

Matthias Bäcker

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

956
citations

471061

17
h-index

433756

31
g-index

50
all docs

50
docs citations

50
times ranked

769
citing authors

#	ARTICLE	IF	CITATIONS
1	The sonorous beat of optical waves in a Michelson interferometer. American Journal of Physics, 2020, 88, 612-616.	0.3	0
2	Measurement of the 671-nm tune-out wavelength of Li7 by atom interferometry. Physical Review A, 2020, 101, .	1.0	4
3	Pancharatnam phase: A tool for atom optics. Physical Review A, 2017, 96, .	1.0	4
4	Phase modulation of atom waves: theory and experiment using the atom optics analogue of the Kerr effect. European Physical Journal D, 2017, 71, 1.	0.6	2
5	Observation of Atom-Wave Beats Using a Kerr Modulator for Atom Waves. Physical Review Letters, 2016, 116, 053004.	2.9	5
6	Measurement of the Aharonov-Casher geometric phase with a separated-arm atom interferometer. European Physical Journal D, 2014, 68, 1.	0.6	7
7	Test of the He-McKellar-Wilkins topological phase by atom interferometry. I. Theoretical discussion. Physical Review A, 2013, 88, .	1.0	7
8	Note: A passively cooled heat pipe for spectroscopy. Review of Scientific Instruments, 2013, 84, 106109.	0.6	1
9	Optical pumping of a lithium atomic beam for atom interferometry. European Physical Journal D, 2013, 67, 1.	0.6	16
10	Test of the He-McKellar-Wilkins topological phase by atom interferometry. II. The experiment and its results. Physical Review A, 2013, 88, .	1.0	8
11	Measurement of the He-McKellar-Wilkins Topological Phase by Atom Interferometry and Test of Its Independence with Atom Velocity. Physical Review Letters, 2013, 111, 030401.	2.9	26
12	He-McKellar-Wilkins Topological Phase in Atom Interferometry. Physical Review Letters, 2012, 109, 120404.	2.9	54
13	Short-range fundamental forces. Comptes Rendus Physique, 2011, 12, 755-778.	0.3	83
14	Atom interferometry measurement of the atom-surface van der Waals interaction. European Physical Journal D, 2011, 62, 309-325.	0.6	20
15	Atom interferometry as a detector of rotation and gravitational waves: comparison of various diffraction processes. General Relativity and Gravitation, 2011, 43, 2011-2025.	0.7	8
16	Interferometric measurement of the temperature dependence of an index of refraction: application to fused silica. Applied Optics, 2010, 49, 678.	2.1	16
17	Matter wave explorer of gravity (MWXG). Experimental Astronomy, 2009, 23, 611-649.	1.6	30
18	Dispersive atom interferometry phase shifts due to atom-surface interactions. Europhysics Letters, 2009, 88, 20002.	0.7	22

#	ARTICLE	IF	CITATIONS
19	Proposed antimatter gravity measurement with an antihydrogen beam. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 351-356.	0.6	231
20	Index of refraction of gases for matter waves: Effect of the motion of the gas particles on the calculation of the index. Physical Review A, 2008, 77, .	1.0	10
21	Dispersion compensation in atom interferometry by a Sagnac phase. Physical Review A, 2008, 78, .	1.0	8
22	Test of the isotopic and velocity selectivity of a lithium atom interferometer by magnetic dephasing. Europhysics Letters, 2007, 77, 20007.	0.7	12
23	First Measurements of the Index of Refraction of Gases for Lithium Atomic Waves. Physical Review Letters, 2007, 98, 240405.	2.9	18
24	Measurement of the refraction index for atom waves. Annales De Physique, 2007, 32, 183-185.	0.2	0
25	Atom interferometry. Physica Scripta, 2006, 74, C15-C23.	1.2	29
26	Lithium atom interferometry. European Physical Journal Special Topics, 2006, 135, 9-16.	0.2	0
27	Atom interferometry measurement of the electric polarizability of lithium. European Physical Journal D, 2006, 38, 353-365.	0.6	56
28	Vibration-induced phase noise in Mach-Zehnder atom interferometers. Applied Physics B: Lasers and Optics, 2006, 84, 617-625.	1.1	15
29	Phase noise due to vibrations in Mach-Zehnder atom interferometers. Europhysics Letters, 2006, 75, 688-694.	0.7	6
30	Measurement of the electric polarizability of lithium by atom interferometry. Physical Review A, 2006, 73, .	1.0	51
31	Lithium atom interferometer using laser diffraction: description and experiments. European Physical Journal D, 2005, 33, 99-112.	0.6	36
32	Parallel temperatures in supersonic beams: Ultracooling of light atoms seeded in a heavier carrier gas. Journal of Chemical Physics, 2005, 122, 094308.	1.2	8
33	An atom interferometer using thermal lithium atoms. European Physical Journal Special Topics, 2004, 119, 233-234.	0.2	0
34	Diffraction phases in atom interferometry. European Physical Journal Special Topics, 2004, 119, 139-140.	0.2	0
35	Anomalous cooling of the parallel velocity in seeded beams. Physical Review A, 2004, 70, .	1.0	3
36	Diffraction phases in atom interferometers. Physical Review A, 2003, 68, .	1.0	28

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37	Optimization of a Langmuir-Taylor detector for lithium. Review of Scientific Instruments, 2002, 73, 2249-2258.	0.6	18
38	The three-grating Mach-Zehnder optical interferometer: a tutorial approach using particle optics. European Journal of Physics, 2002, 23, 623-635.	0.3	8
39	High-contrast Mach-Zehnder lithium-atom interferometer in the Bragg regime. Applied Physics B: Lasers and Optics, 2002, 74, 489-493.	1.1	24
40	Interf�rom�tre de Mach-Zehnder atomique fonctionnant avec le lithium : premiers signaux. European Physical Journal Special Topics, 2002, 12, 131-132.	0.2	0
41	Atom interferometry: Principles and applications to fundamental physics. AIP Conference Proceedings, 2001, , .	0.3	0
42	Atomic diffraction by a laser standing wave: Analysis using Bloch states. European Physical Journal D, 2001, 13, 271-278.	0.6	17
43	Some theoretical and experimental aspects of three-grating Mach-Zehnder atom interferometers. Comptes Rendus Physique, 2001, 2, 587-593.	0.1	0
44	Fringe contrast in three grating Mach-Zehnder atomic interferometers. European Physical Journal D, 1999, 5, 363-374.	0.6	18
45	Saturation spectroscopy of the A-X transition of the ICl molecule. European Physical Journal D, 1999, 6, 193-200.	0.6	1
46	Laser desorption of C-contaminated Pd clusters grown on MgO(100). Chemical Physics Letters, 1998, 287, 40-46.	1.2	2
47	Photodissociation of ICl Molecule Oriented by an Intense Electric Field: Experiment and Theoretical Analysis. Journal of Physical Chemistry A, 1998, 102, 1098-1105.	1.1	18
48	Angular motion of molecular adsorbates influenced by surface coverage. Chemical Physics Letters, 1995, 233, 430-435.	1.2	3
49	Hindered rotation of molecular adsorbates: Application to photoionization. Physical Review B, 1994, 49, 2768-2781.	1.1	6
50	Backscattering of electrons in photoionization of an adsorbed CO molecule. Surface Science, 1993, 292, 67-82.	0.8	17