Vladimir M Mostepanenko

List of Publications by Year
in descending order

267	10,817	20817 60	40979 93
papers	citations	h-index	g-index

274	274	274	1618
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Casimir force between real materials: Experiment and theory. Reviews of Modern Physics, 2009, 81, 1827-1885.	45.6	638
2	Tests of new physics from precise measurements of the Casimir pressure between two gold-coated plates. Physical Review D, 2007, 75, .	4.7	367
3	Demonstration of the Lateral Casimir Force. Physical Review Letters, 2002, 88, 101801.	7.8	254
4	Improved tests of extra-dimensional physics and thermal quantum field theory from new Casimir force measurements. Physical Review D, 2003, 68, .	4.7	242
5	Casimir and van der Waals forces between two plates or a sphere (lens) above a plate made of real metals. Physical Review A, 2000, 61, .	2.5	201
6	Violation of the Nernst heat theorem in the theory of the thermal Casimir force between Drude metals. Physical Review A, 2004, 69, .	2.5	172
7	Casimir Force at Both Nonzero Temperature and Finite Conductivity. Physical Review Letters, 2000, 85, 503-506.	7.8	164
8	Control of the Casimir force by the modification of dielectric properties with light. Physical Review B, 2007, 76, .	3.2	161
9	Complete roughness and conductivity corrections for Casimir force measurement. Physical Review A, 1999, 60, 3487-3495.	2.5	156
10	Experimental and theoretical investigation of the lateral Casimir force between corrugated surfaces. Physical Review A, 2002, 66, .	2.5	149
11	Demonstration of optically modulated dispersion forces. Optics Express, 2007, 15, 4823.	3.4	149
12	Gradient of the Casimir force between Au surfaces of a sphere and a plate measured using an atomic force microscope in a frequency-shift technique. Physical Review B, 2012, 85, .	3.2	144
13	Theory confronts experiment in the Casimir force measurements: Quantification of errors and precision. Physical Review A, 2004, 69, .	2.5	126
14	Demonstration of the Difference in the Casimir Force for Samples with Different Charge-Carrier Densities. Physical Review Letters, 2006, 97, 170402.	7.8	125
15	Thermal quantum field theory and the Casimir interaction between dielectrics. Physical Review D, 2005, 72, .	4.7	122
16	Lateral Casimir force between sinusoidally corrugated surfaces: Asymmetric profiles, deviations from the proximity force approximation, and comparison with exact theory. Physical Review B, 2010, 81, .	3.2	122
17	Lifshitz-type formulas for graphene and single-wall carbon nanotubes: van der Waals and Casimir interactions. Physical Review B, 2006, 74, .	3.2	121
18	Demonstration of the Casimir Force between Ferromagnetic Surfaces of a Ni-Coated Sphere and a Ni-Coated Plate. Physical Review Letters, 2013, 110, 137401.	7.8	121

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19	Investigation of the Casimir force between metal and semiconductor test bodies. Physical Review A, 2005, 72, .	2.5	115
20	Correlation of energy and free energy for the thermal Casimir force between real metals. Physical Review A, 2002, 66, .	2.5	112
21	Experimental test for the conductivity properties from the Casimir force between metal and semiconductor. Physical Review A, 2006, 74, .	2.5	112
22	Particle creation from vacuum in homogeneous isotropic models of the Universe. General Relativity and Gravitation, 1976, 7, 535-547.	2.0	111
23	Surface-impedance approach solves problems with the thermal Casimir force between real metals. Physical Review A, 2003, 67, .	2.5	111
24	The Casimir effect and its applications. Uspekhi Fizicheskikh Nauk, 1988, 31, 965-987.	0.3	108
25	Constraints for hypothetical interactions from a recent demonstration of the Casimir force and some possible improvements. Physical Review D, 1998, 58, .	4.7	108
26	Casimir-Polder interaction between an atom and a cavity wall under the influence of real conditions. Physical Review A, 2004, 70, .	2.5	108
27	New constraints on ultrashort-ranged Yukawa interactions from atomic force microscopy. Physical Review D, 2001, 64, .	4.7	106
28	Van der Waals interaction between microparticle and uniaxial crystal with application to hydrogen atoms and multiwall carbon nanotubes. Physical Review B, 2005, 71, .	3.2	104
29	Thermodynamical aspects of the Casimir force between real metals at nonzero temperature. Physical Review A, 2002, 65, .	2.5	103
30	Casimir interaction between two magnetic metals in comparison with nonmagnetic test bodies. Physical Review B, 2013, 88, .	3.2	102
31	Dependences of the van der Waals atom-wall interaction on atomic and material properties. Physical Review A, 2005, 71, .	2.5	97
32	Measuring the Casimir force gradient from graphene on a SiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>substrate. Physical Review B, 2013, 87, .	3.2	97
33	Conductivity of dielectric and thermal atomâ€“wall interaction. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 312002.	2.1	94
34	Demonstration of the asymmetric lateral Casimir force between corrugated surfaces in the nonadditive regime. Physical Review B, 2009, 80, .	3.2	90
35	Stronger constraints for nanometer scale Yukawa-type hypothetical interactions from the new measurement of the Casimir force. Physical Review D, 1999, 60, .	4.7	89
36	Investigation of the temperature dependence of the Casimir force between real metals. Physical Review A, 2001, 63, .	2.5	89

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37	van der Waals interaction between a microparticle and a single-walled carbon nanotube. Physical Review B, 2007, 75, .	3.2	86
38	Thermal Casimir-Polder interaction of different atoms with graphene. Physical Review A, 2012, 86, .	2.5	86
39	Measurement of the gradient of the Casimir force between a nonmagnetic gold sphere and a magnetic nickel plate. Physical Review B, 2012, 85, .	3.2	86
40	Experiment and theory in the Casimir effect. Contemporary Physics, 2006, 47, 131-144.	1.8	85
41	Comment on â€œTemperature dependence of the Casimir effectâ€ Physical Review E, 2006, 73, 028101.	2.1	85
42	Reduction of the Casimir Force from Indium Tin Oxide Film by UV Treatment. Physical Review Letters, 2011, 107, 090403.	7.8	84
43	Quantum field theoretical description for the reflectivity of graphene. Physical Review D, 2015, 91, .	4.7	79
44	Comment on â€œAnomalies in electrostatic calibrations for the measurement of the Casimir force in a sphere-plane geometryâ€ Physical Review A, 2009, 79, .	2.5	76
45	Constraints on non-Newtonian gravity from the Casimir force measurements between two crossed cylinders. Physical Review D, 2001, 63, .	4.7	75
46	Present status of controversies regarding the thermal Casimir force. Journal of Physics A, 2006, 39, 6589-6600.	1.6	75
47	New constraints for non-Newtonian gravity in the nanometer range from the improved precision measurement of the Casimir force. Physical Review D, 2000, 62, .	4.7	74
48	Thermal Casimir effect in the interaction of graphene with dielectrics and metals. Physical Review B, 2012, 86, .	3.2	74
49	Theory of the Casimir interaction from graphene-coated substrates using the polarization tensor and comparison with experiment. Physical Review B, 2014, 89, .	3.2	74
50	Kramersâ€“Kronig relations for plasma-like permittivities and the Casimir force. Journal of Physics A: Mathematical and Theoretical, 2007, 40, F339-F346.	2.1	73
51	van der Waals and Casimir interactions between two graphene sheets. Physical Review B, 2013, 87, .	3.2	72
52	New Features of the Thermal Casimir Force at Small Separations. Physical Review Letters, 2003, 90, 160404.	7.8	70
53	Higher-order conductivity corrections to the Casimir force. Physical Review A, 2000, 62, .	2.5	69
54	Thermal Casimir effect in ideal metal rectangular boxes. European Physical Journal C, 2008, 57, 823-834.	3.9	68

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55	Lifshitz theory of atom-wall interaction with applications to quantum reflection. Physical Review A, 2008, 78, .	2.5	67
56	Advance and prospects in constraining the Yukawa-type corrections to Newtonian gravity from the Casimir effect. Physical Review D, 2010, 81, .	4.7	64
57	Two approaches for describing the Casimir interaction in graphene: Density-density correlation function versus polarization tensor. Physical Review B, 2014, 89, .	3.2	64
58	Thermal Casimirâ€“Polder force between an atom and a dielectric plate: thermodynamics and experiment. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 432001.	2.1	62
59	Modifying the Casimir force between indium tin oxide film and Au sphere. Physical Review B, 2012, 85, .	3.2	62
60	Experimental approaches to the difference in the Casimir force due to modifications in the optical properties of the boundary surface. Physical Review A, 2007, 75, .	2.5	61
61	CASIMIR EFFECT AS A TEST FOR THERMAL CORRECTIONS AND HYPOTHETICAL LONG-RANGE INTERACTIONS. International Journal of Modern Physics A, 2005, 20, 2205-2221.	1.5	59
62	Hypothetical long-range interactions and restrictions on their parameters from force measurements. Physical Review D, 1993, 47, 2882-2891.	4.7	55
63	Universal behaviour of dispersion forces between two dielectric plates in the low-temperature limit. Journal of Physics A, 2006, 39, 6495-6499.	1.6	55
64	Perturbation approach to the Casimir force between two bodies made of different real metals. Physical Review A, 2002, 65, .	2.5	52
65	RECENT RESULTS ON THERMAL CASIMIR FORCE BETWEEN DIELECTRICS AND RELATED PROBLEMS. International Journal of Modern Physics A, 2006, 21, 5007-5042.	1.5	52
66	Impact of surface imperfections on the Casimir force for lenses of centimeter-size curvature radii. Physical Review B, 2011, 83, .	3.2	51
67	CASIMIR FORCE UNDER THE INFLUENCE OF REAL CONDITIONS. International Journal of Modern Physics A, 2001, 16, 3291-3308.	1.5	49
68	Pulsating Casimir force. Journal of Physics A: Mathematical and Theoretical, 2007, 40, F841-F847.	2.1	48
69	Constraints on corrections to Newtonian gravity from two recent measurements of the Casimir interaction between metallic surfaces. Physical Review D, 2013, 87, .	4.7	48
70	Thermal corrections in the Casimir interaction between a metal and dielectric. Physical Review A, 2005, 72, .	2.5	47
71	Generalized plasma-like permittivity and thermal Casimir force between real metals. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 13485-13499.	2.1	47
72	CONTROL OF THE CASIMIR FORCE USING SEMICONDUCTOR TEST BODIES. International Journal of Modern Physics B, 2011, 25, 171-230.	2.0	47

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73	Observability of thermal effects in the Casimir interaction from graphene-coated substrates. Physical Review A, 2014, 89, .	2.5	47
74	Vacuum Stressâ€Energy Tensor and Particle Creation in Isotropic Cosmological Models. Fortschritte Der Physik, 1980, 28, 173-199.	4.4	46
75	Stronger constraints on non-Newtonian gravity from the Casimir effect. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 164054.	2.1	46
76	Casimirâ€“Polder interaction between an atom and a cylinder with application to nanosystems. Journal of Physics A, 2006, 39, 6481-6484.	1.6	45
77	Comment on â€œEffects of spatial dispersion on electromagnetic surface modes and on modes associated with a gap between two half spacesâ€• Physical Review B, 2007, 75, .	3.2	44
78	Application of the proximity force approximation to gravitational and Yukawa-type forces. Physical Review D, 2009, 79, .	4.7	44
79	Experiment, theory and the Casimir effect. Journal of Physics: Conference Series, 2009, 161, 012003.	0.4	43
80	New approach to the thermal Casimir force between real metals. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 164014.	2.1	42
81	WHY SCREENING EFFECTS DO NOT INFLUENCE THE CASIMIR FORCE. International Journal of Modern Physics A, 2009, 24, 1721-1742.	1.5	42
82	Reply to â€œComment on â€˜Surface-impedance approach solves problems with the thermal Casimir force between real metalsâ€™ â€• Physical Review A, 2004, 70, .	2.5	41
83	Precise Determination of the Casimir Force and First Realization of a â€œCasimir Lessâ€•Experiment. Journal of Low Temperature Physics, 2004, 135, 63-74.	1.4	41
84	Origin of large thermal effect in the Casimir interaction between two graphene sheets. Physical Review B, 2015, 91, .	3.2	41
85	Rigorous approach to the comparison between experiment and theory in Casimir force measurements. Journal of Physics A, 2006, 39, 6485-6493.	1.6	39
86	Thermal Casimir interaction between two magnetodielectric plates. Physical Review B, 2010, 81, .	3.2	39
87	Creation of quasiparticles in graphene by a time-dependent electric field. Physical Review D, 2013, 87, .	4.7	39
88	Measurement of the Casimir Force between 0.2 and 8 Î¼m: Experimental Procedures and Comparison with Theory. Universe, 2021, 7, 93.	2.5	39
89	van der Waals and Casimir interactions between atoms and carbon nanotubes. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 164012.	2.1	38
90	Comment on â€œAnalytical and numerical verification of the Nernst theorem for metalsâ€• Physical Review E, 2008, 77, 023101; discussion 023102.	2.1	38

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91	Casimir Puzzle and Casimir Conundrum: Discovery and Search for Resolution. Universe, 2021, 7, 84.	2.5	38
92	Control of the lateral Casimir force between corrugated surfaces. Physical Review A, 2004, 69, .	2.5	37
93	Comment on â€œLateral Casimir Force beyond the Proximity-Force Approximationâ€. Physical Review Letters, 2007, 98, 068901; author reply 068902.	7.8	36
94	Comment on â€œPrecision measurement of the Casimir-Lifshitz force in a fluidâ€. Physical Review A, 2008, 77, .	2.5	36
95	Constraints on non-Newtonian gravity from measuring the Casimir force in a configuration with nanoscale rectangular corrugations. Physical Review D, 2011, 83, .	4.7	36
96	Reducing detrimental electrostatic effects in Casimir-force measurements and Casimir-force-based microdevices. Physical Review A, 2018, 97, .	2.5	36
97	Examining the Casimir puzzle with an upgraded AFM-based technique and advanced surface cleaning. Physical Review B, 2019, 100, .	3.2	36
98	PROBLEMS IN THE LIFSHITZ THEORY OF ATOM-WALL INTERACTION. International Journal of Modern Physics A, 2009, 24, 1777-1788.	1.5	35
99	Precision measurements of the gradient of the Casimir force between ultraclean metallic surfaces at larger separations. Physical Review A, 2019, 100, .	2.5	35
100	CONSTRAINTS ON FORCES INSPRIRED BY EXTRA DIMENSIONAL PHYSICS FOLLOWING FROM THE CASIMIR EFFECT. International Journal of Modern Physics A, 2002, 17, 722-731.	1.5	34
101	Dependence of the Casimirâ€“Polder interaction between an atom and a cavity wall on atomic and material properties. Journal of Physics A, 2006, 39, 6583-6587.	1.6	34
102	EXPERIMENTAL STATUS OF CORRECTIONS TO NEWTONIAN GRAVITATION INSPIRED BY EXTRA DIMENSIONS. International Journal of Modern Physics A, 2002, 17, 4307-4316.	1.5	33
103	Low-temperature behavior of the Casimir free energy and entropy of metallic films. Physical Review A, 2017, 95, .	2.5	33
104	OBSERVATION OF THE THERMAL CASIMIR FORCE IS OPEN TO QUESTION. International Journal of Modern Physics A, 2011, 26, 3918-3929.	1.5	32
105	Influence of the chemical potential on the Casimir-Polder interaction between an atom and gapped graphene or a graphene-coated substrate. Physical Review A, 2018, 97, .	2.5	32
106	Thermal Casimir effect in closed Friedmann universe revisited. Physical Review D, 2011, 83, .	4.7	30
107	Impact of graphene coating on the atom-plate interaction. Physical Review A, 2014, 89, .	2.5	29
108	Unexpected Applications of Hill's Differential Equations in Quantum Field Theory and Cosmology. International Journal of Modern Physics A, 2003, 18, 2159-2166.	1.5	28

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109	Conductivity of pure graphene: Theoretical approach using the polarization tensor. Physical Review B, 2016, 93, .	3.2	28
110	Impact of magnetic properties on atom-wall interactions. Physical Review A, 2009, 79, .	2.5	27
111	THE CASIMIR EFFECT AND THE FOUNDATIONS OF STATISTICAL PHYSICS. International Journal of Modern Physics A, 2010, 25, 2302-2312.	1.5	25
112	Thermal Casimir effect for neutrino and electromagnetic fields in the closed Friedmann cosmological model. Physical Review D, 2011, 84, .	4.7	25
113	Constraints on the parameters of an axion from measurements of the thermal Casimir-Polder force. Physical Review D, 2014, 89, .	4.7	25
114	Constraining axionâ€"nucleon coupling constants from measurements of effective Casimir pressure by means of micromachined oscillator. European Physical Journal C, 2014, 74, 1.	3.9	25
115	Improved constraints on the coupling constants of axion-like particles to nucleons from recent Casimir-less experiment. European Physical Journal C, 2015, 75, 1.	3.9	25
116	Demonstration of an Unusual Thermal Effect in the Casimir Force from Graphene. Physical Review Letters, 2021, 126, 206802.	7.8	25
117	COMPARISON BETWEEN EXPERIMENT AND THEORY FOR THE THERMAL CASIMIR FORCE. International Journal of Modern Physics A, 2012, 27, 1260012.	1.5	24
118	Classical Casimir-Polder force between polarizable microparticles and thin films including graphene. Physical Review A, 2014, 89, .	2.5	24
119	Comparison of hydrodynamic model of graphene with recent experiment on measuring the Casimir interaction. Physical Review B, 2015, 91, .	3.2	24
120	Prospects for Searching Thermal Effects, Non-Newtonian Gravity and Axion-Like Particles: Cannex Test of the Quantum Vacuum. Symmetry, 2019, 11, 407.	2.2	24
121	Experimental and theoretical investigation of the thermal effect in the Casimir interaction from graphene. Physical Review B, 2021, 104, .	3.2	24
122	Classical limit of the Casimir interaction for thin films with applications to graphene. Physical Review B, 2014, 89, .	3.2	23
123	Constraints on axionlike particles and non-Newtonian gravity from measuring the difference of Casimir forces. Physical Review D, 2017, 95, .	4.7	23
124	An alternative response to the off-shell quantum fluctuations: a step forward in resolution of the Casimir puzzle. European Physical Journal C, 2020, 80, 1.	3.9	23
125	Particle creation and vacuum polarisation in an isotropic universe. Journal of Physics A, 1980, 13, 2057-2065.	1.6	22
126	On the validity of constraints on light elementary particles andÂextra-dimensional physics from the Casimir effect. European Physical Journal C, 2010, 68, 223-226.	3.9	22

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127	Exact Casimirâ€"Polder potential between a particle and an ideal metal cylindrical shell and the proximity force approximation. European Physical Journal C, 2011, 71, 1.	3.9	22
128	Constraints on axion-nucleon coupling constants from measuring the Casimir force between corrugated surfaces. Physical Review D, 2014, 90, .	4.7	22
129	Casimir free energy of metallic films: Discriminating between Drude and plasma model approaches. Physical Review A, 2015, 92, .	2.5	22
130	Casimir free energy of dielectric films: classical limit, low-temperature behavior and control. Journal of Physics Condensed Matter, 2017, 29, 275701.	1.8	22
131	How to observe the giant thermal effect in the Casimir force for graphene systems. Physical Review A, 2017, 96, .	2.5	22
132	Particle creation from vacuum by a homogeneous electric field in the canonical formalism. Theoretical and Mathematical Physics(Russian Federation), 1972, 13, 1207-1217.	0.9	21
133	Particle creation and vacuum polarization of a non-conformal scalar field near the isotropic cosmological singularity. Classical and Quantum Gravity, 1998, 15, 581-602.	4.0	21
134	Reflectivity properties of graphene with a nonzero mass-gap parameter. Physical Review A, 2016, 93, .	2.5	21
135	Conductivity of graphene in the framework of Dirac model: Interplay between nonzero mass gap and chemical potential. Physical Review B, 2017, 96, .	3.2	21
136	Casimir and Casimir-Polder Forces in Graphene Systems: Quantum Field Theoretical Description and Thermodynamics. Universe, 2020, 6, 150.	2.5	21
137	Bordag, Geyer, Klimchitskaya, and Mostepanenko Reply:. Physical Review Letters, 2001, 87, .	7.8	20
138	Quantum electrodynamic approach to the conductivity of gapped graphene. Physical Review B, 2016, 94, .	3.2	20
139	Thermal effect in the Casimir force for graphene and graphene-coated substrates: Impact of nonzero mass gap and chemical potential. Physical Review B, 2017, 96, .	3.2	20
140	Impact of magnetic nanoparticles on the Casimir pressure in three-layer systems. Physical Review B, 2019, 99, .	3.2	20
141	Possibility of measuring thermal effects in the Casimir force. Physical Review A, 2010, 82, .	2.5	19
142	Casimir interaction at liquid nitrogen temperature: Comparison between experiment and theory. Physical Review B, 2013, 88, .	3.2	19
143	Stronger constraints on an axion from measuring the Casimir interaction by means of a dynamic atomic force microscope. Physical Review D, 2014, 89, .	4.7	19
144	Nernst heat theorem for the thermal Casimir interaction between two graphene sheets. Physical Review A, 2016, 94, .	2.5	19

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145	Casimir pressure between metallic plates out of thermal equilibrium: Proposed test for the relaxation properties of free electrons. Physical Review A, 2019, 100, .	2.5	19
146	Fluctuation-induced free energy of thin peptide films. Physical Review E, 2019, 99, 022410.	2.1	19
147	How to confirm and exclude different models of material properties in the Casimir effect. Journal of Physics Condensed Matter, 2015, 27, 214013.	1.8	17
148	Possibility of measuring the thermal Casimir interaction between a plate and a cylinder attached to a micromachined oscillator. Physical Review A, 2010, 82, .	2.5	16
149	Comment on â€œCasimir Force andInÂSituSurface Potential Measurements on Nanomembranesâ€• Physical Review Letters, 2012, 109, 199701.	7.8	16
150	Casimir free energy and pressure for magnetic metal films. Physical Review B, 2016, 94, .	3.2	16
151	Optical Chopper Driven by the Casimir Force. Physical Review Applied, 2018, 10, .	3.8	16
152	Constraints on non-Newtonian gravity and axionlike particles from measuring the Casimir force in nanometer separation range. Physical Review D, 2020, 101, .	4.7	16
153	Vacuum Stress-Energy Tensor of Nonconformal Scalar Field in Quasi-Euclidean Gravitational Background. International Journal of Modern Physics D, 1997, 06, 449-463.	2.1	15
154	New constraints on Yukawa-type corrections to Newtonian gravity at short separations. Gravitation and Cosmology, 2014, 20, 3-9.	1.1	15
155	Impact of chemical potential on the reflectance of graphene in the infrared and microwave domains. Physical Review A, 2018, 98, .	2.5	15
156	Quantum field theoretical description of the Casimir effect between two real graphene sheets and thermodynamics. Physical Review D, 2020, 102, .	4.7	15
157	Nernst heat theorem for an atom interacting with graphene: Dirac model with nonzero energy gap and chemical potential. Physical Review D, 2020, 101, .	4.7	15
158	Quantum effects in nonlinear insulating materials in the presence of a nonstationary electromagnetic field. Theoretical and Mathematical Physics(Russian Federation), 1991, 86, 303-309.	0.9	14
159	Constraints on non-Newtonian gravity and light elementary particles from measurements of the Casimir force by means of a dynamic atomic force microscope. Physical Review D, 2012, 86, .	4.7	14
160	Kramers-Kronig relations and causality conditions for graphene in the framework of the Dirac model. Physical Review D, 2018, 97, .	4.7	14
161	The State of the Art in Constraining Axion-to-Nucleon Coupling and Non-Newtonian Gravity from Laboratory Experiments. Universe, 2020, 6, 147.	2.5	14
162	Spontaneous breaking of gauge symmetry in a nonstationary isotropic metric. Theoretical and Mathematical Physics(Russian Federation), 1977, 33, 869-876.	0.9	13

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163	Comment on â€œThermal Lifshitz Force between an Atom and a Conductor with a Small Density of Carriersâ€ Physical Review Letters, 2009, 102, 189301; author reply 189302.	7.8	13
164	Casimir and van der Waals energy of anisotropic atomically thin metallic films. Physical Review B, 2015, 92, .	3.2	13
165	Optical properties of dielectric plates coated with gapped graphene. Physical Review B, 2017, 95, .	3.2	13
166	Low-temperature behavior of the Casimir-Polder free energy and entropy for an atom interacting with graphene. Physical Review A, 2018, 98, .	2.5	13
167	Recent measurements of the Casimir force: Comparison between experiment and theory. Modern Physics Letters A, 2020, 35, 2040007.	1.2	13
168	Theory-experiment comparison for the Casimir force between metallic test bodies: A spatially nonlocal dielectric response. Physical Review A, 2022, 105, .	2.5	13
169	Particle creation from vacuum by a nonstationary gravitational field in the canonical formalism. Theoretical and Mathematical Physics(Russian Federation), 1974, 19, 349-361.	0.9	12
170	Quantum effects associated with parametric generation of light and the theory of squeezed states. Theoretical and Mathematical Physics(Russian Federation), 1991, 88, 913-925.	0.9	12
171	THERMAL CASIMIR FORCE BETWEEN MAGNETIC MATERIALS. International Journal of Modern Physics A, 2010, 25, 2293-2301.	1.5	12
172	OBSERVATION OF REDUCTION IN CASIMIR FORCE WITHOUT CHANGE OF DIELECTRIC PERMITTIVITY. International Journal of Modern Physics A, 2012, 27, 1260001.	1.5	12
173	Constraining axion coupling constants from measuring the Casimir interaction between polarized test bodies. Physical Review D, 2016, 94, .	4.7	12
174	Characteristic properties of the Casimir free energy for metal films deposited on metallic plates. Physical Review A, 2016, 93, .	2.5	12
175	Change of sign in the Casimir interaction of peptide films deposited on a dielectric substrate. Modern Physics Letters A, 2020, 35, 2040020.	1.2	12
176	Casimir entropy and nonlocal response functions to the off-shell quantum fluctuations. Physical Review D, 2021, 103, .	4.7	12
177	Casimir effect for magnetic media: Spatially nonlocal response to the off-shell quantum fluctuations. Physical Review D, 2021, 104, .	4.7	12
178	Comment on â€œContribution of Drifting Carriers to the Casimir-Lifshitz and Casimir-Polder Interactions with Semiconductor Materialsâ€ Physical Review Letters, 2009, 102, 189303; author reply 189304.	7.8	11
179	Casimir force between a microfabricated elliptic cylinder and a plate. Physical Review A, 2011, 84, .	2.5	11
180	New constraints on the Yukawa-type hypothetical interaction from the recent Casimir force measurement. Physical Review D, 1997, 56, R6-R10.	4.7	10

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181	NEW CONSTRAINTS ON YUKAWA-TYPE INTERACTIONS FROM THE CASIMIR EFFECT. International Journal of Modern Physics A, 2012, 27, 1260015.	1.5	10
182	Constraints on the axion and corrections to newtonian gravity from the Casimir effect. Gravitation and Cosmology, 2015, 21, 1-12.	1.1	10
183	Method of dimensional regularization for scalar and vector fields in homogeneous isotropic spaces. Theoretical and Mathematical Physics(Russian Federation), 1985, 63, 366-375.	0.9	9
184	Description of force surfaces in atomic force microscopy with allowance for the mobility of the lattice atoms. Technical Physics, 1999, 44, 970-976.	0.7	9
185	How to modify the van der Waals and Casimir forces without change of the dielectric permittivity. Journal of Physics Condensed Matter, 2012, 24, 424202.	1.8	9
186	Universal experimental test for the role of free charge carriers in the thermal Casimir effect within a micrometer separation range. Physical Review A, 2017, 95, .	2.5	9
187	Whether an Enormously Large Energy Density of the Quantum Vacuum Is Catastrophic. Symmetry, 2019, 11, 314.	2.2	9
188	Dark Matter Axions, Non-Newtonian Gravity and Constraints on Them from Recent Measurements of the Casimir Force in the Micrometer Separation Range. Universe, 2021, 7, 343.	2.5	9
189	Graphene may help to solve the Casimir conundrum in indium tin oxide systems. Physical Review B, 2018, 98, .	3.2	8
190	Effect of agglomeration of magnetic nanoparticles on the Casimir pressure through a ferrofluid. Physical Review B, 2019, 100, .	3.2	8
191	Nonequilibrium effects in the Casimir force between two similar metallic plates kept at different temperatures. Physical Review A, 2020, 101, .	2.5	8
192	New experimental results on the Casimir effect. Brazilian Journal of Physics, 2000, 30, .	1.4	8
193	Creation of Nonconformal Particles from Vacuum by A Test-Model Isotropic Gravitational Field. Modern Physics Letters A, 1997, 12, 145-154.	1.2	7
194	JACOBI ELLIPTIC SOLUTIONS OF Î»Ï•4 THEORY IN A FINITE DOMAIN. International Journal of Modern Physics A, 2000, 15, 2645-2659.	1.5	7
195	Comparison of the experimental data for the Casimir pressure with the Lifshitz theory at zero temperature. Physical Review B, 2010, 81, .	3.2	7
196	CAPACITANCE MEASUREMENTS AND ELECTROSTATIC CALIBRATIONS IN EXPERIMENTS MEASURING THE CASIMIR FORCE. International Journal of Modern Physics A, 2011, 26, 3930-3943.	1.5	7
197	Progress in constraining axion and non-Newtonian gravity from the Casimir effect. International Journal of Modern Physics A, 2016, 31, 1641020.	1.5	7
198	Nonperturbative theory of atom-surface interaction: corrections at short separations. Journal of Physics Condensed Matter, 2018, 30, 055003.	1.8	7

#	Article	IF	Citations
199	Impact of Magnetic Particles on Dispersion Forces in Ferrofluid-Based Microdevices. , 2018, , .		7
200	Effect of increased stability of peptide-based coatings in the Casimir regime via nanoparticle doping. Physical Review B, 2020, 102, .	3.2	7
201	Casimir-Polder Interaction of an Atom with a Cavity Wall Made of Phase-Change Material out of Thermal Equilibrium. Atoms, 2021, 9, 4.	1.6	7
202	CALCULATION OF LATERAL FORCE COMPONENTS IN AFM CONTACT MODE IN APPLICATION TO THE DIAGNOSTIC OF POINT DEFECTS. Surface Review and Letters, 1997, 04, 271-278.	1.1	6
203	WHAT IS CREDIBLE AND WHAT IS INCREDIBLE IN THE MEASUREMENTS OF THE CASIMIR FORCE. International Journal of Modern Physics A, 2011, 26, 3944-3957.	1.5	6
204	Comment on â€œLifshitz-Matsubara sum formula for the Casimir pressure between magnetic metallic mirrorsâ€. Physical Review E, 2016, 94, 026101.	2.1	6
205	Nernst heat theorem for the Casimir-Polder interaction between a magnetizable atom and ferromagnetic dielectric plate. Modern Physics Letters A, 2020, 35, 2040010.	1.2	6
206	Casimir-Polder attraction and repulsion between nanoparticles and graphene in out-of-thermal-equilibrium conditions. Physical Review B, 2022, 105, .	3.2	6
207	HAMILTONIAN DIAGONALIZATION FOR A NONCONFORMAL SCALAR FIELD IN AN ISOTROPIC GRAVITATIONAL BACKGROUND. International Journal of Modern Physics D, 1998, 07, 249-259.	2.1	5
208	PARTICLE CREATION IN THE CHIRAL COSMIC STRING SPACETIME. International Journal of Modern Physics D, 2002, 11, 437-445.	2.1	5
209	Reflectivity Properties of Graphene and Graphene-Coated Substrates. Lecture Notes in Computer Science, 2014, , 451-458.	1.3	5
210	Special features of the thermal Casimir effect across a uniaxial anisotropic film. Physical Review A, 2015, 92, .	2.5	5
211	Dispersion Forces between Metal and Dielectric Plates Separated by a Magnetic Fluid. Technical Physics, 2019, 64, 1260-1266.	0.7	5
212	Role of electromagnetic fluctuations in organic electronics. Journal of Electronic Science and Technology, 2020, 18, 100023.	3.6	5
213	OBSERVATION OF THE THERMAL CASIMIR FORCE IS OPEN TO QUESTION. International Journal of Modern Physics Conference Series, 2011, 03, 515-526.	0.7	4
214	Contribution of Electromagnetic Fluctuations to the Free Energy of Protein Films. , 2018, , .		4
215	Maximum reflectance and transmittance of films coated with gapped graphene in the context of the Dirac model. Physical Review A, 2018, 97, .	2.5	4
216	Casimir pressure in peptide films on metallic substrates: Change of sign via graphene coating. Physical Review B, 2021, 103, .	3.2	4

#	Article	IF	Citations
217	Creation and scattering of particles by a nonstationary electromagnetic field in the canonical formalism. Theoretical and Mathematical Physics(Russian Federation), 1976, 26, 148-155.	0.9	3
218	Particle creation and vacuum polarization by a nonstationary electric field. Theoretical and Mathematical Physics(Russian Federation), 1980, 45, 983-991.	0.9	3
219	Self-Consistent Treatment of Vacuum Quantum Effects in Isotropic Cosmology. , 1984, , 197-212.		3
220	A Proposed Experiment Using a Sphere with an Eccentric Cavity for Hypothetical Long-Range Interactions. International Journal of Modern Physics A, 1997, 12, 1465-1482.	1.5	3
221	PRECISION MEASUREMENT OF THE CASIMIR FORCE FOR Au USING A DYNAMIC AFM. International Journal of Modern Physics Conference Series, 2012, 14, 270-280.	0.7	3
222	A few remarks on the relationship between elementary particle physics, gravitation and cosmology. Gravitation and Cosmology, 2016, 22, 116-121.	1.1	3
223	Casimir force, causality, and the Gurzhi model. Physical Review B, 2020, 101, .	3.2	3
224	THE CASIMIR EFFECT IN RELATIVISTIC QUANTUM FIELD THEORIES. , 2008, , .		3
225	Breaking of conformal symmetry and quantization in curved spacetime. Theoretical and Mathematical Physics(Russian Federation), 1978, 37, 1065-1070.	0.9	2
226	Spontaneous breaking of CP symmetry in a nonstationary isotropic metric. Theoretical and Mathematical Physics(Russian Federation), 1978, 37, 975-983.	0.9	2
227	Corrections to vacuum forces resulting from small distortions of the geometry of a region. Theoretical and Mathematical Physics(Russian Federation), 1989, 79, 487-493.	0.9	2
228	Laboratory tests for the constituents of dark matter. Astronomische Nachrichten, 1990, 311, 197-200.	1.2	2
229	RESTRICTIONS ON THE HYPOTHETICAL LONG RANGE INTERACTIONS FROM THE CASIMIR-TYPE NULL EXPERIMENT WITH THREE TEST BODIES. Modern Physics Letters A, 1994, 09, 2671-2680.	1.2	2
230	AFM OPERATING MODE WITH A CONSTANT FORCE PROJECTION ONTO THE ARBITRARY AXIS. Surface Review and Letters, 1997, 04, 613-620.	1.1	2
231	WHAT IS CREDIBLE AND WHAT IS INCREDIBLE IN THE MEASUREMENTS OF THE CASIMIR FORCE. International Journal of Modern Physics Conference Series, 2011, 03, 541-554.	0.7	2
232	Comment on â€œTemperature dependence of the Casimir force for lossy bulk mediaâ€• Physical Review A, 2011, 84, .	2.5	2
233	COMPARISON BETWEEN EXPERIMENT AND THEORY FOR THE THERMAL CASIMIR FORCE. International Journal of Modern Physics Conference Series, 2012, 14, 155-170.	0.7	2
234	Reflectance of graphene-coated dielectric plates in the framework of Dirac model: joint action of energy gap and chemical potential. Journal of Physics Condensed Matter, 2019, 31, 505003.	1.8	2

#	Article	IF	Citations
235	Spontaneous symmetry breaking in the interaction of a scalar field with an external vector field. Theoretical and Mathematical Physics(Russian Federation), 1976, 29, 1131-1135.	0.9	1
236	Heisenberg representation of second-quantized fields in stationary external fields and nonlinear dielectric media. Theoretical and Mathematical Physics(Russian Federation), 1993, 97, 1393-1404.	0.9	1
237	Modeling of surfaces of constant force above a lattice of close-packed atoms in the repulsive mode. Technical Physics, 1997, 42, 655-662.	0.7	1
238	VACUUM QUANTUM EFFECTS OF NONCONFORMAL SCALAR FIELD IN A NONSINGULAR COSMOLOGICAL MODEL. International Journal of Modern Physics D, 1998, 07, 779-792.	2.1	1
239	The Feasibility of Determining Vacancy Migration Energy by Atomic Force Microscopy Data. Surface Review and Letters, 1998, 05, 559-567.	1.1	1
240	Atomic Paths in Scanning of the AFM Tip above the Close-Packed Surface in Repulsive Mode. Surface Review and Letters, 1998, 05, 989-996.	1.1	1
241	Experimental status of corrections to Newton's gravitational law inspired by extra dimensional physics. Brazilian Journal of Physics, 2004, 34, 211-216.	1.4	1
242	CAPACITANCE MEASUREMENTS AND ELECTROSTATIC CALIBRATIONS IN EXPERIMENTS MEASURING THE CASIMIR FORCE. International Journal of Modern Physics Conference Series, 2011, 03, 527-540.	0.7	1
243	OBSERVATION OF REDUCTION IN CASIMIR FORCE WITHOUT CHANGE OF DIELECTRIC PERMITTIVITY. International Journal of Modern Physics Conference Series, 2012, 14, 1-15.	0.7	1
244	NEW CONSTRAINTS ON YUKAWA-TYPE INTERACTIONS FROM THE CASIMIR EFFECT. International Journal of Modern Physics Conference Series, 2012, 14, 200-214.	0.7	1
245	Andrei Anatolyevich Grib, on the 75th birthday. Gravitation and Cosmology, 2014, 20, 1-2.	1.1	1
246	Some remarks on axion dark matter, dark energy and energy of the quantum vacuum. International Journal of Modern Physics A, 2020, 35, 2040036.	1.5	1
247	Constraints on Non-Newtonian Gravity from Recent Casimir Force Measurements. , 2004, , 269-288.		1
248	WEAK SCALE COMPACTIFICATION AND CONSTRAINTS ON NON-NEWTONIAN GRAVITY IN SUBMILLIMETER RANGE. , 2001, , .		1
249	Fundamental physical constants and standards. Measurement Techniques, 1986, 29, 691-694.	0.6	0
250	Prospects for improving voltage standards based on the Josephson Effect. Measurement Techniques, 1986, 29, 712-716.	0.6	0
251	Energy-momentum tensor of intermediate vector bosons in an external electromagnetic field. Theoretical and Mathematical Physics(Russian Federation), 1988, 74, 137-142.	0.9	0
252	Metrological surface scanning tunneling and atomic-force microscopy. Measurement Techniques, 1990, 33, 26-30.	0.6	0

#	Article	IF	Citations
253	Prospects of decentralizing the system of provision for unity in measurements and quantum metrology. Measurement Techniques, 1992, 35, 1235-1239.	0.6	0
254	INDUCED PARITY VIOLATION ANOMALY FOR THE PROCA FIELD IN A THREE-DIMENSIONAL SPACEâ€“TIME. International Journal of Modern Physics A, 1999, 14, 271-280.	1.5	0
255	Experimental Status of Corrections to Newtonian Gravity Inspired by the Extra Dimensional Physics. AIP Conference Proceedings, 2003, , .	0.4	0
256	Authors question book reviewerâ€™s fairness. Physics Today, 2010, 63, 12-13.	0.3	0
257	On the definition of dielectric permittivity for media with temporal dispersion in the presence of free charge carriers. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 015402.	2.1	0
258	Reflective properties of graphene for optical and near-infrared wavelength range. , 2018, , .		0
259	Editorial to the Special Issue â€œSelected Papers from the 17th Russian Gravitational Conferenceâ€"International Conference on Gravitation, Cosmology and Astrophysics (RUSGRAV-17)â€. Universe, 2021, 7, 296.	2.5	0
260	SHORT-RANGE NON-NEWTONIAN GRAVITY AND CONSTRAINTS ON IT. , 2006, , .		0
261	THERMAL CASIMIR FORCE BETWEEN MAGNETIC MATERIALS. , 2010, , .		0
262	THE CASIMIR EFFECT AND THE FOUNDATIONS OF STATISTICAL PHYSICS. , 2010, , .		0
263	Casimir Force Between Real Boundaries: Contributions of Mechanical and Electrical Imperfections. Teubner-Texte Zur Physik, 1996, , 55-56.	3.0	0
264	Quantum Field Theoretical Approach to the Electrical Conductivity of Graphene. Lecture Notes in Computer Science, 2016, , 699-707.	1.3	0
265	Laboratory and astrophysical constraints on an axion. , 2016, , .		0
266	The Casimir-Operated Microdevice for Application in Optical Networks. Lecture Notes in Computer Science, 2018, , 613-623.	1.3	0
267	Editorial to the Special Issue â€œAdvances in the Physics of Starsâ€"In Memory of Prof. Yuri N. Gnedinâ€. Universe, 2022, 8, 239.	2.5	0