

# Henrik Stapelfeldt

## List of Publications by Year in descending order

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95  
papers

6,880  
citations

71102

41  
h-index

56724

83  
g-index

97  
all docs

97  
docs citations

97  
times ranked

2370  
citing authors

#	ARTICLE	IF	CITATIONS
1	Colloquium: Aligning molecules with strong laser pulses. <i>Reviews of Modern Physics</i> , 2003, 75, 543-557.	45.6	1,625
2	Photoelectron angular distributions from strong-field ionization of oriented molecules. <i>Nature Physics</i> , 2010, 6, 428-432.	16.7	349
3	Three Dimensional Alignment of Molecules Using Elliptically Polarized Laser Fields. <i>Physical Review Letters</i> , 2000, 85, 2470-2473.	7.8	287
4	Laser-Induced Alignment and Orientation of Quantum-State-Selected Large Molecules. <i>Physical Review Letters</i> , 2009, 102, 023001.	7.8	283
5	Controlling the alignment of neutral molecules by a strong laser field. <i>Journal of Chemical Physics</i> , 1999, 110, 10235-10238.	3.0	247
6	Aligning molecules with intense nonresonant laser fields. <i>Journal of Chemical Physics</i> , 1999, 111, 7774-7781.	3.0	221
7	X-Ray Diffraction from Isolated and Strongly Aligned Gas-Phase Molecules with a Free-Electron Laser. <i>Physical Review Letters</i> , 2014, 112, .	7.8	217
8	Observation of Enhanced Field-Free Molecular Alignment by Two Laser Pulses. <i>Physical Review Letters</i> , 2004, 92, 173004.	7.8	148
9	Quantum-state selection, alignment, and orientation of large molecules using static electric and laser fields. <i>Journal of Chemical Physics</i> , 2009, 131, 064309.	3.0	139
10	Controlling the Branching Ratio of Photodissociation Using Aligned Molecules. <i>Physical Review Letters</i> , 1999, 83, 1123-1126.	7.8	122
11	Nonadiabatic Alignment of Asymmetric Top Molecules: Field-Free Alignment of Iodobenzene. <i>Physical Review Letters</i> , 2003, 91, 043003.	7.8	105
12	Multiphoton Electron Angular Distributions from Laser-Aligned $CS_2$ Molecules. <i>Physical Review Letters</i> , 2008, 100, 093006.	7.8	92
13	Time-resolved Coulomb explosion imaging: A method to measure structure and dynamics of molecular nuclear wave packets. <i>Physical Review A</i> , 1998, 58, 426-433.	2.5	91
14	Laser-induced 3D alignment and orientation of quantum state-selected molecules. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 9912.	2.8	91
15	Influence of molecular symmetry on strong-field ionization: Studies on ethylene, benzene, fluorobenzene, and chlorofluorobenzene. <i>Physical Review A</i> , 2005, 71, .	2.5	83
16	Control and femtosecond time-resolved imaging of torsion in a chiral molecule. <i>Journal of Chemical Physics</i> , 2012, 136, 204310.	3.0	83
17	Alignment of symmetric top molecules by short laser pulses. <i>Physical Review A</i> , 2005, 72, .	2.5	82
18	Time-Resolved Photoelectron Angular Distributions from Strong-Field Ionization of Rotating Naphthalene Molecules. <i>Physical Review Letters</i> , 2011, 106, 073001.	7.8	81

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19	Impulsive Laser Induced Alignment of Molecules Dissolved in Helium Nanodroplets. <i>Physical Review Letters</i> , 2013, 110, 093002.	7.8	81
20	Nonadiabatic alignment of asymmetric top molecules: Rotational revivals. <i>Journal of Chemical Physics</i> , 2004, 121, 783-791.	3.0	77
21	Holding and Spinning Molecules in Space. <i>Physical Review Letters</i> , 2007, 99, 143602.	7.8	77
22	Ionization of oriented carbonyl sulfide molecules by intense circularly polarized laser pulses. <i>Physical Review A</i> , 2011, 83, .	2.5	75
23	Pure Samples of Individual Conformers: The Separation of Stereoisomers of Complex Molecules Using Electric Fields. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 6900-6902.	13.8	73
24	Orientation-dependent ionization yields from strong-field ionization of fixed-in-space linear and asymmetric top molecules. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2012, 45, 015101.	1.5	73
25	Role of rotational temperature in adiabatic molecular alignment. <i>Journal of Chemical Physics</i> , 2006, 125, 194309.	3.0	72
26	Molecular movie of ultrafast coherent rotational dynamics of OCS. <i>Nature Communications</i> , 2019, 10, 3364.	12.8	71
27	State- and conformer-selected beams of aligned and oriented molecules for ultrafast diffraction studies. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 2076-2087.	2.8	69
28	Ionization of one- and three-dimensionally-oriented asymmetric-top molecules by intense circularly polarized femtosecond laser pulses. <i>Physical Review A</i> , 2011, 83, .	2.5	66
29	Imaging and Control of Interfering Wave Packets in a Dissociating Molecule. <i>Physical Review Letters</i> , 2002, 89, 133004.	7.8	62
30	Dynamic Stark Control of Torsional Motion by a Pair of Laser Pulses. <i>Physical Review Letters</i> , 2014, 113, 073005.	7.8	60
31	Molecular-Frame 3D Photoelectron Momentum Distributions by Tomographic Reconstruction. <i>Physical Review Letters</i> , 2012, 109, 123001.	7.8	59
32	Covariance imaging experiments using a pixel-imaging mass-spectrometry camera. <i>Physical Review A</i> , 2014, 89, .	2.5	59
33	Imaging molecular structure through femtosecond photoelectron diffraction on aligned and oriented gas-phase molecules. <i>Faraday Discussions</i> , 2014, 171, 57-80.	3.2	55
34	Laser-Induced Rotation of Iodine Molecules in Helium Nanodroplets: Revivals and Breaking Free. <i>Physical Review Letters</i> , 2017, 118, 203203.	7.8	55
35	Making the Best of Mixed-Field Orientation of Polar Molecules: A Recipe for Achieving Adiabatic Dynamics in an Electrostatic Field Combined with Laser Pulses. <i>Physical Review Letters</i> , 2012, 108, 193001.	7.8	53
36	Coulomb-explosion imaging using a pixel-imaging mass-spectrometry camera. <i>Physical Review A</i> , 2015, 91, .	2.5	50

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37	Coulomb-explosion imaging of concurrent $\text{CH}_2\text{BrI}$ photodissociation dynamics. <i>Physical Review A</i> , 2017, 96, .	2.5	50
38	Stark-selected beam of ground-state OCS molecules characterized by revivals of impulsive alignment. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 18971.	2.8	46
39	Coulomb explosion imaging of $\text{CH}_3\text{I}$ and $\text{CH}_2\text{ClI}$ photodissociation dynamics. <i>Journal of Chemical Physics</i> , 2018, 149, 204313.	3.0	46
40	Control and imaging of interfering wave packets in dissociating $\text{I}_2$ molecules. <i>Physical Review A</i> , 2004, 70, .	2.5	43
41	Aligning molecules with long or short laser pulses. <i>Physica Scripta</i> , 2007, 76, C63-C68.	2.5	41
42	Long-lasting field-free alignment of large molecules inside helium nanodroplets. <i>Nature Communications</i> , 2019, 10, 133.	12.8	41
43	Control of rotational wave-packet dynamics in asymmetric top molecules. <i>Physical Review A</i> , 2007, 75, .	2.5	40
44	Photodissociation of aligned $\text{CH}_3\text{I}$ and $\text{C}_6\text{H}_3\text{F}_2\text{I}$ molecules probed with time-resolved Coulomb explosion imaging by site-selective extreme ultraviolet ionization. <i>Structural Dynamics</i> , 2018, 5, 014301.	2.3	40
45	Photodissociation of laser aligned iodobenzene: Towards selective photoexcitation. <i>Journal of Chemical Physics</i> , 2002, 117, 2097-2102.	3.0	38
46	Controlling the rotation of asymmetric top molecules by the combination of a long and a short laser pulse. <i>Physical Review A</i> , 2009, 79, .	2.5	38
47	Nonsequential double ionization of $\text{D}_2$ molecules with intense 20-fs pulses. <i>Physical Review A</i> , 2003, 67, .	2.5	37
48	Communication: Gas-phase structural isomer identification by Coulomb explosion of aligned molecules. <i>Journal of Chemical Physics</i> , 2018, 148, .	3.0	35
49	Strongly aligned molecules inside helium droplets in the near-adiabatic regime. <i>Journal of Chemical Physics</i> , 2017, 147, 013946.	3.0	34
50	Jitter-correction for IR/UV-XUV pump-probe experiments at the FLASH free-electron laser. <i>New Journal of Physics</i> , 2017, 19, 043009.	2.9	34
51	$B_{21}(\text{I}^{\infty+1})$ excited state decay dynamics in $\text{CS}_2$ . <i>Journal of Chemical Physics</i> , 2006, 125, 234302.	3.0	33
52	Alignment and Imaging of the $\text{CS}_2$ Dimer Inside Helium Nanodroplets. <i>Physical Review Letters</i> , 2018, 120, 113202.	7.8	33
53	Strongly driven quantum pendulum of the carbonyl sulfide molecule. <i>Physical Review A</i> , 2014, 89, .	2.5	30
54	Three-Dimensional Molecular Alignment Inside Helium Nanodroplets. <i>Physical Review Letters</i> , 2017, 119, 073202.	7.8	29

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55	Femtosecond photodissociation dynamics of I <sub>2</sub> studied by ion imaging. <i>Journal of Chemical Physics</i> , 1998, 109, 8857-8863.	3.0	28
56	Using laser-induced Coulomb explosion of aligned chiral molecules to determine their absolute configuration. <i>Physical Review A</i> , 2015, 92, .	2.5	28
57	Strongly aligned gas-phase molecules at free-electron lasers. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 204002.	1.5	28
58	Formation and measurement of molecular quantum picostructures. <i>Physical Review A</i> , 1997, 55, R3319-R3322.	2.5	27
59	Alignment enhancement by the combination of a short and a long laser pulse. <i>Physical Review A</i> , 2006, 73, .	2.5	27
60	Alignment, orientation, and Coulomb explosion of difluoroiodobenzene studied with the pixel imaging mass spectrometry (PI <sub>m</sub> MS) camera. <i>Journal of Chemical Physics</i> , 2017, 147, 013933.	3.0	26
61	Laser-induced adiabatic alignment of molecules dissolved in helium nanodroplets. <i>Physical Review A</i> , 2013, 87, .	2.5	25
62	Mixed-field orientation of molecules without rotational symmetry. <i>Journal of Chemical Physics</i> , 2013, 139, 234313.	3.0	25
63	Deconvoluting nonaxial recoil in Coulomb explosion measurements of molecular axis alignment. <i>Physical Review A</i> , 2016, 94, .	2.5	25
64	Femtosecond laser induced Coulomb explosion imaging of aligned OCS oligomers inside helium nanodroplets. <i>Journal of Chemical Physics</i> , 2018, 149, 154306.	3.0	25
65	Communication: Three-fold covariance imaging of laser-induced Coulomb explosions. <i>Journal of Chemical Physics</i> , 2016, 144, 161105.	3.0	24
66	X-ray diffractive imaging of controlled gas-phase molecules: Toward imaging of dynamics in the molecular frame. <i>Journal of Chemical Physics</i> , 2020, 152, 084307.	3.0	24
67	Rotational Coherence Spectroscopy of Molecules in Helium Nanodroplets: Reconciling the Time and the Frequency Domains. <i>Physical Review Letters</i> , 2020, 125, 013001.	7.8	23
68	Hyperfine-Structure-Induced Depolarization of Impulsively Aligned $I_2$ Molecules. <i>Physical Review Letters</i> , 2018, 120, 163202.	7.8	22
69	Atomic-resolution imaging of carbonyl sulfide by laser-induced electron diffraction. <i>Journal of Chemical Physics</i> , 2019, 150, 244301.	3.0	22
70	Structure determination of the tetracene dimer in helium nanodroplets using femtosecond strong-field ionization. <i>Structural Dynamics</i> , 2019, 6, 044301.	2.3	22
71	Communication: Switched wave packets with spectrally truncated chirped pulses. <i>Journal of Chemical Physics</i> , 2018, 148, 221105.	3.0	20
72	Electrons frozen in motion. <i>Nature</i> , 2004, 432, 809-810.	27.8	19

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73	Alignment enhancement of molecules embedded in helium nanodroplets by multiple laser pulses. <i>Physical Review A</i> , 2015, 92, .	2.5	18
74	Alignment-dependent strong-field ionization yields of carbonyl sulfide molecules induced by mid-infrared laser pulses. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 205601.	1.5	18
75	Laser-induced aligned self-assembly on water surfaces. <i>Journal of Chemical Physics</i> , 2009, 130, 144704.	3.0	17
76	Laser-induced Coulomb explosion of 1,4-diodobenzene molecules: Studies of isolated molecules and molecules in helium nanodroplets. <i>Physical Review A</i> , 2016, 93, .	2.5	16
77	Nonadiabatic laser-induced alignment of molecules: Reconstructing $\langle \hat{I}_y \rangle$ directly from $\langle \hat{I}_x \rangle$ by Fourier analysis. <i>Journal of Chemical Physics</i> , 2017, 147, 013905.	3.0	15
78	Femtosecond Rotational Dynamics of $D_2$ Molecules in Superfluid Helium Nanodroplets. <i>Physical Review Letters</i> , 2022, 128, .	7.8	15
79	Spectrofluorometric Characterization of $\hat{I}^2$ -Lactoglobulin B Covalently Labeled with 2-(4-Maleimidylanilino)naphthalene-6-sulfonate. <i>Journal of Agricultural and Food Chemistry</i> , 1999, 47, 3986-3990.	5.2	14
80	Laser-induced alignment dynamics of gas phase $CS_2$ dimers. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 3245-3253.	2.8	14
81	Laser-induced Coulomb-explosion imaging of the $CS_2$ dimer: The effect of non-Coulombic interactions. <i>Physical Review A</i> , 2020, 102, .	2.5	13
82	Laser-Induced Coulomb Explosion Imaging of Aligned Molecules and Molecular Dimers. <i>Annual Review of Physical Chemistry</i> , 2022, 73, 323-347.	10.8	13
83	Alignment of the $CS_2$ dimer embedded in helium droplets induced by a circularly polarized laser pulse. <i>Physical Review A</i> , 2019, 99, .	2.5	9
84	Pulsed laser manipulation of an optically trapped bead: Averaging thermal noise and measuring the pulsed force amplitude. <i>Optics Express</i> , 2013, 21, 1986.	3.4	8
85	Quantum-State-Sensitive Detection of Alkali Dimers on Helium Nanodroplets by Laser-Induced Coulomb Explosion. <i>Physical Review Letters</i> , 2022, 128, 093201.	7.8	7
86	Excited rotational states of molecules in a superfluid. <i>Physical Review A</i> , 2021, 104, .	2.5	7
87	Observation of rotational revivals for iodine molecules in helium droplets using a near-adiabatic laser pulse. <i>Physical Review A</i> , 2018, 97, .	2.5	6
88	Laser-induced Coulomb explosion imaging of $(C_6H_5Br)_2$ dimers in helium nanodroplets using a Tpx3Cam. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2021, 54, 184001.	1.5	6
89	Rotational dissociation of impulsively aligned van der Waals complexes. <i>Journal of Chemical Physics</i> , 2017, 147, 074304.	3.0	5
90	Photoelectron angular distributions from resonant two-photon ionisation of adiabatically aligned naphthalene and aniline molecules. <i>Molecular Physics</i> , 2021, 119, e1836411.	1.7	4

#	ARTICLE	IF	CITATIONS
91	Laser-Induced Alignment of Molecules in Helium Nanodroplets. Topics in Applied Physics, 2022, , 381-445.	0.8	3
92	Alignment of Neutral Molecules by a Strong Nonresonant Linearly Polarized Laser Field. ACS Symposium Series, 2002, , 320-335.	0.5	1
93	Motion analysis of optically trapped particles and cells using 2D Fourier analysis. Optics Express, 2012, 20, 1953.	3.4	1
94	3D Alignment by Holding and Spinning Molecules. , 2007, , .		0
95	ALIGNMENT OF NEUTRAL MOLECULES BY A STRONG NONRESONANT LASER FIELD. , 2000, , .		0