George Palasantzas

List of Publications by Year
in descending order

102 papers	3,844 citations	126907 33 h-index	128289 60 g-index
103 all docs	103 docs citations	103 times ranked	2904 citing authors

#	Article	IF	Citations
1	Light on the moth-eye corneal nipple array of butterflies. Proceedings of the Royal Society B: Biological Sciences, 2006, 273, 661-667.	2.6	483
2	Roughness spectrum and surface width of self-affine fractal surfaces via the K-correlation model. Physical Review B, 1993, 48, 14472-14478.	3.2	289
3	EXPERIMENTAL OBSERVATIONS OF SELF-AFFINE SCALING AND KINETIC ROUGHENING AT SUB-MICRON LENGTHSCALES. International Journal of Modern Physics B, 1995, 09, 599-632.	2.0	265
4	Scanning Tunneling Microscopy Study of the Thick Film Limit of Kinetic Roughening. Physical Review Letters, 1994, 73, 3564-3567.	7.8	145
5	Optical properties of gold films and the Casimir force. Physical Review B, 2008, 77, .	3.2	136
6	Effect of the form of the height-height correlation function on diffuse x-ray scattering from a self-affine surface. Physical Review B, 1993, 48, 2873-2877.	3.2	127
7	Wetting on rough surfaces. Acta Materialia, 2001, 49, 3533-3538.	7.9	109
8	Switching Casimir forces with phase-change materials. Physical Review A, 2010, 82, .	2.5	101
9	Influence of random roughness on the Casimir force at small separations. Physical Review B, 2008, 77, .	3.2	99
10	Surface-roughness fractality effects in electrical conductivity of single metallic and semiconducting films. Physical Review B, 1997, 56, 7726-7731.	3.2	97
11	Influence of roughness on capillary forces between hydrophilic surfaces. Physical Review E, 2008, 78, 031606.	2.1	80
12	Repulsive Casimir forces between solid materials with high-refractive-index intervening liquids. Physical Review A, 2010, 81, .	2.5	78
13	Static and dynamic aspects of the rms local slope of growing random surfaces. Physical Review E, 1997, 56, 1254-1257.	2.1	69
14	Roughness correction to the Casimir force at short separations: Contact distance and extreme value statistics. Physical Review B, 2012, 85, .	3.2	57
15	Crystallization Kinetics of GeSbTe Phase-Change Nanoparticles Resolved by Ultrafast Calorimetry. Journal of Physical Chemistry C, 2017, 121, 8569-8578.	3.1	56
16	Electrical conductivity and thin-film growth dynamics. Physical Review B, 2000, 61, 11109-11117.	3.2	54
17	Distance upon contact: Determination from roughness profile. Physical Review B, 2009, 80, .	3.2	52
18	Significance of the Casimir force and surface roughness for actuation dynamics of MEMS. Physical Review B, 2013, 87, .	3.2	48

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19	Pull-in characteristics of electromechanical switches in the presence of Casimir forces: Influence of self-affine surface roughness. Physical Review B, 2005, 72, .	3.2	47
20	Influence of surface roughness on dispersion forces. Advances in Colloid and Interface Science, 2015, 216, 1-19.	14.7	47
21	Casimir force measurements from silicon carbide surfaces. Physical Review B, 2016, 93, .	3.2	47
22	Contact angle influence on the pull-in voltage of microswitches in the presence of capillary and quantum vacuum effects. Journal of Applied Physics, 2007, 101, 053512.	2.5	46
23	Nonlinear Actuation Dynamics of Driven Casimir Oscillators with Rough Surfaces. Physical Review Applied, 2015, 4, .	3.8	43
24	Phase maps of microelectromechanical switches in the presence of electrostatic and Casimir forces. Physical Review B, 2005, 72, .	3.2	41
25	Pull-in voltage of microswitch rough plates in the presence of electromagnetic and acoustic Casimir forces. Journal of Applied Physics, 2007, 101, 063548.	2.5	41
26	Transition from Casimir to van der Waals force between macroscopic bodies. Applied Physics Letters, 2008, 93, .	3.3	41
27	Fabrication of Co/Si nanowires by ultrahigh-vacuum scanning tunneling microscopy on hydrogen-passivated Si(100) surfaces. Journal of Applied Physics, 1999, 85, 1907-1910.	2.5	40
28	Influence of random roughness on the adhesion between metal surfaces due to capillary condensation. Applied Physics Letters, 2007, 91, .	3.3	38
29	Sensitivity of micromechanical actuation on amorphous to crystalline phase transformations under the influence of Casimir forces. Physical Review B, 2013, 88, .	3.2	38
30	Measurement of dispersive forces between evaporated metal surfaces in the range below 100nm. Applied Physics Letters, 2008, 92, 054101.	3.3	37
31	Casimir forces from conductive silicon carbide surfaces. Physical Review B, 2014, 89, .	3.2	37
32	Roughness of Microspheres for Force Measurements. Langmuir, 2008, 24, 7528-7531.	3.5	35
33	Casimir Force Contrast Between Amorphous and Crystalline Phases of AIST. Advanced Functional Materials, 2012, 22, 3729-3736.	14.9	35
34	Resolving Crystallization Kinetics of GeTe Phase-Change Nanoparticles by Ultrafast Calorimetry. Crystal Growth and Design, 2018, 18, 1041-1046.	3.0	34
35	Roughness controlled superhydrophobicity on single nanometer length scale with metal nanoparticles. RSC Advances, 2015, 5, 28696-28702.	3.6	33
36	Interface roughness effects in the giant magnetoresistance in magnetic multilayers. Journal of Applied Physics, 1997, 82, 3950-3956.	2.5	31

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37	Roughness correction to the Casimir force beyond perturbation theory. Europhysics Letters, 2011, 95, 30001.	2.0	31
38	Influence of dielectric properties on van der Waals/Casimir forces in solid-liquid systems. Physical Review B, 2009, 79, .	3.2	30
39	Size-dependent and tunable crystallization of GeSbTe phase-change nanoparticles. Scientific Reports, 2016, 6, 39546.	3.3	30
40	Roughness dependent wettability of sputtered copper thin films: The effect of the local surface slope. Journal of Applied Physics, 2019, 125, .	2.5	24
41	Influence of surface modification on the quality factor of microresonators. Physical Review B, 2012, 85, .	3.2	23
42	Influence of ultrathin water layer on the van der Waals/Casimir force between gold surfaces. Physical Review B, 2009, 79, .	3.2	22
43	Weak dispersive forces between glass and gold macroscopic surfaces in alcohols. Physical Review E, 2009, 79, 041605.	2.1	22
44	Roughness effects on the electrostatic-image potential near a dielectric interface. Journal of Applied Physics, 1997, 82, 351-355.	2.5	20
45	Random surface roughness influence on gas damped nanoresonators. Applied Physics Letters, 2007, 90, 041914.	3.3	19
46	Synthesis and morphology of ironâ€“iron oxide coreâ€“shell nanoparticles produced by high pressure gas condensation. Nanotechnology, 2016, 27, 215703.	2.6	19
47	Dependence of chaotic behavior on optical properties and electrostatic effects in double-beam torsional Casimir actuation. Physical Review E, 2018, 98, 022210.	2.1	19
48	Roughness corrections to the Casimir force: The importance of local surface slope. Applied Physics Letters, 2007, 91, .	3.3	18
49	Sensitivity on materials optical properties of single beam torsional Casimir actuation. Journal of Applied Physics, 2017, 121, .	2.5	18
50	Gas-Phase Synthesis of Tunable-Size Germanium Nanocrystals by Inert Gas Condensation. Chemistry of Materials, 2020, 32, 1627-1635.	6.7	18
51	Surface roughness influence on the pull-in voltage of microswitches in presence of thermal and quantum vacuum fluctuations. Surface Science, 2006, 600, 1450-1455.	1.9	17
52	OPTICAL PROPERTIES AND KINETIC ROUGHENING INFLUENCE ON DISPERSIVE CASIMIR AND VAN DER WAALS FORCES. International Journal of Modern Physics B, 2010, 24, 6013-6042.	2.0	17
53	Chaotic behavior in Casimir oscillators: A case study for phase-change materials. Physical Review E, 2017, 96, 042215.	2.1	17
54	Roughness-dependent wetting behavior of vapor-deposited metallic thin films. Physical Review E, 2019, 100, 022804.	2.1	17

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55	Effect of Airborne Hydrocarbons on the Wettability of Phase Change Nanoparticle Decorated Surfaces. ACS Nano, 2019, 13, 13430-13438.	14.6	16
56	Self-affine roughness influence on the Casimir effect. Journal of Applied Physics, 2005, 97, 126104.	2.5	15
57	Copper nanoparticle formation in a reducing gas environment. Journal of Applied Physics, 2014, 116, .	2.5	15
58	Applications of Casimir forces: Nanoscale actuation and adhesion. Applied Physics Letters, 2020, 117, .	3.3	15
59	Adsorption-desorption noise influence on mass sensitivity and dynamic range of nanoresonators with rough surfaces. Journal of Applied Physics, 2007, 101, 076103.	2.5	14
60	Measuring the Dispersion Forces Near the van der Waalsâ€"Casimir Transition. Physical Review Applied, 2020, 13, .	3.8	14
61	Influence of low optical frequencies on actuation dynamics of microelectromechanical systems via Casimir forces. Journal of Applied Physics, 2015, 117, 144901.	2.5	13
62	Static and dynamic aspects of the demagnetizing factor in magnetic thin films with random rough surfaces. Journal of Applied Physics, 1999, 86, 2196-2199.	2.5	12
63	Global consequences of a local Casimir force: Adhered cantilever. Applied Physics Letters, 2017, 111, .	3.3	12
64	Interface Roughness Fractality Effects on the Electron Mobility in Semiconducting Quantum Wells. Physica Status Solidi (B): Basic Research, 1998, 209, 319-327.	1.5	11
65	Influence of anomalous roughness growth on the electrical conductivity of thin films. Physical Review B, 2005, 71, .	3.2	11
66	Dependence of non-equilibrium Casimir forces on material optical properties toward chaotic motion during device actuation. Chaos, 2019, 29, 093126.	2.5	11
67	Explosion of Microbubbles Generated by the Alternating Polarity Water Electrolysis. Energies, 2020, 13, 20.	3.1	11
68	Dynamic range of nanoresonators with random rough surfaces in the presence of thermomechanical and momentum exchange noise. Applied Physics Letters, 2007, 91, 021901.	3.3	9
69	Control surface wettability with nanoparticles from phase-change materials. Applied Physics Letters, 2016, 109, 234102.	3.3	9
70	Sensitivity of chaotic behavior to low optical frequencies of a double-beam torsional actuator. Physical Review E, 2019, 100, 012201.	2.1	9
71	Roughness effects on the thermal stability of thin films. Journal of Applied Physics, 1997, 81, 246-250.	2.5	8
72	Viscous damping of microcantilevers with modified surfaces and geometries. Applied Physics Letters, 2012, 101, 061908.	3.3	8

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73	Influence of materials' optical response on actuation dynamics by Casimir forces. Journal of Physics Condensed Matter, 2015, 27, 214014.	1.8	8
74	Dynamics of GeSbTe phase-change nanoparticles deposited on graphene. Nanotechnology, 2018, 29, 505706.	2.6	8
75	Casimir and electrostatic forces from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Bi</mml:mi><mml:mn>2</mml:mn></mm thin films of varying thickness. Physical Review B, 2021, 103, .	2.2	8
76	Quality factor due to roughness scattering of shear horizontal surface acoustic waves in nanoresonators. Journal of Applied Physics, 2008, 104, 053524.	2.5	7
77	Casimir and hydrodynamic force influence on microelectromechanical system actuation in ambient conditions. Applied Physics Letters, 2014, 104, 074108.	3.3	7
78	Preparation of tunable-sized iron nanoparticles based on magnetic manipulation in inert gas condensation (IGC). Journal of Applied Physics, 2017, 121, .	2.5	7
79	Capillary-force measurement on SiC surfaces. Physical Review E, 2016, 93, 062803.	2.1	6
80	Comparison of Casimir forces and electrostatics from conductive SiC-Si/C and Ru surfaces. Physical Review B, 2019, 100, .	3.2	6
81	Sensitivity of nonequilibrium Casimir forces on low frequency optical properties toward chaotic motion of microsystems: Drude vs plasma model. Chaos, 2020, 30, 023108.	2.5	6
82	Note: Spring constant calibration of nanosurface-engineered atomic force microscopy cantilevers. Review of Scientific Instruments, 2014, 85, 026118.	1.3	5
83	Excessive number of high asperities for sputtered rough films. Physical Review B, 2021, 104, .	3.2	5
84	Phase Separation in Ge-Rich GeSbTe at Different Length Scales: Melt-Quenched Bulk versus Annealed Thin Films. Nanomaterials, 2022, 12, 1717.	4.1	5
85	Weak adhesion between deposited rough films: Relation to dispersion forces. Physical Review B, 2021, 104, .	3.2	4
86	Sensitivity of actuation dynamics on normal and lateral Casimir forces: Interaction of phase change and topological insulator materials. Chaos, 2021, 31, 103103.	2.5	4
87	Chaotic motion due to lateral Casimir forces during nonlinear actuation dynamics. Chaos, 2020, 30, 073101.	2.5	3
88	Nonlinear Actuation of Casimir Oscillators toward Chaos: Comparison of Topological Insulators and Metals. Universe, 2021, 7, 123.	2.5	3
89	Tailoring Growth Kinetics toward a Size-Dependent Work Function of Ge Nanocrystals Synthesized by Inert Gas Condensation. Journal of Physical Chemistry C, 2021, 125, 12870-12879.	3.1	3
90	Characterization of Optical Properties and Surface Roughness Profiles: The Casimir Force Between Real Materials. Lecture Notes in Physics, 2011, , 311-343.	0.7	3

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91	Roughness effects on the critical fracture toughness of materials under uniaxial stress. Journal of Applied Physics, 1998, 83, 5212-5216.	2.5	2
92	Conductivity of Quantum Wires with Rough Boundaries. Physica Status Solidi (B): Basic Research, 1999, 211, 671-679.	1.5	2
93	Analysis of Casimir forces with window functions: Kramers-Kronig general approach for real measured dielectric data. Physical Review A, 2011, 84, .	2.5	2
94	Dependence of chaotic actuation dynamics of Casimir oscillators on optical properties and electrostatic effects. European Physical Journal B, 2018, 91, 1.	1.5	2
95	Sensitivity of Casimir oscillators on geometry and optical properties. Modern Physics Letters A, 2020, 35, 2040003.	1.2	2
96	Dynamical Casimir actuation under non-equilibrium conditions: The influence of optical properties from different interacting bodies. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 443, 128220.	2.1	2
97	Roughness-induced fluid interface fluctuations due to polar and apolar interactions. Physical Review E, 1999, 59, 1259-1262.	2.1	1
98	Adhered cantilevers: A new method to measure dispersion forces between rough surfaces at short distances. Modern Physics Letters A, 2020, 35, 2040014.	1.2	1
99	Tunable wettability of polymer films by partial engulfment of nanoparticles. Physical Review Materials, 2021, 5, .	2.4	1
100	Kinetic Roughening and Material Optical Properties Influence on Van der Waals/Casimir Forces. Acta Physica Polonica A, 2010, 117, 379-383.	0.5	1
101	Surface engineering of the quality factor of metal coated microcantilevers. Journal of Applied Physics, 2014, 116, 224303.	2.5	0
102	Wetting of surfaces decorated by gas-phase synthesized silver nanoparticles: Effects of Ag adatoms, nanoparticle aging, and surface mobility. Journal of Chemical Physics, 2021, 155, 214701.	3.0	0