

# Th Weber

## List of Publications by Year in descending order

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145  
papers

6,005  
citations

94433

37  
h-index

74163

75  
g-index

146  
all docs

146  
docs citations

146  
times ranked

2450  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrafast temporal evolution of interatomic Coulombic decay in NeKr dimers. Chemical Science, 2022, 13, 1789-1800.	7.4	3
2	Investigating resonant low-energy electron attachment to formamide: Dynamics of model peptide bond dissociation and other fragmentation channels. Physical Review Research, 2021, 3, .	3.6	8
3	Nonequilibrium dissociative dynamics of D2 in two-color, few-photon excitation and ionization. Physical Review Research, 2021, 3, .	3.6	3
4	High-Resolution Momentum Imagingâ€”From Sternâ€™s Molecular Beam Method to the COLTRIMS Reaction Microscope. , 2021, , 375-441.		3
5	Double Core-Hole Generation in $O_2$ Using an X-Ray Free-Electron Laser: Molecular-Frame Photoelectron Angular Distributions. Physical Review Letters, 2020, 125, 163201.	7.5	20
6	Selective bond scission in formic acid by low-energy electrons. Journal of Physics: Conference Series, 2020, 1412, 052004.	0.4	1
7	Distinguishing resonance symmetries with energy-resolved photoion angular distributions from ion-pair formation in O2 following two-photon absorption of a 9.3 eV femtosecond pulse. Journal of Chemical Physics, 2020, 153, 021103.	3.0	7
8	Angle-resolved nonresonant two-photon single ionization of argon using 9.3-eV photons produced via high-order harmonic generation. Physical Review A, 2020, 101, .	2.5	3
9	Selective bond-breaking in formic acid by dissociative electron attachment. Physical Chemistry Chemical Physics, 2020, 22, 13893-13902.	2.8	5
10	Photoelectron Diffraction Imaging of a Molecular Breakup Using an X-Ray Free-Electron Laser. Physical Review X, 2020, 10, .	8.9	31
11	Role of dipole-forbidden autoionizing resonances in nonresonant one-color two-photon single ionization of $N_2$ . Physical Review A, 2020, 102, 013401.	2.5	4
12	Photoelectron and fragmentation dynamics of the $H_2^+$ dissociative channel in $H_2^+$ . Physical Review A, 2020, 102, 013402.	3.6	4
13	Mechanisms and dynamics of the $NH_2^+$ dissociative channel upon single-photon double ionization of $NH_2^+$ . Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 244003.	1.5	3
14	Tracing intermolecular Coulombic decay of carbon-dioxide dimers and oxygen dimers after valence photoionization. Physical Review A, 2019, 99, .	2.5	8
15	Symmetry breaking in the body-fixed electron emission pattern due to electron-retroaction in the photodissociation of $H_2^+$ and $D_2^+$ close to threshold. Physical Review Research, 2019, 1, .	3.6	5
16	Dissociation dynamics of the water dication following one-photon double ionization. II. Experiment. Physical Review A, 2018, 98, .	2.5	26
17	Resonance signatures in the body-frame valence photoionization of $CF_4$ . Physical Chemistry Chemical Physics, 2018, 20, 21075-21084.	2.8	10
18	Attosecond coherent control of oxygen dissociation by XUV-IR laser fields using three-dimensional momentum imaging. Physical Review A, 2018, 98, .	2.5	5

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19	Determination of Interatomic Potentials of $\text{He}^2+$ and $\text{Ne}^2+$ ions. Physical Review Letters, 2018, 121, 083002.	7.8	17
20	Revealing the role of electron-electron correlations by mapping dissociation of highly excited $\text{D}_2^+$ using ultrashort XUV pulses. Physical Review A, 2018, 97, .	2.5	5
21	Mapping and controlling ultrafast dynamics of highly excited $\text{H}_2$ molecules by VUV-IR pump-probe schemes. Physical Review A, 2017, 95, .	2.5	10
22	Unambiguous observation of F-atom core-hole localization in $\text{CF}_4$ through body-frame photoelectron angular distributions. Physical Review A, 2017, 95, .	2.7	14
23	The hydrogen molecule under the reaction microscope: single photon double ionization at maximum cross section and threshold (doubly differential cross sections). Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 164002.	1.5	3
24	A comprehensive study of Interatomic Coulombic Decay in argon dimers: Extracting R-dependent absolute decay rates from the experiment. Chemical Physics, 2017, 482, 185-191.	1.9	12
25	Imaging the square of the correlated two-electron wave function of a hydrogen molecule. Nature Communications, 2017, 8, 2266.	12.8	28
26	Molecular frame photoelectron angular distributions for core ionization of ethane, carbon tetrafluoride and 1,1-difluoroethylene. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 055203.	1.5	11
27	Time resolved 3D momentum imaging of ultrafast dynamics by coherent VUV-XUV radiation. Review of Scientific Instruments, 2016, 87, 063110.	1.3	9
28	Two-Particle Interference of Electron Pairs on a Molecular Level. Physical Review Letters, 2016, 117, 083002.	7.8	25
29	Bond rearrangement and ionization mechanisms in the photo-double-ionization of simple		

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37	Photo-double-ionization of ethylene and acetylene near threshold. <i>Physical Review A</i> , 2014, 89, .	2.5	41
38	Resonant Auger decay driving intermolecular Coulombic decay in molecular dimers. <i>Nature</i> , 2014, 505, 664-666.	27.8	119
39	Dynamics of the Dissociating Uracil Anion Following Resonant Electron Attachment. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 3854-3858.	4.6	17
40	Experimental Proof of Resonant Auger Decay Driven Intermolecular Coulombic Decay. <i>Journal of Physics: Conference Series</i> , 2014, 488, 022009.	0.4	1
41	Single photon double ionization of Helium at 800 eV – observation of the Quasi Free Mechanism. <i>Journal of Physics: Conference Series</i> , 2014, 488, 022007.	0.4	0
42	Ion-momentum imaging of resonant dissociative-electron-attachment dynamics in methanol. <i>Physical Review A</i> , 2013, 87, .	2.5	21
43	Ejection of Quasi-Free-Electron Pairs from the Helium-Atom Ground State by Single-Photon Absorption. <i>Physical Review Letters</i> , 2013, 111, 013003.	7.8	43
44	Dissociative electron attachment to carbon dioxide via the $\sigma^* \rightarrow \sigma^*$ resonance. <i>Physical Review A</i> , 2013, 88, .	2.5	26
45	Interatomic Coulombic decay of fixed-in-space neon dimers. <i>Physical Review A</i> , 2012, 85, .	2.5	8
46	Imaging Polyatomic Molecules in Three Dimensions Using Molecular Frame Photoelectron Angular Distributions. <i>Physical Review Letters</i> , 2012, 108, 233002.	7.8	62
47	Multi-fragment vector correlation imaging. A search for hidden dynamical symmetries in many-particle molecular fragmentation processes. <i>Molecular Physics</i> , 2012, 110, 1863-1872.	1.7	6
48	Probing the dynamics of dissociation of methane following core ionization using three-dimensional molecular-frame photoelectron angular distributions. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2012, 45, 194003.	1.5	27
49	Quasi free mechanism in single photon double ionization of Helium. <i>Journal of Physics: Conference Series</i> , 2012, 388, 022021.	0.4	0
50	Electron diffraction self imaging of molecular fragmentation in two step double ionization of water. <i>Journal of Physics: Conference Series</i> , 2012, 388, 022029.	0.4	0
51	Double Auger Emission of fixed-in-space Carbon Monoxide following Core-Excitation and Ionization. <i>Journal of Physics: Conference Series</i> , 2012, 388, 022066.	0.4	0
52	Dissociative Photoionization of Methane at the Carbon K-edge. <i>Journal of Physics: Conference Series</i> , 2012, 388, 022085.	0.4	0
53	Dynamical Studies of Dissociative Electron Attachment to $\text{CO}_2$ . <i>Journal of Physics: Conference Series</i> , 2012, 388, 052013.	0.4	1
54	Calculated and measured angular correlation between photoelectrons and Auger electrons from K-shell ionization. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2012, 45, 175001.	1.5	5

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55	A momentum imaging microscope for dissociative electron attachment. Review of Scientific Instruments, 2012, 83, 023106.	1.3	24
56	Observation of the dynamics leading to a conical intersection in dissociative electron attachment to water. Physical Review A, 2011, 84, .	2.5	17
57	Carbon K-shell photoionization of CO: Molecular frame angular distributions of normal and conjugate shakeup satellites. Journal of Electron Spectroscopy and Related Phenomena, 2011, 183, 48-52.	1.7	11
58	Matter wave optics perspective at molecular photoionization: K-shell photoionization and Auger decay of $N_{2^+}$ . New Journal of Physics, 2011, 13, 095013.	2.9	17
59	Adaniya et al. Reply. Physical Review Letters, 2011, 106, .	7.8	5
60	Dynamic modification of the fragmentation of autoionizing states of $O_2^+$ . Physical Review A, 2011, 84, .	2.5	15
61	Electron Diffraction Self-Imaging of Molecular Fragmentation in Two-Step Double Ionization of Water. Physical Review Letters, 2011, 106, 133001.	7.8	24
62	Ultrafast energy transfer between water molecules. Nature Physics, 2010, 6, 139-142.	16.7	271
63	Auger decay of $K_{1s}$ shell photoionization of fixed-in-space $CO_2$ . Physical Review A, 2010, 81, .	2.5	7
64	Auger decay of $K_{1s}$ shell photoionization of fixed-in-space $CO_2$ . Physical Review A, 2010, 81, .	2.5	7
65	Auger decay of $K_{1s}$ shell photoionization of fixed-in-space $CO_2$ . Physical Review A, 2010, 81, .	2.5	7
66	Formation of inner-shell autoionizing $CO^+$ states below the $CO_2^+$ threshold. Physical Review A, 2010, 81, .	2.5	13
67	Separation of Auger transitions into different repulsive states after K-shell photoionization of $N_2$ molecules. Physical Review A, 2009, 80, .	2.5	17
68	Photo- and Auger-Electron Recoil Induced Dynamics of Interatomic Coulombic Decay. Physical Review Letters, 2009, 103, 033001.	7.8	35
69	Imaging the Molecular Dynamics of Dissociative Electron Attachment to Water. Physical Review Letters, 2009, 103, 233201.	7.8	47
70	Angular Correlation between Photoelectrons and Auger Electrons from $K_{1s}$ Shell Ionization of Neon. Physical Review Letters, 2009, 102, 223001.	7.8	27
71	Photoelectron and Auger-electron angular distributions of fixed-in-space $CO_2$ . Physical Review A, 2009, 80, .	2.5	18
72	Single photon double ionization of $H_2$ by circularly polarized photons at a photon energy of 160 eV. European Physical Journal: Special Topics, 2009, 169, 109-116.	2.6	3

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73	K-shell photoionization of N <sub>2</sub> : Angular resolved molecular frame photoelectron Auger electron coincidence spectra. Journal of Physics: Conference Series, 2009, 194, 022063.	0.4	0
74	Interatomic Coulombic decay following the Auger decay: Experimental evidence in rare-gas dimers. Journal of Electron Spectroscopy and Related Phenomena, 2008, 166-167, 3-10.	1.7	22
75	Ultrafast Probing of Core Hole Localization in N <sub>2</sub> . Science, 2008, 320, 920-923.	12.6	168
76	Fragmentation pathways for selected electronic states of the acetylene dication. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 091001.	1.5	42
77	Evidence of interatomic Coulombic decay in ArKr after Ar 2p Auger decay. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 025101.	1.5	25
78	Interference in the Collective Electron Momentum in Double Photoionization of H <sub>2</sub> . Physical Review Letters, 2008, 100, 133005.	7.8	59
79	Photo-double-ionization of H <sub>2</sub> : Two-center Relaxation processes following	2.5	27
80	and Auger decay in Ne <sub>2</sub> . Physical Review A, 2008, 78, .	2.5	61
81	Localization of inner-shell photoelectron emission and interatomic Coulombic decay in Ne <sub>2</sub> . Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 101002.	1.5	49
82	Experimental Separation of Virtual Photon Exchange and Electron Transfer in Interatomic Coulombic Decay of Neon Dimers. Physical Review Letters, 2007, 99, 153401.	7.8	66
83	Binary and Recoil Collisions in Strong Field Double Ionization of Helium. Physical Review Letters, 2007, 99, 263002.	7.8	255
84	Few-Photon Multiple Ionization of Ne and Ar by Strong Free-Electron-Laser Pulses. Physical Review Letters, 2007, 98, 203001.	7.8	145
85	Attosecond Stroboscopic of Two-Surface Population Dynamics in Dissociating H <sub>2</sub> <sup>+</sup> . Physical Review Letters, 2007, 98, 073003.	7.8	128
86	CzaschetÅal.Reply:. Physical Review Letters, 2007, 98, .	7.8	0
87	Imaging of continuum states of the He <sub>2</sub> <sup>+</sup> quasimolecule. Physical Review A, 2007, 76, .	2.5	16
88	Single Photon-Induced Symmetry Breaking of H <sub>2</sub> Dissociation. Science, 2007, 315, 629-633.	12.6	185
89	The Simplest Double Slit: Interference and Entanglement in Double Photoionization of H <sub>2</sub> . Science, 2007, 318, 949-952.	12.6	216
90	Nondipole effects in the angular distribution of photoelectrons from the C K-shell of the CO molecule. Physical Review A, 2006, 73, .	2.5	17

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91	Photon-ion collisions and molecular clocks. Journal of Modern Optics, 2005, 52, 439-451.	1.3	2
92	Photo induced multiple fragmentation of atoms and molecules: Dynamics of Coulombic many-particle systems studied with the COLTRIMS reaction microscope. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 347, 95-102.	2.1	10
93	Many-particle fragmentation processes in atomic and molecular physics - new insight into the world of correlation. Nuclear Instruments & Methods in Physics Research B, 2005, 233, 3-11.	1.4	7
94	Verschränkte Elektronenbewegung in Deuteriummolekülen. Physik in Unserer Zeit, 2005, 36, 6-7.	0.0	0
95	Photo double ionization of helium 100 eV and 450 eV above threshold: II. Circularly polarized light. Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, 635-643.	1.5	7
96	Photo double ionization of helium 100 eV and 450 eV above threshold: I. Linearly polarized light. Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, 615-633.	1.5	17
97	Ionization Dynamics in p and p <sub>l</sub> , on Helium collisions. AIP Conference Proceedings, 2005, , .	0.4	0
98	Photo double ionization of helium 100 eV and 450 eV above threshold: III. Gerade and ungerade amplitudes and their relative phases. Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, 645-657.	1.5	15
99	Partial Photoionization Cross Sections and Angular Distributions for Double Excitation of Helium up to the N=13 Threshold. Physical Review Letters, 2005, 95, 243003.	7.8	27
100	Fully Differential Study of Transfer Ionization Processes? a View into Correlated Many Particle Dynamics. Physica Scripta, 2004, 110, 379.	2.5	13
101	Fully Differential Rates for Femtosecond Multiphoton Double Ionization of Neon. Physical Review Letters, 2004, 92, 213002.	7.8	131
102	Fully Differential Cross Sections for Photo-Double-Ionization of D <sub>2</sub> . Physical Review Letters, 2004, 92, 163001.	7.8	74
103	A 2D spectrometer for electron-electron coincidence studies on surfaces. Review of Scientific Instruments, 2004, 75, 2373-2378.	1.3	15
104	Complete photo-fragmentation of the deuterium molecule. Nature, 2004, 431, 437-440.	27.8	145
105	Many-particle dynamics in atomic and molecular physics investigated with the COLTRIMS-technique: New insight into e-e correlation. Nuclear Physics A, 2004, 337, 306-313.	1.5	4
106	Deformation, nuclear motion and fragmentation of core-excited CO <sub>2</sub> probed by multiple-ion coincidence momentum imaging. Journal of Electron Spectroscopy and Related Phenomena, 2004, 141, 183-193.	1.7	18
107	Multicoincidence studies of photo and Auger electrons from fixed-in-space molecules using the COLTRIMS technique. Journal of Electron Spectroscopy and Related Phenomena, 2004, 141, 229-238.	1.7	117
108	Initial velocity of secondary ions from XY-TOF technique, simultaneous calibration by residual gas ionization. International Journal of Mass Spectrometry, 2004, 231, 51-58.	1.5	8



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109	Double ionization by one and many photons. Radiation Physics and Chemistry, 2004, 70, 191-206.	2.8	28
110	Dynamics of multiple ionization of atoms and molecules by electron, photon, and ion impact—investigated by the COLTRIMS imaging method. Radiation Physics and Chemistry, 2004, 71, 627-632.	2.8	4
111	Doubly Excited States in Helium Close to the Double Ionization Threshold: Angular and Energy Resolved Partial Cross Sections. Physica Scripta, 2004, 110, 141.	2.5	3
112	Dynamics of ionization processes studied with the COLTRIMS method—new insight into e—e correlation. Radiation Physics and Chemistry, 2003, 68, 41-50.	2.8	10
113	Auger Electron Emission from Fixed-in-Space CO. Physical Review Letters, 2003, 90, 153003.	7.8	56
114	Photoelectron-Photoion Momentum Spectroscopy as a Clock for Chemical Rearrangements: Isomerization of the Di-Cation of Acetylene to the Vinylidene Configuration. Physical Review Letters, 2003, 90, 233002.	7.8	116
115	Revealing the non- $s^2$ contributions in the momentum wave function of ground-state He. Europhysics Letters, 2003, 62, 477-483.	2.0	30
116	Fast $p$ —He Transfer Ionization Processes: A Window to Reveal the Non- $s^2$ Contributions in the Momentum Wave Function of Ground—State He. Springer Series on Atomic, Optical, and Plasma Physics, 2003, , 353-378.	0.2	3
117	From Atoms to Molecules. Springer Series on Atomic, Optical, and Plasma Physics, 2003, , 245-260.	0.2	1
118	Circular Dichroism in K-Shell Ionization from Fixed-in-Space CO and N <sub>2</sub> Molecules. Physical Review Letters, 2002, 88, 073002.	7.8	126
119	Direct Probe of the Bent and Linear Geometries of the Core-Excited Renner-Teller Pair States by Means of the Triple-Ion-Coincidence Momentum Imaging Technique. Physical Review Letters, 2002, 88, 133002.	7.8	59
120	Mechanisms of Photo Double Ionization of Helium by 530 eV Photons. Physical Review Letters, 2002, 89, 033004.	7.8	111
121	BENT AND LINEAR GEOMETRIES OF RENNER—TELLER PAIR STATES IN CO <sub>2</sub> PROBED BY TRIPLE-ION-COINCIDENCE MOMENTUM IMAGING. Surface Review and Letters, 2002, 09, 93-97.	1.1	4
122	Must saddle point electrons always ride on the saddle?. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, L229-L235.	1.5	16
123	Energy sharing and asymmetry parameters for photo double ionization of helium 100 eV above threshold in single-particle and Jacobi coordinates. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, L521-L526.	1.5	30
124	Multiple hit readout of a microchannel plate detector with a three-layer delay-line anode. IEEE Transactions on Nuclear Science, 2002, 49, 2477-2483.	2.0	300
125	Multiple Ionization in Strong Laser Fields. Advances in Atomic, Molecular and Optical Physics, 2002, , 1-34.	2.3	115
126	Experimental investigation of the asymptotic momentum wave function of the He ground state. AIP Conference Proceedings, 2002, , .	0.4	4



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127	Atomic dynamics in single and multi-photon double ionization: An experimental comparison. <i>Optics Express</i> , 2001, 8, 368.	3.4	15
128	K-shell photoionization of CO and N <sub>2</sub> : is there a link between the photoelectron angular distribution and the molecular decay dynamics?. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2001, 34, 3669-3678.	1.5	111
129	Experimental evidence for electron repulsion in multiphoton double ionization. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2001, 34, L449-L455.	1.5	38
130	Photoelectron Diffraction Mapping: Molecules Illuminated from Within. <i>Physical Review Letters</i> , 2001, 87, 013002.	7.8	170
131	Strong Correlations in the He Ground State Momentum Wave Function Observed in the Fully Differential Momentum Distributions for the p+He Transfer Ionization Process. <i>Physical Review Letters</i> , 2001, 86, 2257-2260.	7.8	97
132	Abrupt Rise of the Longitudinal Recoil Ion Momentum Distribution for Ionizing Collisions. <i>Physical Review Letters</i> , 2001, 86, 224-227.	7.8	34
133	Double Ionization in Strong Fields: Ion Momenta and Correlated Electron Momenta. , 2001, , 15-23.		0
134	Correlated electron emission in multiphoton double ionization. <i>Nature</i> , 2000, 405, 658-661.	27.8	482
135	Recoil-Ion Momentum Distributions for Single and Double Ionization of Helium in Strong Laser Fields. <i>Physical Review Letters</i> , 2000, 84, 443-446.	7.8	301
136	Sequential and nonsequential contributions to double ionization in strong laser fields. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2000, 33, L127-L133.	1.5	73
137	Kinematically complete investigation of momentum transfer for single ionization in fast proton-helium collisions. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2000, 33, 3331-3344.	1.5	29
138	Double ionization of helium in fast ion collisions: the role of momentum transfer. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1999, 32, 1859-1872.	1.5	20
139	Differential cross sections in antiproton- and proton-helium collisions. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1999, 32, L73-L79.	1.5	23
140	Compton Double Ionization of Helium in the Region of the Cross-Section Maximum. <i>Physical Review Letters</i> , 1999, 83, 53-56.	7.8	22
141	Cross-section ratio of double to single ionization of helium by Compton scattering of 40 keV x rays. <i>Physical Review A</i> , 1999, 59, 371-379.	2.5	38
142	Recoil Ion Momentum Spectroscopy Momentum Space Images of Atomic Reactions. , 1999, , 33-45.		1
143	Cold Target Helium Recoil Ion Momentum Imaging: Understanding Correlated Electron Motion in the Double Ionisation Process. <i>Australian Journal of Physics</i> , 1999, 52, 523.	0.6	1
144	Double Ionization of Helium by Fast Fully Stripped Ions. <i>Physica Scripta</i> , 1999, T80, 351.	2.5	1

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145	Kinematically complete experiments using cold target recoil ion momentum spectroscopy. Nuclear Instruments & Methods in Physics Research B, 1997, 124, 225-231.	1.4	46