

Th Weber

List of Publications by Year in descending order

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145
papers

6,005
citations

94433

37
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75
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146
all docs

146
docs citations

146
times ranked

2450
citing authors

#	ARTICLE	IF	CITATIONS
1	Correlated electron emission in multiphoton double ionization. <i>Nature</i> , 2000, 405, 658-661.	27.8	482
2	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
3	Multiple hit readout of a microchannel plate detector with a three-layer delay-line anode. <i>IEEE Transactions on Nuclear Science</i> , 2002, 49, 2477-2483.	2.0	300
4	Ultrafast energy transfer between water molecules. <i>Nature Physics</i> , 2010, 6, 139-142.	16.7	271
5	Binary and Recoil Collisions in Strong Field Double Ionization of Helium. <i>Physical Review Letters</i> , 2007, 99, 263002.	7.8	255
6	The Simplest Double Slit: Interference and Entanglement in Double Photoionization of H ₂ . <i>Science</i> , 2007, 318, 949-952.	12.6	216
7	Single Photon-Induced Symmetry Breaking of H ₂ Dissociation. <i>Science</i> , 2007, 315, 629-633.	12.6	185
8	Photoelectron Diffraction Mapping: Molecules Illuminated from Within. <i>Physical Review Letters</i> , 2001, 87, 013002.	7.8	170
9	Ultrafast Probing of Core Hole Localization in N ₂ . <i>Science</i> , 2008, 320, 920-923.	12.6	168
10	Complete photo-fragmentation of the deuterium molecule. <i>Nature</i> , 2004, 431, 437-440.	27.8	145
11	Few-Photon Multiple Ionization of Ne and Ar by Strong Free-Electron-Laser Pulses. <i>Physical Review Letters</i> , 2007, 98, 203001.	7.8	145
12	Fully Differential Rates for Femtosecond Multiphoton Double Ionization of Neon. <i>Physical Review Letters</i> , 2004, 92, 213002.	7.8	131
13	Attosecond Strobng of Two-Surface Population Dynamics in Dissociating H ₂ ⁺ . <i>Physical Review Letters</i> , 2007, 98, 073003.	7.8	128
14	Circular Dichroism in K-Shell Ionization from Fixed-in-Space CO and N ₂ Molecules. <i>Physical Review Letters</i> , 2002, 88, 073002.	7.8	126
15	Resonant Auger decay driving intermolecular Coulombic decay in molecular dimers. <i>Nature</i> , 2014, 505, 664-666.	27.8	119
16	Multicoincidence studies of photo and Auger electrons from fixed-in-space molecules using the COLTRIMS technique. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2004, 141, 229-238.	1.7	117
17	Photoelectron-Photoion Momentum Spectroscopy as a Clock for Chemical Rearrangements: Isomerization of the Di-Cation of Acetylene to the Vinylidene Configuration. <i>Physical Review Letters</i> , 2003, 90, 233002.	7.8	116
18	Multiple Ionization in Strong Laser Fields. <i>Advances in Atomic, Molecular and Optical Physics</i> , 2002, , 1-34.	2.3	115

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19	K-shell photoionization of CO and N ₂ : is there a link between the photoelectron angular distribution and the molecular decay dynamics?. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 3669-3678.	1.5	111
20	Mechanisms of Photo Double Ionization of Helium by 530 eV Photons. Physical Review Letters, 2002, 89, 033004.	7.8	111
21	Strong Correlations in the He Ground State Momentum Wave Function Observed in the Fully Differential Momentum Distributions for the p+He Transfer Ionization Process. Physical Review Letters, 2001, 86, 2257-2260.	7.8	97
22	Ultrafast isomerization initiated by X-ray core ionization. Nature Communications, 2015, 6, 8199.	12.8	92
23	Fully Differential Cross Sections for Photo-Double-Ionization of D ₂ ⁺ . Physical Review Letters, 2004, 92, 163001.	7.8	74
24	Sequential and nonsequential contributions to double ionization in strong laser fields. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, L127-L133.	1.5	73
25	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
26	Imaging Polyatomic Molecules in Three Dimensions Using Molecular Frame Photoelectron Angular Distributions. Physical Review Letters, 2012, 108, 233002.	7.8	62
27	Relaxation processes following Ne^{2+} photoionization and Auger decay in Ne^{2+} . Physical Review A, 2008, 78, 043401.	2.5	61
28	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
29	Interference in the Collective Electron Momentum in Double Photoionization of H ₂ . Physical Review Letters, 2008, 100, 133005.	7.8	59
30	Auger Electron Emission from Fixed-in-Space CO. Physical Review Letters, 2003, 90, 153003.	7.8	56
31	Localization of inner-shell photoelectron emission and interatomic Coulombic decay in Ne^{2+} . Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 101002.	1.5	49
32	Imaging the Molecular Dynamics of Dissociative Electron Attachment to Water. Physical Review Letters, 2009, 103, 233201.	7.8	47
33	Kinematically complete experiments using cold target recoil ion momentum spectroscopy. Nuclear Instruments & Methods in Physics Research B, 1997, 124, 225-231.	1.4	46
34	Ejection of Quasi-Free-Electron Pairs from the Helium-Atom Ground State by Single-Photon Absorption. Physical Review Letters, 2013, 111, 013003.	7.8	43
35	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
36	Photo-double-ionization of ethylene and acetylene near threshold. Physical Review A, 2014, 89, .	2.5	41

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37	Cross-section ratio of double to single ionization of helium by Compton scattering of 40-100-keV x rays. <i>Physical Review A</i> , 1999, 59, 371-379.	2.5	38
38	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
39	Photo- and Auger-Electron Recoil Induced Dynamics of Interatomic Coulombic Decay. <i>Physical Review Letters</i> , 2009, 103, 033001.	7.8	35
40	Abrupt Rise of the Longitudinal Recoil Ion Momentum Distribution for Ionizing Collisions. <i>Physical Review Letters</i> , 2001, 86, 224-227.	7.8	34
41	Photoelectron Diffraction Imaging of a Molecular Breakup Using an X-Ray Free-Electron Laser. <i>Physical Review X</i> , 2020, 10, .	8.9	31
42	Energy sharing and asymmetry parameters for photo double ionization of helium 100 eV above threshold in single-particle and Jacobi coordinates. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2002, 35, L521-L526.	1.5	30
43	Revealing the non- s^2 contributions in the momentum wave function of ground-state He. <i>Europhysics Letters</i> , 2003, 62, 477-483.	2.0	30
44	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
45	Double ionization by one and many photons. <i>Radiation Physics and Chemistry</i> , 2004, 70, 191-206.	2.8	28
46	Imaging the square of the correlated two-electron wave function of a hydrogen molecule. <i>Nature Communications</i> , 2017, 8, 2266.	12.8	28
47	Partial Photoionization Cross Sections and Angular Distributions for Double Excitation of Helium up to the $N=13$ Threshold. <i>Physical Review Letters</i> , 2005, 95, 243003.	7.8	27
48	Photo-double-ionization of H_2 : Two-center interference and its dependence on the internuclear distance. <i>Physical Review A</i> , 2008, 78, .	2.5	27
49	Angular Correlation between Photoelectrons and Auger Electrons from K -Shell Ionization of Neon. <i>Physical Review Letters</i> , 2009, 102, 223001.	7.8	27
50	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
51	Dissociative electron attachment to carbon dioxide via the H_2^+ resonance. <i>Physical Review A</i> , 2013, 88, .	2.5	26
52	Dissociation dynamics of the water dication following one-photon double ionization. II. Experiment. <i>Physical Review A</i> , 2018, 98, .	2.5	26
53	Evidence of interatomic Coulombic decay in ArKr after Ar 2p Auger decay. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 025101.	1.5	25
54	Two-Particle Interference of Electron Pairs on a Molecular Level. <i>Physical Review Letters</i> , 2016, 117, 083002.	7.8	25

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55	Electron Diffraction Self-Imaging of Molecular Fragmentation in Two-Step Double Ionization of Water. <i>Physical Review Letters</i> , 2011, 106, 133001.	7.8	24
56	A momentum imaging microscope for dissociative electron attachment. <i>Review of Scientific Instruments</i> , 2012, 83, 023106.	1.3	24
57	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
58	Double Core-Hole Generation in O_2 Molecules Using an X-Ray Free-Electron Laser: Molecular-Frame Photoelectron Angular Distributions. <i>Physical Review Letters</i> , 2020, 125, 163201.	7.8	20
59	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
60	Interatomic Coulombic decay following the Auger decay: Experimental evidence in rare-gas dimers. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2008, 166-167, 3-10.	1.7	22
61	Ion-momentum imaging of resonant dissociative-electron-attachment dynamics in methanol. <i>Physical Review A</i> , 2013, 87, .	2.5	21
62	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
63	Auger decay of CO_2 . <i>Physical Review A</i> , 2010, 82, .	2.5	19
64	Auger decay of CO_2 . <i>Physical Review A</i> , 2010, 82, .	2.5	19
65	Deformation, nuclear motion and fragmentation of core-excited CO_2 probed by multiple-ion coincidence momentum imaging. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2004, 141, 183-193.	1.7	18
66	Photoelectron and Auger-electron angular distributions of fixed-in-space CO_2 . <i>Physical Review A</i> , 2009, 80, .	2.5	18
67	Photo double ionization of helium 100 eV and 450 eV above threshold: I. Linearly polarized light. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2005, 38, 615-633.	1.5	17
68	Nondipole effects in the angular distribution of photoelectrons from the CKshell of the CO molecule. <i>Physical Review A</i> , 2006, 73, .	2.5	17
69	Separation of Auger transitions into different repulsive states after K-shell photoionization of N_2 molecules. <i>Physical Review A</i> , 2009, 80, .	2.5	17
70	Observation of the dynamics leading to a conical intersection in dissociative electron attachment to water. <i>Physical Review A</i> , 2011, 84, .	2.5	17
71	Matter wave optics perspective at molecular photoionization: K-shell photoionization and Auger decay of N_2 . <i>New Journal of Physics</i> , 2011, 13, 095013.	2.9	17
72	Dynamics of the Dissociating Uracil Anion Following Resonant Electron Attachment. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 3854-3858.	4.6	17

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73	Determination of Interatomic Potentials of HeNe^2+ . <i>Physical Review Letters</i> , 2018, 121, 083002.	7.8	17
74	Must saddle point electrons always ride on the saddle?. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2002, 35, L229-L235.	1.5	16
75	Imaging of continuum states of the He^{2+} quasimolecule. <i>Physical Review A</i> , 2007, 76, .	2.5	16
76	Electron Localization in Dissociating H^2+ . <i>Physical Review Letters</i> , 2016, 116, 043001.	7.8	16
77	Atomic dynamics in single and multi-photon double ionization: An experimental comparison. <i>Optics Express</i> , 2001, 8, 368.	3.4	15
78	A 2I^{\ominus} spectrometer for electron-electron coincidence studies on surfaces. <i>Review of Scientific Instruments</i> , 2004, 75, 2373-2378.	1.3	15
79	Photo double ionization of helium 100 eV and 450 eV above threshold: III. Gerade and ungerade amplitudes and their relative phases. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2005, 38, 645-657.	1.5	15
80	Dynamic modification of the fragmentation of autoionizing states of O_2^+ . <i>Physical Review A</i> , 2011, 84, .	2.5	15
81	Unambiguous observation of F-atom core-hole localization in CF_4 through body-frame photoelectron angular distributions. <i>Physical Review A</i> , 2017, 95, .	2.5	14
82	Fully Differential Study of Transfer Ionization Processes? a View into Correlated Many Particle Dynamics. <i>Physica Scripta</i> , 2004, 110, 379.	2.5	13
83	Formation of inner-shell autoionizing CO^+ states below the CO_2^+ threshold. <i>Physical Review A</i> , 2010, 81, .	2.5	13
84	A comprehensive study of Interatomic Coulombic Decay in argon dimers: Extracting R-dependent absolute decay rates from the experiment. <i>Chemical Physics</i> , 2017, 482, 185-191.	1.9	12
85	Carbon K-shell photoionization of CO: Molecular frame angular distributions of normal and conjugate shakeup satellites. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2011, 183, 48-52.	1.7	11
86	Molecular frame photoelectron angular distributions for core ionization of ethane, carbon tetrafluoride and 1,1-difluoroethylene. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 055203.	1.5	11
87	Dynamics of ionization processes studied with the COLTRIMS method - new insight into e-e correlation. <i>Radiation Physics and Chemistry</i> , 2003, 68, 41-50.	2.8	10
88	Photo induced multiple fragmentation of atoms and molecules: Dynamics of Coulombic many-particle systems studied with the COLTRIMS reaction microscope. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2005, 347, 95-102.	2.1	10
89	Mapping and controlling ultrafast dynamics of highly excited H^2+ molecules by VUV-IR pump-probe schemes. <i>Physical Review A</i> , 2017, 95, .	2.5	10
90	Resonance signatures in the body-frame valence photoionization of CF_4 . <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 21075-21084.	2.8	10

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91	Auger decay and subsequent fragmentation pathways of ethylene following K -shell ionization. Physical Review A, 2015, 92, .	2.5	9
92	Time resolved 3D momentum imaging of ultrafast dynamics by coherent VUV-XUV radiation. Review of Scientific Instruments, 2016, 87, 063110.	1.3	9
93	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
94	Interatomic Coulombic decay of fixed-in-space neon dimers. Physical Review A, 2012, 85, .	2.5	8
95	Tracing intermolecular Coulombic decay of carbon-dioxide dimers and oxygen dimers after valence photoionization. Physical Review A, 2019, 99, .	2.5	8
96	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
97	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
98	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
99	Fixed-in-space K -shell photoionization of C_2	2.5	7
100	Distinguishing resonance symmetries with energy-resolved photoion angular distributions from ion-pair formation in O_2 following two-photon absorption of a 9.3 eV femtosecond pulse. Journal of Chemical Physics, 2020, 153, 021103.	3.0	7
101	Multi-fragment vector correlation imaging. A search for hidden dynamical symmetries in many-particle molecular fragmentation processes. Molecular Physics, 2012, 110, 1863-1872.	1.7	6
102	Adaniya et al. Reply. Physical Review Letters, 2011, 106, .	7.8	5
103	Calculated and measured angular correlation between photoelectrons and Auger electrons from K -shell ionization. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 175001.	1.5	5
104	Attosecond coherent control of oxygen dissociation by XUV-IR laser fields using three-dimensional momentum imaging. Physical Review A, 2018, 98, .	2.5	5
105	Selective bond-breaking in formic acid by dissociative electron attachment. Physical Chemistry Chemical Physics, 2020, 22, 13893-13902.	2.8	5
106	Revealing the role of electron-electron correlations by mapping dissociation of highly excited D_2^+ using ultrashort XUV pulses. Physical Review A, 2018, 97, .	2.5	5
107	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
108	BENT AND LINEAR GEOMETRIES OF RENNER-TELLER PAIR STATES IN CO_2 PROBED BY TRIPLE-ION-COINCIDENCE MOMENTUM IMAGING. Surface Review and Letters, 2002, 09, 93-97.	1.1	4

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109	Experimental investigation of the asymptotic momentum wave function of the He ground state. AIP Conference Proceedings, 2002, , .	0.4	4
110	Many-particle dynamics in atomic and molecular physics investigated with the COLTRIMS-technique: New inside into e-e correlation. Nuclear Physics A, 2004, 737, 306-313.	1.5	4
111	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
112	Role of dipole-forbidden autoionizing resonances in nonresonant one-color two-photon single ionization of N^2 . Physical Review A, 2020, 102, ion and fragmentation dynamics of the N^2	2.5	4
113	ion and fragmentation dynamics of the N^2 dissociative channel in NH^3	3.6	4
114	Single photon double ionization of NH_3 by circularly polarized photons at a photon energy of 160 eV. European Physical Journal: Special Topics, 2009, 169, 109-116.	2.6	3
115			

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127	Experimental Proof of Resonant Auger Decay Driven Intermolecular Coulombic Decay. Journal of Physics: Conference Series, 2014, 488, 022009.	0.4	1
128	Ion-momentum imaging of dissociative-electron-attachment dynamics in CO ₂ , N ₂ O, HCCH and CF ₄ . Journal of Physics: Conference Series, 2015, 635, 072028.	0.4	1
129	Selective bond scission in formic acid by low-energy electrons. Journal of Physics: Conference Series, 2020, 1412, 052004.	0.4	1
130	Recoil Ion Momentum Spectroscopy Momentum Space Images of Atomic Reactions. , 1999, , 33-45.		1
131	Cold Target Helium Recoil Ion Momentum Imaging: Understanding Correlated Electron Motion in the Double Ionisation Process. Australian Journal of Physics, 1999, 52, 523.	0.6	1
132	Double Ionization of Helium by Fast Fully Stripped Ions. Physica Scripta, 1999, T80, 351.	2.5	1
133	From Atoms to Molecules. Springer Series on Atomic, Optical, and Plasma Physics, 2003, , 245-260.	0.2	1
134	Verschränkte Elektronenbewegung in Deuteriummolekülen. Physik in Unserer Zeit, 2005, 36, 6-7.	0.0	0
135	Ionization Dynamics in p and p ₁ , on Helium collisions. AIP Conference Proceedings, 2005, , .	0.4	0
136	Czaschetel.Reply:. Physical Review Letters, 2007, 98, .	7.8	0
137	K-shell photoionization of N ₂ : Angular resolved molecular frame photoelectron “ Auger electron coincidence spectra. Journal of Physics: Conference Series, 2009, 194, 022063.	0.4	0
138	Quasi free mechanism in single photon double ionization of Helium. Journal of Physics: Conference Series, 2012, 388, 022021.	0.4	0
139	Electron diffraction self imaging of molecular fragmentation in two step double ionization of water. Journal of Physics: Conference Series, 2012, 388, 022029.	0.4	0
140	Double Auger Emission of fixed-in-space Carbon Monoxide following Core-Excitation and Ionization. Journal of Physics: Conference Series, 2012, 388, 022066.	0.4	0
141	Dissociative Photoionization of Methane at the Carbon K-edge. Journal of Physics: Conference Series, 2012, 388, 022085.	0.4	0
142	Dissociation Dynamics and Molecular Imaging of Methane following Photoionization at the Carbon K-Edge. Journal of Physics: Conference Series, 2014, 488, 022016.	0.4	0
143	Single photon double ionization of Helium at 800 eV “ observation of the Quasi Free Mechanism. Journal of Physics: Conference Series, 2014, 488, 022007.	0.4	0
144	Dissociation Dynamics of Doubly Ionized Water Using 57 eV Photons. Journal of Physics: Conference Series, 2015, 635, 112141.	0.4	0

#	ARTICLE	IF	CITATIONS
145	Double Ionization in Strong Fields: Ion Momenta and Correlated Electron Momenta. , 2001, , 15-23.		0