

John M Doyle

List of Publications by Year in descending order

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54
papers

3,636
citations

126858

33
h-index

168321

53
g-index

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all docs

56
docs citations

56
times ranked

1975
citing authors

#	ARTICLE	IF	CITATIONS
1	The Buffer Gas Beam: An Intense, Cold, and Slow Source for Atoms and Molecules. <i>Chemical Reviews</i> , 2012, 112, 4803-4827.	23.0	274
2	Manipulation of molecules with electromagnetic fields. <i>Molecular Physics</i> , 2013, 111, 1648-1682.	0.8	235
3	Buffer-gas loading of atoms and molecules into a magnetic trap. <i>Physical Review A</i> , 1995, 52, R2515-R2518.	1.0	232
4	An optical tweezer array of ultracold molecules. <i>Science</i> , 2019, 365, 1156-1158.	6.0	200
5	Sisyphus Laser Cooling of a Polyatomic Molecule. <i>Physical Review Letters</i> , 2017, 118, 173201.	2.9	193
6	Radio Frequency Magneto-Optical Trapping of CaF with High Density. <i>Physical Review Letters</i> , 2017, 119, 103201.	2.9	172
7	Laser cooling of optically trapped molecules. <i>Nature Physics</i> , 2018, 14, 890-893.	6.5	172
8	3D Magneto-Optical Trap of Yttrium Monoxide. <i>Physical Review Letters</i> , 2018, 121, 213201.	2.9	137
9	Direct laser cooling of a symmetric top molecule. <i>Science</i> , 2020, 369, 1366-1369.	6.0	114
10	Probing the frontiers of particle physics with tabletop-scale experiments. <i>Science</i> , 2017, 357, 990-994.	6.0	110
11	Enantiomer-Specific State Transfer of Chiral Molecules. <i>Physical Review Letters</i> , 2017, 118, 123002.	2.9	106
12	Laser-cooled polyatomic molecules for improved electron electric dipole moment searches. <i>New Journal of Physics</i> , 2020, 22, 022003.	1.2	104
13	$\hat{\rho}$ -Enhanced Imaging of Molecules in an Optical Trap. <i>Physical Review Letters</i> , 2018, 121, 083201.	2.9	93
14	Continuous probing of cold complex molecules with infrared frequency comb spectroscopy. <i>Nature</i> , 2016, 533, 517-520.	13.7	92
15	Proposal for Laser Cooling of Complex Polyatomic Molecules. <i>ChemPhysChem</i> , 2016, 17, 3641-3648.	1.0	82
16	Rotational State Microwave Mixing for Laser Cooling of Complex Diatomic Molecules. <i>Physical Review Letters</i> , 2015, 114, 223003.	2.9	77
17	Magneto-optical trapping and sub-Doppler cooling of a polyatomic molecule. <i>Nature</i> , 2022, 606, 70-74.	13.7	72
18	1D Magneto-Optical Trap of Polyatomic Molecules. <i>Physical Review Letters</i> , 2020, 124, 133201.	2.9	69

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19	Observation of microwave shielding of ultracold molecules. <i>Science</i> , 2021, 373, 779-782.	6.0	69
20	Observation of Collisions between Two Ultracold Ground-State CaF Molecules. <i>Physical Review Letters</i> , 2020, 125, 043401.	2.9	65
21	A scalable quantum computing platform using symmetric-top molecules. <i>New Journal of Physics</i> , 2019, 21, 093049.	1.2	62
22	Rotational spectroscopy and three-wave mixing of 4-carvomenthenol: A technical guide to measuring chirality in the microwave regime. <i>Journal of Chemical Physics</i> , 2015, 142, 214201.	1.2	60
23	Molecules are cool. <i>Nature</i> , 1999, 401, 749-751.	13.7	58
24	Spectroscopy of laser-ablated buffer-gas-cooled PbO at 4 K and the prospects for measuring the electric dipole moment of the electron. <i>Physical Review A</i> , 2001, 63, .	1.0	56
25	Buffer-gas cooling of atomic and molecular beams. <i>Physical Review A</i> , 2002, 66, .	1.0	56
26	A scalable method of applying heat and humidity for decontamination of N95 respirators during the COVID-19 crisis. <i>PLoS ONE</i> , 2020, 15, e0234851.	1.1	52
27	Magnetic Trapping of Molecules via Optical Loading and Magnetic Slowing. <i>Physical Review Letters</i> , 2014, 112, 113006.	2.9	51
28	Spectroscopy of buffer-gas cooled vanadium monoxide in a magnetic trapping field. <i>Journal of Chemical Physics</i> , 1998, 109, 2656-2661.	1.2	49
29	Molecular Asymmetry and Optical Cycling: Laser Cooling Asymmetric Top Molecules. <i>Physical Review X</i> , 2020, 10, .	2.8	43
30	Zeeman spectroscopy of CaH molecules in a magnetic trap. <i>Journal of Chemical Physics</i> , 1999, 110, 2376-2383.	1.2	41
31	Rotational Coherence Times of Polar Molecules in Optical Tweezers. <i>Physical Review Letters</i> , 2021, 127, 123202.	2.9	41
32	Determination of CaOH and CaOCH ₃ vibrational branching ratios for direct laser cooling and trapping. <i>New Journal of Physics</i> , 2019, 21, 052002.	1.2	40
33	cotrapping of NH		

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37	Establishing a nearly closed cycling transition in a polyatomic molecule. Physical Review A, 2021, 103, .	1.0	28
38	Spin-dependent collision of ultracold metastable atoms. Physical Review A, 2012, 86, .	1.0	26
39	Enhanced sensitivity to ultralight bosonic dark matter in the spectra of the linear radical SrOH. Physical Review A, 2021, 103, .	1.0	26
40	Validation of N95 Filtering Facepiece Respirator Decontamination Methods Available at a Large University Hospital. Open Forum Infectious Diseases, 2021, 8, ofaa610.	0.4	26
41	Observation and laser spectroscopy of ytterbium monomethoxide, YbOCH_3 . Physical Review A, 2021, 103, .	1.0	26
42	Realization of coherent optically dense media via buffer-gas cooling. Physical Review A, 2009, 79, .	1.0	20
43	Sensitivity and resolution in frequency comb spectroscopy of buffer gas cooled polyatomic molecules. Applied Physics B: Lasers and Optics, 2016, 122, 1.	1.1	16
44	Zeeman-Sisyphus Deceleration of Molecular Beams. Physical Review Letters, 2021, 127, 263002.	2.9	14
45	Magnetic trapping of an atomic $\text{Mn}^{55}\text{Cr}^{52}$ mixture. Physical Review A, 2005, 71, .	1.0	10
46	Direct Time-Domain Observation of Conformational Relaxation in Gas-Phase Cold Collisions. Angewandte Chemie - International Edition, 2016, 55, 4957-4961.	7.2	9
47	Zeeman relaxation of cold atomic iron and nickel in collisions with He . Physical Review A, 2010, 81, .	1.0	5
48	Physics and Chemistry with Cold Molecules. ChemPhysChem, 2016, 17, 3581-3582.	1.0	5
49	Vibrational quenching of the electronic ground state in ThO in cold collisions with He_3 . Physical Review A, 2014, 90, .	1.0	4
50	Fast and high-yield loading of a D_2 magneto-optical trap of potassium from a cryogenic buffer-gas beam. Physical Review A, 2021, 104, .	1.0	4
51	Zeeman relaxation induced by spin-orbit coupling in cold antimony-helium collisions. Physical Review A, 2013, 88, .	1.0	2
52	Properties of the ground and the excited F_2 and P_2 molecules. Physical Review A, 2013, 88, .	1.0	2
53	Device for Suppression of Aerosol Transfer in Close Proximity Settings. Covid, 2021, 1, 394-402.	0.7	0
54	Buffer-gas Loading and Magnetic Trapping of Molecules. , 2003, , .		0