Thomas Fennel

List of Publications by Year in Descending Order

83 papers	2,313 citations	25 h-index	47 g-index
104 ext. papers	2,612 ext. citations	6 avg, IF	4.56 L-index

#	Paper	IF	Citations
83	Characterization of Laser-Induced Ionization Dynamics in Solid Dielectrics. *ACS Photonics*, **2022**, 9, 233-240	6.3	1
82	Strong-field physics with nanospheres. *Advances in Physics: X*, **2022**, 7,	5.1	1
81	Fundamentals and Mechanisms of Vacuum Photoionization **2021**, 1-21		
80	Onset of charge interaction in strong-field photoemission from nanometric needle tips. *Nanophotonics*, **2021**,	6.3	3
79	Origin of strong-field-induced low-order harmonic generation in amorphous quartz. *Nature Physics*, **2020**, 16, 1035-1039	16.2	23
78	Quantum coherent diffractive imaging. *JPhys Photonics*, **2020**, 2, 024007	2.5	1
77	Photoelectron spectroscopy of large water clusters ionized by an XUV comb. *JPhys Photonics*, **2020**, 2, 035007	2.5	3
76	Fast reconstruction of single-shot wide-angle diffraction images through deep learning. *Machine Learning: Science and Technology*, **2020**, 1, 045007	5.1	4
75	Ionization-Induced Subcycle Metallization of Nanoparticles in Few-Cycle Pulses. *ACS Photonics*, **2020**, 7, 3207-3215	6.3	7
74	All-optical spatio-temporal control of electron emission from SiO2 nanospheres with femtosecond two-color laser fields. *New Journal of Physics*, **2019**, 21, 073011	2.9	4
73	A DFT-based tight-binding approach to the self-consistent description of molecule metal-nanoparticle interactions. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2019**, 52, 185101	1.3	2
72	Few-cycle laser driven reaction nanoscopy on aerosolized silica nanoparticles. *Nature Communications*, **2019**, 10, 4655	17.4	12
71	Nonlinear Lorentz model for the description of nonlinear optical dispersion in nanophotonics simulations [Invited]. *Optical Materials Express*, **2019**, 9, 771	2.6	4
70	A sensitive EUV Schwarzschild microscope for plasma studies with sub-micrometer resolution. *Review of Scientific Instruments*, **2018**, 89, 023703	1.7	8
69	Explicit formulation of second and third order optical nonlinearity in the FDTD framework. *Computer Physics Communications*, **2018**, 222, 70-83	4.2	16
68	Low-Energy Electron Emission in the Strong-Field Ionization of Rare Gas Clusters. *Physical Review Letters*, **2018**, 121, 063202	7.4	8
67	Attosecond streaking metrology with isolated nanotargets. *Journal of Optics (United Kingdom)*, **2018**, 20, 024002	1.7	7

66	Phase- and intensity-resolved measurements of above threshold ionization by few-cycle pulses. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2018**, 51, 134007	1.3	10
65	Three-Dimensional Shapes of Spinning Helium Nanodroplets. *Physical Review Letters*, **2018**, 121, 255301	7.4	37
64	High-order above-threshold photoemission from nanotips controlled with two-color laser fields. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2018**, 51, 134001	1.3	16
63	Trapping field assisted backscattering in strong-field photoemission from dielectric nanospheres. *Journal of Modern Optics*, **2017**, 64, 1096-1103	1.1	15
62	Attosecond physics at the nanoscale. *Reports on Progress in Physics*, **2017**, 80, 054401	14.4	201
61	Attosecond chronoscopy of electron scattering in dielectric nanoparticles. *Nature Physics*, **2017**, 13, 766-770	17.1	52
60	Quenching of material dependence in few-cycle driven electron acceleration from nanoparticles under many-particle charge interaction. *Journal of Modern Optics*, **2017**, 64, 995-1003	1.1	14
59	Nanoplasmonic electron acceleration by attosecond-controlled forward rescattering in silver clusters. *Nature Communications*, **2017**, 8, 1181	17.4	25
58	Signatures and mechanisms of plasmon-enhanced electron emission from clusters in few-cycle laser fields. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2017**, 50, 224001	1.3	2
57	Coherent diffractive imaging of single helium nanodroplets with a high harmonic generation source. *Nature Communications*, **2017**, 8, 493	17.4	53
56	VIII Microscopic particle-in-cell approach **2017**, 227-270		
55	Attosekunden-Stoppuhr f□inelastische Elektronenst□. *Physik in Unserer Zeit*, **2017**, 48, 217-218	0.1	
54	Massively parallel microscopic particle-in-cell. *Computer Physics Communications*, **2017**, 219, 269-285	4.2	0
53	Photoemission from Nanomaterials in Strong Few-Cycle Laser Fields. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2017**, 283-299	0.2	0
52	Dual crystal x-ray spectrometer at 1.8 keV for high repetition-rate single-photon counting spectroscopy experiments. *Journal of Instrumentation*, **2016**, 11, P08015-P08015	1	2
51	Ionization Avalanching in Clusters Ignited by Extreme-Ultraviolet Driven Seed Electrons. *Physical Review Letters*, **2016**, 116, 033001	7.4	21
50	Competition of single and double rescattering in the strong-field photoemission from dielectric nanospheres. *Applied Physics B: Lasers and Optics*, **2016**, 122, 101	1.9	19
49	MeV femtosecond electron pulses from direct-field acceleration in low density atomic gases. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2016**, 49, 024001	1.3	5

48	Measurement of high-dynamic range x-ray Thomson scattering spectra for the characterization of nano-plasmas at LCLS. *Review of Scientific Instruments*, **2016**, 87, 11E709	1.7	4
47	Recombination-Enhanced Surface Expansion of Clusters in Intense Soft X-Ray Laser Pulses. *Physical Review Letters*, **2016**, 117, 153401	7.4	14
46	Real-time fragmentation dynamics of clusters ionized by intense extreme-ultraviolet pulses. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2015**, 48, 185101	1.3	10
45	Recombination dynamics of clusters in intense extreme-ultraviolet and near-infrared fields. *New Journal of Physics*, **2015**, 17, 033043	2.9	21
44	Coherent electronic wave packet motion in C(60) controlled by the waveform and polarization of few-cycle laser fields. *Physical Review Letters*, **2015**, 114, 123004	7.4	46
43	Signatures of transient resonance heating in photoemission from free NaCl nanoparticles in intense femtosecond laser pulses. *Journal of Electron Spectroscopy and Related Phenomena*, **2015**, 200, 216-221	1.7	6
42	Ultrafast electron kinetics in short pulse laser-driven dense hydrogen. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2015**, 48, 224004	1.3	4
41	Accurate determination of absolute carrier-envelope phase dependence using photo-ionization. *Optics Letters*, **2015**, 40, 3137-40	3	13
40	Field propagation-induced directionality of carrier-envelope phase-controlled photoemission from nanospheres. *Nature Communications*, **2015**, 6, 7944	17.4	60
39	Coulomb frustration of the multiphoton ionization of metallic clusters under intense EUV FEL evidenced by ion spectrometry. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2015**, 48, 234001	1.3	1
38	Correlated electronic decay following intense near-infrared ionization of clusters. *Journal of Physics: Conference Series*, **2015**, 635, 012025	0.3	1
37	Intracluster Coulombic decay following intense NIR ionization of clusters. *Journal of Physics: Conference Series*, **2015**, 635, 102004	0.3	
36	Influence of wavelength and pulse duration on single-shot x-ray diffraction patterns from nonspherical nanoparticles. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2015**, 48, 204004	1.3	7
35	Laser-Induced Plasma Dynamics Imaged by Femtosecond In-Line Holography. *Springer Proceedings in Physics*, **2015**, 345-347	0.2	
34	Observation of correlated electronic decay in expanding clusters triggered by near-infrared fields. *Nature Communications*, **2015**, 6, 8596	17.4	26
33	The 3D-architecture of individual free silver nanoparticles captured by X-ray scattering. *Nature Communications*, **2015**, 6, 6187	17.4	67
32	Light Wave Driven Electron Dynamics in Clusters **2015**, 119-154		
31	Recombination-Induced Autoionization Process in Rare-Gas Clusters. *Springer Proceedings in Physics* , **2015**, 56-59	0.2	

30	Attosecond Nanophysics **2014**, 421-462		5
29	Time-resolved x-ray imaging of anisotropic nanoplasma expansion. *Physical Review Letters*, **2014**, 113, 133401	7.4	26
28	Equilibration dynamics and conductivity of warm dense hydrogen. *Physical Review E*, **2014**, 90, 013104	2.4	18
27	Light wave driven electron dynamics in clusters. *Annalen Der Physik*, **2014**, 526, 135-156	2.6	6
26	Resolving ultrafast heating of dense cryogenic hydrogen. *Physical Review Letters*, **2014**, 112, 105002	7.4	70
25	Electron-relocalization dynamics in xenon clusters in intense soft-x-ray fields. *Physical Review A*, **2014**, 89,	2.6	24
24	Tracing electron-ion recombination in nanoplasmas produced by extreme-ultraviolet irradiation of rare-gas clusters. *Physical Review Letters*, **2014**, 112, 253401	7.4	34
23	Carrier□nvelope phase-tagged imaging of the controlled electron acceleration from SiO2nanospheres in intense few-cycle laser fields. *New Journal of Physics*, **2012**, 14, 075010	2.9	35
22	Atomic photoionization in combined intense XUV free-electron and infrared laser fields. *New Journal of Physics*, **2012**, 14, 043008	2.9	32
21	Collision-enhanced plasmonic electron acceleration in small metal clusters. *New Journal of Physics*, **2012**, 14, 055011	2.9	10
20	Fully microscopic analysis of laser-driven finite plasmas using the example of clusters. *New Journal of Physics*, **2012**, 14, 065011	2.9	26
19	Attosecond plasma wave dynamics in laser-driven cluster nanoplasmas. *Physical Review Letters*, **2012**, 108, 175007	7.4	38
18	Rare-gas clusters in intense VUV, XUV and soft x-ray pulses: signatures of the transition from nanoplasma-driven cluster expansion to Coulomb explosion in ion and electron spectra. *New Journal of Physics*, **2011**, 13, 053022	2.9	53
17	Controlled near-field enhanced electron acceleration from dielectric nanospheres with intense few-cycle laser fields. *Nature Physics*, **2011**, 7, 656-662	16.2	193
16	Resonant charging of Xe clusters in helium nanodroplets under intense laser fields. *European Physical Journal D*, **2011**, 63, 281-288	1.3	13
15	Time-resolved analysis of strong-field induced plasmon oscillations in metal clusters by spectral interferometry with few-cycle laser fields. *Physical Chemistry Chemical Physics*, **2011**, 13, 8747-54	3.6	5
14	Steplike intensity threshold behavior of extreme ionization in laser-driven xenon clusters. *Physical Review Letters*, **2010**, 105, 053401	7.4	39
13	Ionization heating in rare-gas clusters under intense XUV laser pulses. *Physical Review A*, **2010**, 82,	2.6	51

12	Laser-driven nonlinear cluster dynamics. *Reviews of Modern Physics*, **2010**, 82, 1793-1842	40.5	337
11	Resolving the Ion and Electron Dynamics in Finite Systems Exposed to Intense Optical Laser Fields. *Springer Series in Materials Science*, **2010**, 85-113	0.9	
10	Signatures of bound-state-assisted nonsequential double ionization. *Physical Review A*, **2009**, 80,	2.6	6
9	Multistep ionization of argon clusters in intense femtosecond extreme ultraviolet pulses. *Physical Review Letters*, **2008**, 100, 133401	7.4	138
8	Non-resonant absorption enhancement in laser-excited simple metal clusters through electron-electron collisions. *Physical Review A*, **2008**, 77,	2.6	16
7	Semiclassical Description of Quantum Many-Particle Dynamics in Strong Laser Fields **2008**, 255-273		1
6	Spectroscopy of rare gas clusters using VUV light from a free-electron-laser. *Journal of Electron Spectroscopy and Related Phenomena*, **2007**, 156-158, 25-29	1.7	4
5	Highly charged ions from laser-cluster interactions: local-field-enhanced impact ionization and frustrated electron-ion recombination. *Physical Review Letters*, **2007**, 99, 233401	7.4	81
4	Plasmon-enhanced electron acceleration in intense laser metal-cluster interactions. *Physical Review Letters*, **2007**, 98, 143401	7.4	78
3	Charging of metal clusters in helium droplets exposed to intense femtosecond laser pulses. *Physical Chemistry Chemical Physics*, **2007**, 9, 4639-52	3.6	27
2	Ionization dynamics of simple metal clusters in intense fields by the Thomas-Fermi-Vlasov method. *European Physical Journal D*, **2004**, 29, 367-378	1.3	64
1	Ionic recoil energies in the Coulomb explosion of metal clusters. *European Physical Journal D*, **2001**, 16, 59-63	1.3	22