Johannes P Hecker Denschlag

List of Publications by Year
in descending order

Version: 2024-02-01

60 papers	8,120 citations	147801 31 h-index	144013 57 g-index
60 all docs	60 docs citations	60 times ranked	3677 citing authors

#	Article	IF	Citations
1	Generating Solitons by Phase Engineering of a Bose-Einstein Condensate. Science, 2000, 287, 97-101.	12.6	1,129
2	Bose-Einstein Condensation of Molecules. Science, 2003, 302, 2101-2103.	12.6	989
3	Observation of the Pairing Gap in a Strongly Interacting Fermi Gas. Science, 2004, 305, 1128-1130.	12.6	708
4	Crossover from a Molecular Bose-Einstein Condensate to a Degenerate Fermi Gas. Physical Review Letters, 2004, 92, 120401.	7.8	593
5	Collective Excitations of a Degenerate Gas at the BEC-BCS Crossover. Physical Review Letters, 2004, 92, 203201.	7.8	507
6	Repulsively bound atom pairs in an optical lattice. Nature, 2006, 441, 853-856.	27.8	491
7	Tuning the Scattering Length with an Optically Induced Feshbach Resonance. Physical Review Letters, 2004, 93, 123001.	7.8	471
8	Ultracold Triplet Molecules in the Rovibrational Ground State. Physical Review Letters, 2008, 101, 133005.	7.8	333
9	A Bose-Einstein condensate in an optical lattice. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 3095-3110.	1.5	274
10	Dynamics of a Cold Trapped Ion in a Bose-Einstein Condensate. Physical Review Letters, 2010, 105, 133202.	7.8	271
11	Pure Gas of Optically Trapped Molecules Created from Fermionic Atoms. Physical Review Letters, 2003, 91, 240402.	7.8	268
12	Precise Determination ofLi6Cold Collision Parameters by Radio-Frequency Spectroscopy on Weakly Bound Molecules. Physical Review Letters, 2005, 94, 103201.	7.8	234
13	Temporal, Matter-Wave-Dispersion Talbot Effect. Physical Review Letters, 1999, 83, 5407-5411.	7.8	195
14	Guiding Neutral Atoms with a Wire. Physical Review Letters, 1999, 82, 2014-2017.	7.8	170
15	Photoassociation of Sodium in a Bose-Einstein Condensate. Physical Review Letters, 2002, 88, 120403.	7.8	147
16	Cold atomâ€“ion experiments in hybrid traps. Contemporary Physics, 2014, 55, 33-45.	1.8	114
17	Probing a Singular Potential with Cold Atoms: A Neutral Atom and a Charged Wire. Physical Review Letters, 1998, 81, 737-741.	7.8	91
18	Imaging the Phase of an Evolving Bose-Einstein Condensate Wave Function. Physical Review Letters, 2000, 85, 2040-2043.	7.8	91

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19	Single Ion as a Three-Body Reaction Center in an Ultracold Atomic Gas. Physical Review Letters, 2012, 109, 123201.	7.8	88
20	Inducing an optical Feshbach resonance via stimulated Raman coupling. Physical Review A, 2005, 71, .	2.5	85
21	Long distance transport of ultracold atoms using a 1D optical lattice. New Journal of Physics, 2006, 8, 159-159.	2.9	85
22	Finite-Temperature Collective Dynamics of a Fermi Gas in the BEC-BCS Crossover. Physical Review Letters, 2007, 99, 150403.	7.8	63
23	Magnetic Field Control of Elastic Scattering in a Cold Gas of Fermionic Lithium Atoms. Physical Review Letters, 2002, 89, 273202.	7.8	61
24	State-to-state chemistry for three-body recombination in an ultracold rubidium gas. Science, 2017, 358, 921-924.	12.6	61
25	Energy Scaling of Cold Atom-Atom-Ion Three-Body Recombination. Physical Review Letters, 2016, 116, 193201.	7.8	60
26	A neutral atom and a wire: towards mesoscopic atom optics. Applied Physics B: Lasers and Optics, 1999, 69, 291-301.	2.2	59
27	Cruising through molecular bound-state manifolds with radiofrequency. Nature Physics, 2008, 4, 223-226.	16.7	52
28	Population distribution of product states following three-body recombination in an ultracold atomic gas. Nature Physics, 2013, 9, 512-517.	16.7	49
29	Scattering a neutral atom from a charged wire. Europhysics Letters, 1997, 38, 405-410.	2.0	33
30	An apparatus for immersing trapped ions into an ultracold gas of neutral atoms. Review of Scientific Instruments, 2012, 83, 053108.	1.3	32
31	Reactive two-body and three-body collisions of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi>Ba</mml:mi></mml:mrow><mml:mo>+</mml:mo> an ultracold Rb gas. Physical Review A, 2016, 94, .	2.9	31
32	Life and death of a cold <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi>BaRb</mml:mi></mml:mrow><mml:mo>+</mml:mo> molecule inside an ultracold cloud of Rb atoms. Physical Review Research, 2021, 3, .	3.6	30
33	Long-term drifts of stray electric fields in a Paul trap. Applied Physics B: Lasers and Optics, 2014, 114, 275-281.	2.2	25
34	Minimization of ion micromotion using ultracold atomic probes. Applied Physics Letters, 2013, 102, .	3.3	21
35	Probing the Axis Alignment of an Ultracold Spin-polarizedRb2Molecule. Physical Review Letters, 2014, 113, 233004.	7.8	20
36	Reaction kinetics of ultracold molecule-molecule collisions. Nature Communications, 2018, 9, 5244.	12.8	18

#	Article	IF	Citations
37	Long-Range Atomâ€“Ion Rydberg Molecule: A Novel Molecular Binding Mechanism. Atoms, 2021, 9, 34.	1.6	18
38	Inelastic collisions of ultracold triplet Rb2 molecules in the rovibrational ground state. Nature Communications, 2017, 8, 14854.	12.8	17
39	Polarizability of ultracold molecules in the rovibrational ground state of. New Journal of Physics, 2015, 17, 065019.	2.9	14
40	Observation of spin-orbit-dependent electron scattering using long-range Rydberg molecules. Physical Review Research, 2020, 2, .	3.6	12
41	Cavity-controlled formation of ultracold molecules. New Journal of Physics, 2018, 20, 123015.	2.9	11
42	Pair correlations in the normal phase of an attractive Fermi gas. New Journal of Physics, 2020, 22, 083008.	2.9	11
43	Pair fraction in a finite-temperature Fermi gas on the BEC side of the BCS-BEC crossover. Physical Review A, 2019, 99, .	2.5	9
44	Hyperfine Magnetic Substate Resolved State-to-State Chemistry. Physical Review Letters, 2019, 123, 253401.	7.8	9
45	Optical control of atom-ion collisions using a Rydberg state. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 134005.	1.5	9
46	Direct observation of swap cooling in atomâ€“ion collisions. New Journal of Physics, 2021, 23, 065008.	2.9	9
47	Mixing of ${0}^{+}$ and ${0}^{-}$ observed in the hyperfine and Zeeman structure of ultracold ${mathrm{Rb}}_{2}$ molecules. New Journal of Physics, 2015, 17, 083032.	2.9	8
48	Towards photoassociation processes of ultracold rubidium trimers. Physical Review A, 2021, 103, .	2.5	8
49	Minimizing rf-induced excess micromotion of a trapped ion with the help of ultracold atoms. Applied Physics B: Lasers and Optics, 2019, 125, 1.	2.2	7
50	Spin-Conservation Propensity Rule for Three-Body Recombination of Ultracold Rb Atoms. Physical Review Letters, 2022, 128, 133401.	7.8	7
51	Dark state experiments with ultracold, deeply-bound triplet molecules. Faraday Discussions, 2009, 142, 271.	3.2	6
52	Second sound in the crossover from the Bose-Einstein condensate to the Bardeen-Cooper-Schrieffer superfluid. Nature Communications, 2021, 12, 7074.	12.8	5
53	Level structure of deeply bound levels of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>c</mml:mi><mml:msup><mml:mspace width="0.222222em" /><mml:mn>3</mml:mn></mml:msup><mml:msub><mml:mi mathvariant="normal">Î£</mml:mi><mml:mi>g</mml:mi></mml:msub><mml:msup><mml:mrow /><mml:mo>+</mml:mo></mml:msup></mml:mrow></mml:math> state of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>Rb</mml:mi><mml:mn>2</mml:mn><mml:none	2.5	4
54	Holographic method for site-resolved detection of a 2D array of ultracold atoms. Applied Physics B: Lasers and Optics, 2016, 122, 1.	2.2	3

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55	A toy model for a diatomic molecule. Physica Scripta, 2016, 91, 083012.	2.5	2
56	Powered by symmetry. Nature, 2007, 448, 422-423.	27.8	1
57	BEC in a lattice: early experiments. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 220502.	1.5	1
58	Publisher's Note: Inducing an optical Feshbach resonance via stimulated Raman coupling [Phys. Rev. A71, 033403 (2005)]. Physical Review A, 2005, 71, .	2.5	0
59	UltrakalteMolekÃ¼le in Reih und Glied. Physik in Unserer Zeit, 2015, 46, 60-61.	0.0	0
60	Tracking a Single Ion in an Ultracold Gas. Physics Magazine, 0, 14, .	0.1	0