

Astrid Lambrecht

List of Publications by Year in descending order

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145
papers

5,690
citations

61984

43
h-index

85541

71
g-index

147
all docs

147
docs citations

147
times ranked

2492
citing authors

#	ARTICLE	IF	CITATIONS
1	Casimir force between metallic mirrors. <i>European Physical Journal D</i> , 2000, 8, 309-318.	1.3	269
2	Motion Induced Radiation from a Vibrating Cavity. <i>Physical Review Letters</i> , 1996, 77, 615-618.	7.8	230
3	The Casimir effect within scattering theory. <i>New Journal of Physics</i> , 2006, 8, 243-243.	2.9	221
4	Ice ablation and meteorological conditions on the debris-covered area of Baltoro glacier, Karakoram, Pakistan. <i>Annals of Glaciology</i> , 2006, 43, 292-300.	1.4	173
5	Casimir Interaction of Dielectric Gratings. <i>Physical Review Letters</i> , 2008, 101, 160403.	7.8	171
6	Temperature dependence of the Casimir effect between metallic mirrors. <i>Physical Review A</i> , 2000, 62, .	2.5	160
7	Casimir force and the quantum theory of lossy optical cavities. <i>Physical Review A</i> , 2003, 67, .	2.5	144
8	Surface Plasmon Modes and the Casimir Energy. <i>Physical Review Letters</i> , 2005, 94, 110404.	7.8	131
9	Casimir effect with rough metallic mirrors. <i>Physical Review A</i> , 2005, 72, .	2.5	116
10	Lateral Casimir Force beyond the Proximity-Force Approximation. <i>Physical Review Letters</i> , 2006, 96, 100402.	7.8	114
11	Quantitative non-contact dynamic Casimir force measurements. <i>Europhysics Letters</i> , 2009, 85, 31001.	2.0	110
12	The GBAR antimatter gravity experiment. <i>Hyperfine Interactions</i> , 2015, 233, 21-27.	0.5	109
13	Influence of slab thickness on the Casimir force. <i>Physical Review A</i> , 2008, 77, .	2.5	105
14	The Casimir force between rough metallic plates. <i>Europhysics Letters</i> , 2003, 62, 484-490.	2.0	103
15	Sample dependence of the Casimir force. <i>New Journal of Physics</i> , 2006, 8, 238-238.	2.9	98
16	Roughness correction to the Casimir force: Beyond the Proximity Force Approximation. <i>Europhysics Letters</i> , 2005, 69, 924-930.	2.0	96
17	Casimir energy between a plane and a sphere in electromagnetic vacuum. <i>Physical Review A</i> , 2008, 78, .	2.5	95
18	Vacuum-induced torque between corrugated metallic plates. <i>Europhysics Letters</i> , 2006, 76, 822-828.	2.0	85

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19	Ultimate Decoherence Border for Matter-Wave Interferometry. <i>Physical Review Letters</i> , 2006, 96, 050405.	7.8	84
20	Short-range fundamental forces. <i>Comptes Rendus Physique</i> , 2011, 12, 755-778.	0.9	83
21	Casimir Interaction between Plane and Spherical Metallic Surfaces. <i>Physical Review Letters</i> , 2009, 102, 230404.	7.8	82
22	The Casimir effect for silicon and gold slabs. <i>Europhysics Letters</i> , 2007, 77, 44006.	2.0	80
23	Enhanced radiative heat transfer between nanostructured gold plates. <i>Physical Review B</i> , 2012, 85, .	3.2	80
24	Macroscopic Quantum Resonators (MAQRO): 2015 update. <i>EPJ Quantum Technology</i> , 2016, 3, .	6.3	77
25	Role of surface plasmons in the Casimir effect. <i>Physical Review A</i> , 2007, 76, .	2.5	76
26	Radiative heat transfer between two dielectric nanogratings in the scattering approach. <i>Physical Review B</i> , 2012, 86, .	3.2	75
27	Thermal Casimir Effect in the Plane-Sphere Geometry. <i>Physical Review Letters</i> , 2010, 104, 040403.	7.8	73
28	Subglacial melt rates on southern inylchek glacier, central tian shan. <i>Geografiska Annaler, Series A: Physical Geography</i> , 2008, 90, 55-63.	1.5	72
29	Casimir repulsion and metamaterials. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 164015.	2.1	70
30	Squeezing with cold atoms. <i>Europhysics Letters</i> , 1996, 36, 93-98.	2.0	67
31	Probing Quantum-Vacuum Geometrical Effects with Cold Atoms. <i>Physical Review Letters</i> , 2008, 100, 040405.	7.8	65
32	Thermal Casimir effect for Drude metals in the plane-sphere geometry. <i>Physical Review A</i> , 2010, 82, .	2.5	64
33	Casimir Force on a Surface with Shallow Nanoscale Corrugations: Geometry and Finite Conductivity Effects. <i>Physical Review Letters</i> , 2010, 105, 250402.	7.8	63
34	Lateral Casimir force beyond the proximity force approximation: A nontrivial interplay between geometry and quantum vacuum. <i>Physical Review A</i> , 2007, 75, .	2.5	62
35	Comment on "Demonstration of the Casimir Force in the 0.6 to 6¼m Range". <i>Physical Review Letters</i> , 2000, 84, 5672-5672.	7.8	61
36	From optical lattice clocks to the measurement of forces in the Casimir regime. <i>Physical Review A</i> , 2007, 75, .	2.5	58

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37	Dispersive interactions between atoms and nonplanar surfaces. <i>Physical Review A</i> , 2009, 80, .	2.5	55
38	A surge of North Gasherbrum Glacier, Karakoram, China. <i>Journal of Glaciology</i> , 2011, 57, 904-916.	2.2	55
39	Gravitational decoherence of planetary motions. <i>Europhysics Letters</i> , 2001, 54, 135-140.	2.0	54
40	Development of a high-sensitivity torsional balance for the study of the Casimir force in the 1â€“10 micrometre range. <i>Classical and Quantum Gravity</i> , 2005, 22, 5397-5406.	4.0	53
41	Analogue Casimir radiation using an optical parametric oscillator. <i>Europhysics Letters</i> , 2010, 89, 14001.	2.0	51
42	The Gbar project, or how does antimatter fall?. <i>Hyperfine Interactions</i> , 2014, 228, 141-150.	0.5	47
43	Quantum dissipative Brownian motion and the Casimir effect. <i>Physical Review E</i> , 2009, 80, 041113.	2.1	44
44	Casimir force between a metal and a semimetal. <i>Europhysics Letters</i> , 2011, 93, 51001.	2.0	44
45	Large-scale EPR correlation and gravitational waves backgrounds. <i>Europhysics Letters</i> , 2011, 95, 20004.	2.0	44
46	Quasiresonant van der Waals Interaction between Nonidentical Atoms. <i>Physical Review Letters</i> , 2015, 115, 033201.	7.8	43
47	Non-Markovian polariton dynamics in organic strong coupling. <i>European Physical Journal D</i> , 2015, 69, 1.	1.3	43
48	Cooperativity and Entanglement of Atom-field States. <i>Journal of Modern Optics</i> , 1993, 40, 1605-1630.	1.3	41
49	Cold atoms: A new medium for quantum optics. <i>Applied Physics B: Lasers and Optics</i> , 1995, 60, 129-134.	2.2	41
50	Kelvin probe force microscopy of metallic surfaces used in Casimir force measurements. <i>Physical Review A</i> , 2014, 90, .	2.5	41
51	Quantum reflection of antihydrogen from the Casimir potential above matter slabs. <i>Physical Review A</i> , 2013, 87, .	2.5	40
52	The Casimir force for passive mirrors. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1997, 225, 188-194.	2.1	39
53	The Casimir effect in the nanoworld. <i>European Physical Journal: Special Topics</i> , 2008, 160, 183-193.	2.6	39
54	Optical nonlinear dynamics with cold atoms in a cavity. <i>Optics Communications</i> , 1995, 115, 199-206.	2.1	38

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55	Casimir-Polder interaction between an atom and a dielectric grating. <i>Physical Review A</i> , 2010, 82, .	2.5	38
56	The evolution of Fedchenko glacier in the Pamir, Tajikistan, during the past eight decades. <i>Journal of Glaciology</i> , 2014, 60, 233-244.	2.2	37
57	Frequency up-converted radiation from a cavity moving in vacuum. <i>European Physical Journal D</i> , 1998, 3, 95-104.	1.3	34
58	Thermal Casimir force between nanostructured surfaces. <i>Physical Review A</i> , 2013, 87, .	2.5	34
59	The Casimir effect: a force from nothing. <i>Physics World</i> , 2002, 15, 29-32.	0.0	33
60	Electromagnetic pulses from an oscillating high-finesse cavity: possible signatures for dynamic Casimir effect experiments. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2005, 7, S3-S10.	1.4	31
61	Matter wave explorer of gravity (MWXG). <i>Experimental Astronomy</i> , 2009, 23, 611-649.	3.7	30
62	Casimir torque between nanostructured plates. <i>Europhysics Letters</i> , 2015, 111, 44001.	2.0	29
63	THEORY OF THE CASIMIR EFFECT IN ONE-DIMENSIONAL PERIODIC DIELECTRIC SYSTEMS. <i>International Journal of Modern Physics A</i> , 2009, 24, 1789-1795.	1.5	27
64	Casimir interaction between a dielectric nanosphere and a metallic plane. <i>Physical Review A</i> , 2011, 83, .	2.5	24
65	Shaping the distribution of vertical velocities of antihydrogen in GBAR. <i>European Physical Journal C</i> , 2014, 74, 1.	3.9	24
66	Generating photon pulses with an oscillating cavity. <i>Europhysics Letters</i> , 1998, 43, 147-152.	2.0	23
67	Quantum reflection of antihydrogen from nanoporous media. <i>Physical Review A</i> , 2013, 87, .	2.5	23
68	CORRELATION BETWEEN PLASMA AND TEMPERATURE CORRECTIONS TO THE CASIMIR FORCE. <i>International Journal of Modern Physics A</i> , 2002, 17, 761-766.	1.5	22
69	Van der Waals Forces Between Plasmonic Nanoparticles. <i>Plasmonics</i> , 2009, 4, 31-36.	3.4	21
70	Classical Casimir interaction in the plane-sphere geometry. <i>Physical Review A</i> , 2012, 85, .	2.5	21
71	Thermodynamics of non-interacting bosons in low-dimensional potentials. <i>European Physical Journal D</i> , 1998, 1, 29-32.	1.3	20
72	Lateral Casimir-Polder force with corrugated surfaces. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 164028.	2.1	20

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73	Thermal and dissipative effects in Casimir physics. <i>Journal of Physics A</i> , 2006, 39, 6195-6208.	1.6	18
74	Casimir energy and geometry: beyond the proximity force approximation. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 164004.	2.1	18
75	Casimir energy between nanostructured gratings of arbitrary periodic profile. <i>Physical Review A</i> , 2012, 86, .	2.5	18
76	Derivation of the Lifshitz-Matsubara sum formula for the Casimir pressure between metallic plane mirrors. <i>Physical Review E</i> , 2014, 90, 042125.	2.1	18
77	Comment on "Sonoluminescence as Quantum Vacuum Radiation". <i>Physical Review Letters</i> , 1997, 78, 2267-2267.	7.8	17
78	Thermal properties of a supraglacial debris layer with respect to lithology and grain size. <i>Geografiska Annaler, Series A: Physical Geography</i> , 2013, 95, 197-209.	1.5	17
79	Prospects for Studies of the Free Fall and Gravitational Quantum States of Antimatter. <i>Advances in High Energy Physics</i> , 2015, 2015, 1-16.	1.1	16
80	Negative entropies in Casimir and Casimir-Polder interactions. <i>Fortschritte Der Physik</i> , 2017, 65, 1600047.	4.4	16
81	GAUGE: the GrAnd Unification and Gravity Explorer. <i>Experimental Astronomy</i> , 2009, 23, 549-572.	3.7	15
82	Disorder in Quantum Vacuum: Casimir-Induced Localization of Matter Waves. <i>Physical Review Letters</i> , 2010, 105, 210401.	7.8	15
83	Casimir torque between corrugated metallic plates. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 164019.	2.1	14
84	Geometric origin of negative Casimir entropies: A scattering-channel analysis. <i>Physical Review E</i> , 2015, 91, 033203.	2.1	14
85	Detailed Seismic Bathymetry Beneath Ekstr�m Ice Shelf, Antarctica: Implications for Glacial History and Ice-Ocean Interaction. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086187.	4.0	14
86	DECOHERENCE AND GRAVITATIONAL BACKGROUDS. <i>International Journal of Modern Physics A</i> , 2002, 17, 1003-1012.	1.5	13
87	HYPER and Gravitational Decoherence. <i>General Relativity and Gravitation</i> , 2004, 36, 2271-2288.	2.0	13
88	Casimir effect from a scattering approach. <i>American Journal of Physics</i> , 2015, 83, 156-162.	0.7	13
89	Casimir-Polder shifts on quantum levitation states. <i>Physical Review A</i> , 2017, 95, .	2.5	13
90	Casimir force between dissimilar mirrors and the role of the surface plasmons. <i>Physical Review A</i> , 2008, 78, .	2.5	12

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91	Pairwise summation approximation for Casimir potentials and its limitations. <i>Physical Review B</i> , 2013, 87, .	3.2	12
92	The Casimir effect for silicon and gold slabs. <i>Europhysics Letters</i> , 2008, 81, 19901.	2.0	11
93	Negative Casimir entropies in nanoparticle interactions. <i>Journal of Physics Condensed Matter</i> , 2015, 27, 214003.	1.8	11
94	Quantum reflection of antihydrogen from a liquid helium film. <i>Europhysics Letters</i> , 2017, 119, 33001.	2.0	11
95	Atomic number fluctuations in a falling cold atom cloud. <i>Quantum and Semiclassical Optics: Journal of the European Optical Society Part B</i> , 1996, 8, 457-472.	0.9	10
96	CASIMIR EFFECT: THEORY AND EXPERIMENTS. <i>International Journal of Modern Physics A</i> , 2012, 27, 1260013.	1.5	10
97	Scattering theory of the screened Casimir interaction in electrolytes. <i>European Physical Journal D</i> , 2019, 73, 1.	1.3	10
98	Roughness correction in the Casimir effect with metallic plates. <i>Journal of Physics A</i> , 2006, 39, 6517-6523.	1.6	9
99	Measurement of the Casimir effect under ultrahigh vacuum: Calibration method. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010, 28, C4A30-C4A35.	1.2	9
100	Driving quantized vortices with quantum vacuum fluctuations. <i>Europhysics Letters</i> , 2010, 92, 40010.	2.0	9
101	THE SCATTERING APPROACH TO THE CASIMIR FORCE. <i>International Journal of Modern Physics A</i> , 2010, 25, 2201-2211.	1.5	8
102	Repulsive Casimir force: Sufficient conditions. <i>Physical Review D</i> , 2010, 82, .	4.7	8
103	Casimir-Polder-induced Rabi oscillations. <i>Europhysics Letters</i> , 2015, 109, 24003.	2.0	8
104	Quantum reflection and Liouville transformations from wells to walls. <i>Europhysics Letters</i> , 2015, 110, 30007.	2.0	8
105	Shaping the void. <i>Nature</i> , 2008, 454, 836-837.	27.8	7
106	New geometries in the Casimir effect: Dielectric gratings. <i>Journal of Physics: Conference Series</i> , 2009, 161, 012014.	0.4	7
107	Enhanced radiative heat transfer between nanostructured gold plates. <i>Journal of Physics: Conference Series</i> , 2012, 395, 012154.	0.4	7
108	Velocity-dependent dipole forces on an excited atom. <i>Physical Review A</i> , 2016, 93, .	2.5	7

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109	High altitude accumulation and preserved climate information in the western Pamir, observations from the Fedchenko Glacier accumulation basin. <i>Journal of Glaciology</i> , 2020, 66, 219-230.	2.2	7
110	Quantum vacuum, inertia and gravitation. <i>New Astronomy Reviews</i> , 2002, 46, 727-739.	12.8	6
111	Rodrigues et al. Reply:. <i>Physical Review Letters</i> , 2007, 98, .	7.8	6
112	Repulsive Casimir forces and the role of surface modes. <i>Physical Review A</i> , 2009, 80, .	2.5	6
113	Study of levitating nanoparticles using ultracold neutrons. <i>New Journal of Physics</i> , 2012, 14, 093053.	2.9	6
114	Quantum levitation of nanoparticles seen with ultracold neutrons. <i>Crystallography Reports</i> , 2013, 58, 743-748.	0.6	6
115	Casimir Effect in the Scattering Approach: Correlations Between Material Properties, Temperature and Geometry. <i>Lecture Notes in Physics</i> , 2011, , 97-127.	0.7	6
116	Intravala and Lambrecht Reply:. <i>Physical Review Letters</i> , 2006, 96, .	7.8	5
117	Liouville transformations and quantum reflection. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 155002.	1.5	5
118	Surface-modified Wannier-Stark states in a one-dimensional optical lattice. <i>Physical Review A</i> , 2016, 94, .	2.5	5
119	Accounting for Dissipation in the Scattering Approach to the Casimir Energy. <i>Symmetry</i> , 2018, 10, 37.	2.2	5
120	Recent Experiments on the Casimir Effect: Description and Analysis. , 2003, , 109-126.		5
121	Quantum vacuum fluctuations. <i>Comptes Rendus Physique</i> , 2001, 2, 1287-1298.	0.1	4
122	Roughness correction to the Casimir force: Beyond the Proximity Force Approximation. <i>Europhysics Letters</i> , 2012, 100, 29902.	2.0	4
123	THE CASIMIR EFFECT IN THE SPHERE-PLANE GEOMETRY. <i>International Journal of Modern Physics Conference Series</i> , 2012, 14, 250-259.	0.7	4
124	Casimir Physics. <i>Journal of Physics Condensed Matter</i> , 2015, 27, 210301.	1.8	4
125	Lifshitz-Matsubara sum formula for the Casimir pressure between magnetic metallic mirrors. <i>Physical Review E</i> , 2016, 93, 022108.	2.1	4
126	Local surface mass-balance reconstruction from a tephra layer " a case study on the northern slope of MÅ½rdalsjÅ½rkull, Iceland. <i>Journal of Glaciology</i> , 2017, 63, 79-87.	2.2	4

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127	Transverse-mode coupling in a Kerr medium. <i>Physical Review A</i> , 1996, 54, 5243-5252.	2.5	3
128	Fluctuations of the Casimir potential above a disordered medium. <i>European Physical Journal D</i> , 2015, 69, 1.	1.3	3
129	Quenching of antihydrogen gravitational states by surface charges. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 205003.	1.5	3
130	Casimir-Polder force fluctuations as spatial probes of dissipation in metals. <i>Europhysics Letters</i> , 2017, 117, 63001.	2.0	3
131	The method of UCN "small heating" measurement in the big gravitational spectrometer (BGS) and studies of this effect on Fomblin oil Y-HVAC 18/8. <i>Review of Scientific Instruments</i> , 2018, 89, 023501.	1.3	3
132	Transverse Effects on Squeezing with Atoms. <i>Journal De Physique II</i> , 1996, 6, 1133-1151.	0.9	3
133	Casimir forces and vacuum energy. , 2017, , .		3
134	CASIMIR EFFECT: THEORY AND EXPERIMENTS. <i>International Journal of Modern Physics Conference Series</i> , 2012, 14, 171-180.	0.7	2
135	Quantum reflection of antihydrogen in the GBAR experiment. <i>International Journal of Modern Physics Conference Series</i> , 2014, 30, 1460265.	0.7	2
136	Statistical approach to Casimir-Polder potentials in heterogeneous media. <i>Physical Review A</i> , 2015, 92, .	2.5	2
137	Coherent effect of vacuum fluctuations on driven atoms. <i>Physical Review A</i> , 2015, 92, .	2.5	2
138	La force de Casimir et les plasmons de surface. <i>European Physical Journal Special Topics</i> , 2004, 119, 199-200.	0.2	2
139	Decoherence induced by stochastic background of gravitational waves on matter-wave interferometers. <i>Applied Physics B: Lasers and Optics</i> , 2006, 84, 575-578.	2.2	1
140	The Role of Surface Plasmon Modes in the Casimir Effect. <i>Open Systems and Information Dynamics</i> , 2007, 14, 159-168.	1.2	1
141	Reply to "Comment on "Lifshitz-Matsubara sum formula for the Casimir pressure between magnetic metallic mirrors"™", <i>Physical Review E</i> , 2016, 94, 026102.	2.1	1
142	Observing Mechanical Dissipation in the Quantum Vacuum: An Experimental Challenge. , 2002, , 197-207.		1
143	L'effet Casimir : th�orie et exp�riences. <i>European Physical Journal Special Topics</i> , 2004, 119, 43-50.	0.2	0
144	Relic gravitational wave background and the isotropy of space. <i>Classical and Quantum Gravity</i> , 2004, 21, S1209-S1214.	4.0	0

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145	Scattering properties of collective dipolar systems. European Physical Journal D, 2020, 74, 1.	1.3	0