of Ultrafast Spin Crossover in Single Crystal [Fe^{II}(bpy)₃](PF₆)₂. Chemistry - A European Journal, 2016, 22, 5118-5122.	1.7	24
116	Reduction of thermocoagulative injury via use of a picosecond infrared laser (PIRL) in laryngeal tissues. European Archives of Oto-Rhino-Laryngology, 2015, 272, 941-948.	0.8	23
117	A coherent photoacoustic approach to excited-state-excited-state absorption spectroscopy: application to the investigation of a near-resonant contribution to ultrasonic diffraction. The Journal of Physical Chemistry, 1984, 88, 3021-3025.	2.9	21
118	Human Î³S-Crystallinâ€“Copper Binding Helps Buffer against Aggregation Caused by Oxidative Damage. Biochemistry, 2020, 59, 2371-2385.	1.2	21
119	Determination of the Feâ€’CO Bond Energy in Myoglobin Using Heterodyne-Detected Transient Thermal Phase Grating Spectroscopy. Journal of Physical Chemistry B, 2005, 109, 20605-20611.	1.2	20
120	Femtosecond electron diffraction: Preparation and characterization of (110)-oriented bismuth films. Journal of Applied Physics, 2012, 111, 043504.	1.1	20
121	Measurement of transverse emittance and coherence of double-gate field emitter array cathodes. Nature Communications, 2016, 7, 13976.	5.8	20
122	Bandgap modulation in photoexcited topological insulator Bi2Te3 via atomic displacements. Journal of Chemical Physics, 2016, 145, 024504.	1.2	20
123	Direct observation of nuclear reorganization driven by ultrafast spin transitions. Nature Communications, 2020, 11, 1530.	5.8	20
124	Picosecond surface restricted transient grating studies of carrier reaction dynamics at nâ€GaAs(100) interfaces. Journal of Chemical Physics, 1992, 96, 3981-3994.	1.2	19
125	Diffractive Optics Based Four-Wave, Six-Wave,â€‰..., Î½-Wave Nonlinear Spectroscopy. Accounts of Chemical Research, 2009, 42, 1442-1451.	7.6	19
126	A novel tool in laryngeal surgery: Preliminary results of the picosecond infrared laser. Laryngoscope, 2013, 123, 2770-2775.	1.1	19

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127	Molecular dynamics investigation of desorption and ion separation following picosecond infrared laser (PIRL) ablation of an ionic aqueous protein solution. Journal of Chemical Physics, 2016, 145, 204202.	1.2	19
128	Laser-Limited Signatures of Quantum Coherence. Journal of Physical Chemistry A, 2016, 120, 3042-3048.	1.1	19
129	Ultrafast dissolution and creation of bonds in IrTe ₂ induced by photodoping. Science Advances, 2018, 4, eaar3867.	4.7	19
130	The crystal structures of a chloride-pumping microbial rhodopsin and its proton-pumping mutant illuminate proton transfer determinants. Journal of Biological Chemistry, 2020, 295, 14793-14804.	1.6	19
131	Microtomographic analysis of healing of femtosecond laser bone calvarial wounds compared to mechanical instruments in mice with and without application of BMP-7. Lasers in Surgery and Medicine, 2007, 39, 458-467.	1.1	18
132	Origin of poor doping efficiency in solution processed organic semiconductors. Chemical Science, 2018, 9, 4468-4476.	3.7	18
133	Highly stable, 100 W average power from fiber-based ultrafast laser system at 1030 nm based on single-pass photonic-crystal rod amplifier. Optics Communications, 2019, 437, 6-10.	1.0	18
134	Ultrafast imaging of photochemical dynamics: roadmap to a new conceptual basis for chemistry. Faraday Discussions, 2016, 194, 777-828.	1.6	17
135	Fabrication and characterization of a focused ion beam milled lanthanum hexaboride based cold field electron emitter source. Applied Physics Letters, 2018, 113, 093101.	1.5	17
136	Enhanced bandwidth noncollinear optical parametric amplification with a narrowband anamorphic pump. Optics Letters, 2011, 36, 2170.	1.7	16
137	Coherent ultrafast lattice-directed reaction dynamics of triiodide anion photodissociation. Nature Chemistry, 2017, 9, 516-522.	6.6	16
138	Mapping Atomic Motions with Electrons: Toward the Quantum Limit to Imaging Chemistry. ACS Photonics, 2020, 7, 296-320.	3.2	16
139	Excited-State Vibronic Dynamics of Bacteriorhodopsin from Two-Dimensional Electronic Photon Echo Spectroscopy and Multiconfigurational Quantum Chemistry. Journal of Physical Chemistry Letters, 2020, 11, 3889-3896.	2.1	16
140	Nonlinear digital filtering of scanningâ€probeâ€microscopy images by morphological pseudoconvolutions. Journal of Applied Physics, 1992, 71, 1565-1578.	1.1	15
141	Tracking an electronic wave packet in the vicinity of a conical intersection. Journal of Chemical Physics, 2017, 147, 074101.	1.2	15
142	Ultrafast Energy Transfer in Excitonically Coupled Molecules Induced by a Nonlocal Peierls Phonon. Journal of Physical Chemistry Letters, 2019, 10, 1206-1211.	2.1	15
143	Experimental basics for femtosecond electron diffraction studies. Journal of Modern Optics, 2007, 54, 923-942.	0.6	14
144	Compression of high-density 0.16 pC electron bunches through high field gradients for ultrafast single shot electron diffraction: The Compact RF Gun. Structural Dynamics, 2017, 4, 044016.	0.9	14

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145	Transient grating excitation of interfacial acoustics: Treatment of multilayer structures. Journal of Chemical Physics, 1995, 103, 1191-1199.	1.2	13
146	Transient structures and chemical reaction dynamics. Russian Chemical Reviews, 2017, 86, 1173-1253.	2.5	13
147	Soft Picosecond Infrared Laser Extraction of Highly Charged Proteins and Peptides from Bulk Liquid Water for Mass Spectrometry. Analytical Chemistry, 2018, 90, 4422-4428.	3.2	13
148	Time zero determination for FEL pump-probe studies based on ultrafast melting of bismuth. Structural Dynamics, 2017, 4, 054308.	0.9	13
149	Response to â€œComment on â€˜Ultrafast electron optics: Propagation dynamics of femtosecond electron packetsâ€™â€Šâ€•[J. Appl. Phys.94, 803 (2003)]. Journal of Applied Physics, 2003, 94, 807-808.	1.1	12
150	Self-Localizing Stabilized Mega-Pixel Picoliter Arrays with Size-Exclusion Sorting Capabilities. Analytical Chemistry, 2011, 83, 767-773.	3.2	12
151	Impact of laser on bismuth thin-films. European Physical Journal: Special Topics, 2013, 222, 1277-1285.	1.2	12
152	Determining the radial distribution function of water using electron scattering: A key to solution phase chemistry. Journal of Chemical Physics, 2020, 153, 194504.	1.2	12
153	Broadband Electronic Two-Dimensional Spectroscopy in the Deep UV. Springer Proceedings in Physics, 2015, , 432-435.	0.1	12
154	Transmission low-energy electron diffraction using double-gated single nanotip field emitter. Applied Physics Letters, 2018, 113, .	1.5	11
155	Does electronic coherence enhance anticorrelated pigment vibrations under realistic conditions?. Journal of Chemical Physics, 2019, 151, 114115.	1.2	11
156	Analysis of Surface Wave Generation by Laser Interference. Journal of Applied Mechanics, Transactions ASME, 1990, 57, 415-418.	1.1	10
157	Comment on â€œEngineering coherence among excited states in synthetic heterodimer systemsâ€• Science, 2014, 344, 1099-1099.	6.0	10
158	Visualization of Cellular Components in a Mammalian Cell with Liquid-Cell Transmission Electron Microscopy. Microscopy and Microanalysis, 2017, 23, 46-55.	0.2	10
159	The effect of Coulomb repulsion on the space-time resolution limits for ultrafast electron diffraction. Journal of Chemical Physics, 2019, 150, 054201.	1.2	10
160	Quantum state tomography of molecules by ultrafast diffraction. Nature Communications, 2021, 12, 5441.	5.8	10
161	Protein crystals IR laser ablated from aqueous solution at high speed retain their diffractive properties: applications in high-speed serial crystallography. Journal of Applied Crystallography, 2017, 50, 1773-1781.	1.9	10
162	Diffractive optics implementation of time- and frequency-domain heterodyne-detected six-wave mixing. Applied Physics B: Lasers and Optics, 2002, 74, s107-s112.	1.1	9

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163	Intramolecular vibrations enhance theÂquantum efficiency of excitonic energy transfer. Photosynthesis Research, 2020, 144, 137-145.	1.6	9
164	Serial Electron Diffraction Data Processing With diffractem and CrystFEL. Frontiers in Molecular Biosciences, 2021, 8, 624264.	1.6	9
165	A simple vapor-diffusion method enables protein crystallization inside the HARE serial crystallography chip. Acta Crystallographica Section D: Structural Biology, 2021, 77, 820-834.	1.1	9
166	Robust reconstruction of time-resolved diffraction from ultrafast streak cameras. Structural Dynamics, 2017, 4, 054302.	0.9	8
167	Sampling of Tissues with Laser Ablation for Proteomics: Comparison of Picosecond Infrared Laser and Microsecond Infrared Laser. Journal of Proteome Research, 2019, 18, 1451-1457.	1.8	8
168	Structural Dynamics upon Photoexcitation in a Spin Crossover Crystal Probed with Femtosecond Electron Diffraction. Angewandte Chemie, 2017, 129, 7236-7240.	1.6	7
169	Photochromism of Amphiphilic Dithienylethenes as Langmuirâ€“Schaefer Films. Langmuir, 2018, 34, 10905-10912.	1.6	7
170	Ultrafast ring-opening and solvent-dependent product relaxation of photochromic spironaphthopyran. Physical Chemistry Chemical Physics, 2019, 21, 18119-18127.	1.3	7
171	Deamidation of the human eye lens protein Î³S-crystallin accelerates oxidative aging. Structure, 2022, 30, 763-776.e4.	1.6	7
172	Field emission beam characteristics of single metal nanotip cathodes with on-chip collimation gate electrode. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 03C111.	0.6	6
173	Synthesis of Bidimensional Prussian Blue Analogue Using an Inverted Langmuirâ€“Schaefer Method. Langmuir, 2016, 32, 9706-9713.	1.6	6
174	Optical fiber-based photocathode. Applied Physics Letters, 2016, 109, 091105.	1.5	6
175	Synchronised photoreversion of spirooxazine ring opening in thin crystals to uncover ultrafast dynamics. CrystEngComm, 2016, 18, 7212-7216.	1.3	6
176	Optical fiber-driven low energy electron gun for ultrafast streak diffraction. Applied Physics Letters, 2018, 113, 133502.	1.5	6
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