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	Laser-Induced Coulomb Explosion Imaging of Aligned Molecules and Molecular Dimers. Annual Review of Physical Chemistry, 2022, 73, 323-347.	10.8	13
2	Quantum-State-Sensitive Detection of Alkali Dimers on Helium Nanodroplets by Laser-Induced Coulomb Explosion. Physical Review Letters, 2022, 128, 093201.	7.8	7
3	Laser-Induced Alignment of Molecules inÂHelium Nanodroplets. Topics in Applied Physics, 2022, , 381-445.	0.8	3
4	Femtosecond Rotational Dynamics of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">D</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml: Molecules in Superfluid Helium Nanodroplets. Physical Review Letters, 2022, 128, .	7.8	15
5	Photoelectron angular distributions from resonant two-photon ionisation of adiabatically aligned naphthalene and aniline molecules. Molecular Physics, 2021, 119, e1836411.	1.7	4
6	Laser-induced Coulomb explosion imaging of (C₆H₅Br)₂ and C₆H₅Brâ€“I₂ dimers in helium nanodroplets using a Tpx3Cam. Journal of Physics B: Atomic, Molecular and Optical Physics, 2021, 54, 184001.	1.5	6
7	Excited rotational states of molecules in a superfluid. Physical Review A, 2021, 104, .	2.5	7
8	Rotational Coherence Spectroscopy of Molecules in Helium Nanodroplets: Reconciling the Time and the Frequency Domains. Physical Review Letters, 2020, 125, 013001.	7.8	23
9	X-ray diffractive imaging of controlled gas-phase molecules: Toward imaging of dynamics in the molecular frame. Journal of Chemical Physics, 2020, 152, 084307.	3.0	24
10	Laser-induced alignment dynamics of gas phase CS₂ dimers. Physical Chemistry Chemical Physics, 2020, 22, 3245-3253.	2.8	14
11	Laser-induced Coulomb-explosion imaging of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml: dimer: The effect of non-Coulombic interactions. Physical Review A, 2020, 102, .	2.5	13
12	Atomic-resolution imaging of carbonyl sulfide by laser-induced electron diffraction. Journal of Chemical Physics, 2019, 150, 244301.	3.0	22
13	Molecular movie of ultrafast coherent rotational dynamics of OCS. Nature Communications, 2019, 10, 3364.	12.8	71
14	Structure determination of the tetracene dimer in helium nanodroplets using femtosecond strong-field ionization. Structural Dynamics, 2019, 6, 044301.	2.3	22
15	Alignment of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml: dimer embedded in helium droplets induced by a circularly polarized laser pulse. Physical Review A, 2019, 99, .	2.5	9
16	Long-lasting field-free alignment of large molecules inside helium nanodroplets. Nature Communications, 2019, 10, 133.	12.8	41
17	Photodissociation of aligned CH3I and C6H3F2I molecules probed with time-resolved Coulomb explosion imaging by site-selective extreme ultraviolet ionization. Structural Dynamics, 2018, 5, 014301.	2.3	40
18	Observation of rotational revivals for iodine molecules in helium droplets using a near-adiabatic laser pulse. Physical Review A, 2018, 97, .	2.5	6

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19	Hyperfine-Structure-Induced Depolarization of Impulsively Aligned <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">I</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:m Molecules. Physical Review Letters, 2018, 120, 163202.	7.8	22
20	Alignment and Imaging of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>CS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:m Dimer Inside Helium Nanodroplets. Physical Review Letters, 2018, 120, 113202.	7.8	33
21	Communication: Gas-phase structural isomer identification by Coulomb explosion of aligned molecules. Journal of Chemical Physics, 2018, 148, .	3.0	35
22	Femtosecond laser induced Coulomb explosion imaging of aligned OCS oligomers inside helium nanodroplets. Journal of Chemical Physics, 2018, 149, 154306.	3.0	25
23	Coulomb explosion imaging of CH3I and CH2ClI photodissociation dynamics. Journal of Chemical Physics, 2018, 149, 204313.	3.0	46
24	Communication: Switched wave packets with spectrally truncated chirped pulses. Journal of Chemical Physics, 2018, 148, 221105.	3.0	20
25	Nonadiabatic laser-induced alignment of molecules: Reconstructing âŸ¨cos²Î¸âŸ© directly from âŸ¨cos²Î¸âŸ© by Fourier analysis. Journal of Chemical Physics, 2017, 147, 013905.	3.0	15
26	Strongly aligned molecules inside helium droplets in the near-adiabatic regime. Journal of Chemical Physics, 2017, 147, 013946.	3.0	34
27	Rotational dissociation of impulsively aligned van der Waals complexes. Journal of Chemical Physics, 2017, 147, 074304.	3.0	5
28	Alignment, orientation, and Coulomb explosion of difluoroiodobenzene studied with the pixel imaging mass spectrometry (PImMS) camera. Journal of Chemical Physics, 2017, 147, 013933.	3.0	26
29	Three-Dimensional Molecular Alignment Inside Helium Nanodroplets. Physical Review Letters, 2017, 119, 073202.	7.8	29
30	Jitter-correction for IR/UV-XUV pump-probe experiments at the FLASH free-electron laser. New Journal of Physics, 2017, 19, 043009.	2.9	34
31	Coulomb-explosion imaging of concurrent <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi mathvariant="bold">CH</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="bold">BrI</mml:mi></mml:mrow></mml:math> photodissociation dynamics. Physical Review A, 2017, 96, .	2.5	50
32	Laser-Induced Rotation of Iodine Molecules in Helium Nanodroplets: Revivals and Breaking Free. Physical Review Letters, 2017, 118, 203203.	7.8	55
33	Communication: Three-fold covariance imaging of laser-induced Coulomb explosions. Journal of Chemical Physics, 2016, 144, 161105.	3.0	24
34	Alignment-dependent strong-field ionization yields of carbonyl sulfide molecules induced by mid-infrared laser pulses. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 205601.	1.5	18
35	Laser-induced Coulomb explosion of 1,4â€“diiodobenzene molecules: Studies of isolated molecules and molecules in helium nanodroplets. Physical Review A, 2016, 93, .	2.5	16
36	Deconvoluting nonaxial recoil in Coulomb explosion measurements of molecular axis alignment. Physical Review A, 2016, 94, .	2.5	25

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37	Alignment enhancement of molecules embedded in helium nanodroplets by multiple laser pulses. Physical Review A, 2015, 92, .	2.5	18
38	Coulomb-explosion imaging using a pixel-imaging mass-spectrometry camera. Physical Review A, 2015, 91, .	2.5	50
39	Using laser-induced Coulomb explosion of aligned chiral molecules to determine their absolute configuration. Physical Review A, 2015, 92, .	2.5	28
40	Strongly aligned gas-phase molecules at free-electron lasers. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 204002.	1.5	28
41	Imaging molecular structure through femtosecond photoelectron diffraction on aligned and oriented gas-phase molecules. Faraday Discussions, 2014, 171, 57-80.	3.2	55
42	Covariance imaging experiments using a pixel-imaging mass-spectrometry camera. Physical Review A, 2014, 89, .	2.5	59
43	Dynamic Stark Control of Torsional Motion by a Pair of Laser Pulses. Physical Review Letters, 2014, 113, 073005.	7.8	60
44	Strongly driven quantum pendulum of the carbonyl sulfide molecule. Physical Review A, 2014, 89, .	2.5	30
45	X-Ray Diffraction from Isolated and Strongly Aligned Gas-Phase Molecules with a Free-Electron Laser. Physical Review Letters, 2014, 112, .	7.8	217
46	Impulsive Laser Induced Alignment of Molecules Dissolved in Helium Nanodroplets. Physical Review Letters, 2013, 110, 093002.	7.8	81
47	Pulsed laser manipulation of an optically trapped bead: Averaging thermal noise and measuring the pulsed force amplitude. Optics Express, 2013, 21, 1986.	3.4	8
48	Laser-induced adiabatic alignment of molecules dissolved in helium nanodroplets. Physical Review A, 2013, 87, .	2.5	25
49	Mixed-field orientation of molecules without rotational symmetry. Journal of Chemical Physics, 2013, 139, 234313.	3.0	25
50	Control and femtosecond time-resolved imaging of torsion in a chiral molecule. Journal of Chemical Physics, 2012, 136, 204310.	3.0	83
51	Motion analysis of optically trapped particles and cells using 2D Fourier analysis. Optics Express, 2012, 20, 1953.	3.4	1
52	Molecular-Frame 3D Photoelectron Momentum Distributions by Tomographic Reconstruction. Physical Review Letters, 2012, 109, 123001.	7.8	59
53	Orientation-dependent ionization yields from strong-field ionization of fixed-in-space linear and asymmetric top molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 015101.	1.5	73
54	Making the Best of Mixed-Field Orientation of Polar Molecules: A Recipe for Achieving Adiabatic Dynamics in an Electrostatic Field Combined with Laser Pulses. Physical Review Letters, 2012, 108, 193001.	7.8	53

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55	State- and conformer-selected beams of aligned and oriented molecules for ultrafast diffraction studies. Physical Chemistry Chemical Physics, 2011, 13, 2076-2087.	2.8	69
56	Stark-selected beam of ground-state OCS molecules characterized by revivals of impulsive alignment. Physical Chemistry Chemical Physics, 2011, 13, 18971.	2.8	46
57	Ionization of one- and three-dimensionally-oriented asymmetric-top molecules by intense circularly polarized femtosecond laser pulses. Physical Review A, 2011, 83, .	2.5	66
58	Ionization of oriented carbonyl sulfide molecules by intense circularly polarized laser pulses. Physical Review A, 2011, 83, .	2.5	75
59	Time-Resolved Photoelectron Angular Distributions from Strong-Field Ionization of Rotating Naphthalene Molecules. Physical Review Letters, 2011, 106, 073001.	7.8	81
60	Photoelectron angular distributions from strong-field ionization of oriented molecules. Nature Physics, 2010, 6, 428-432.	16.7	349
61	Controlling the rotation of asymmetric top molecules by the combination of a long and a short laser pulse. Physical Review A, 2009, 79, .	2.5	38
62	Laser-Induced Alignment and Orientation of Quantum-State-Selected Large Molecules. Physical Review Letters, 2009, 102, 023001.	7.8	283
63	Quantum-state selection, alignment, and orientation of large molecules using static electric and laser fields. Journal of Chemical Physics, 2009, 131, 064309.	3.0	139
64	Laser-induced aligned self-assembly on water surfaces. Journal of Chemical Physics, 2009, 130, 144704.	3.0	17
65	Pure Samples of Individual Conformers: The Separation of Stereoisomers of Complex Molecules Using Electric Fields. Angewandte Chemie - International Edition, 2009, 48, 6900-6902.	13.8	73
66	Laser-induced 3D alignment and orientation of quantum state-selected molecules. Physical Chemistry Chemical Physics, 2009, 11, 9912.	2.8	91
67	Multiphoton Electron Angular Distributions from Laser-Aligned<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>CS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Molecules. Physical Review Letters, 2008, 100, 093006.	7.8	92
68	Aligning molecules with long or short laser pulses. Physica Scripta, 2007, 76, C63-C68.	2.5	41
69	Control of rotational wave-packet dynamics in asymmetric top molecules. Physical Review A, 2007, 75, .	2.5	40
70	3D Alignment by Holding and Spinning Molecules. , 2007, , .		0
71	Holding and Spinning Molecules in Space. Physical Review Letters, 2007, 99, 143602.	7.8	77
72	B21(Î£u+1) excited state decay dynamics in CS2. Journal of Chemical Physics, 2006, 125, 234302.	3.0	33

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73	Role of rotational temperature in adiabatic molecular alignment. Journal of Chemical Physics, 2006, 125, 194309.	3.0	72
74	Alignment enhancement by the combination of a short and a long laser pulse. Physical Review A, 2006, 73, .	2.5	27
75	Influence of molecular symmetry on strong-field ionization: Studies on ethylene, benzene, fluorobenzene, and chlorofluorobenzene. Physical Review A, 2005, 71, .	2.5	83
76	Alignment of symmetric top molecules by short laser pulses. Physical Review A, 2005, 72, .	2.5	82
77	Control and imaging of interfering wave packets in dissociatingI2molecules. Physical Review A, 2004, 70, .	2.5	43
78	Nonadiabatic alignment of asymmetric top molecules:â€,Rotational revivals. Journal of Chemical Physics, 2004, 121, 783-791.	3.0	77
79	Electrons frozen in motion. Nature, 2004, 432, 809-810.	27.8	19
80	Observation of Enhanced Field-Free Molecular Alignment by Two Laser Pulses. Physical Review Letters, 2004, 92, 173004.	7.8	148
81	Colloquium: Aligning molecules with strong laser pulses. Reviews of Modern Physics, 2003, 75, 543-557.	45.6	1,625
82	Nonadiabatic Alignment of Asymmetric Top Molecules: Field-Free Alignment of Iodobenzene. Physical Review Letters, 2003, 91, 043003.	7.8	105
83	Nonsequential double ionization ofD2molecules with intense 20-fs pulses. Physical Review A, 2003, 67, .	2.5	37
84	Imaging and Control of Interfering Wave Packets in a Dissociating Molecule. Physical Review Letters, 2002, 89, 133004.	7.8	62
85	Photodissociation of laser aligned iodobenzene: Towards selective photoexcitation. Journal of Chemical Physics, 2002, 117, 2097-2102.	3.0	38
86	Alignment of Neutral Molecules by a Strong Nonresonant Linearly Polarized Laser Field. ACS Symposium Series, 2002, , 320-335.	0.5	1
87	Three Dimensional Alignment of Molecules Using Elliptically Polarized Laser Fields. Physical Review Letters, 2000, 85, 2470-2473.	7.8	287
88	ALIGNMENT OF NEUTRAL MOLECULES BY A STRONG NONRESONANT LASER FIELD. , 2000, , .		0
89	Controlling the Branching Ratio of Photodissociation Using Aligned Molecules. Physical Review Letters, 1999, 83, 1123-1126.	7.8	122
90	Aligning molecules with intense nonresonant laser fields. Journal of Chemical Physics, 1999, 111, 7774-7781.	3.0	221

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91	Controlling the alignment of neutral molecules by a strong laser field. Journal of Chemical Physics, 1999, 110, 10235-10238.	3.0	247
92	Spectrofluorometric Characterization of Î²-Lactoglobulin B Covalently Labeled with 2-(4â€˜-Maleimidylanilino)naphthalene-6-sulfonate. Journal of Agricultural and Food Chemistry, 1999, 47, 3986-3990.	5.2	14
93	Femtosecond photodissociation dynamics of I2 studied by ion imaging. Journal of Chemical Physics, 1998, 109, 8857-8863.	3.0	28
94	Time-resolved Coulomb explosion imaging: A method to measure structure and dynamics of molecular nuclear wave packets. Physical Review A, 1998, 58, 426-433.	2.5	91
95	Formation and measurement of molecular quantum picostructures. Physical Review A, 1997, 55, R3319-R3322.	2.5	27