Aleksandr I Volokitin

List of Publications by Year
in descending order

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64	3,502	186265	133252
papers	citations	28 h-index	59 g-index

72	72	72	2158
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	On the nature of surface roughness with application to contact mechanics, sealing, rubber friction and adhesion. Journal of Physics Condensed Matter, 2005, 17, R1-R62.	1.8	748
2	Near-field radiative heat transfer and noncontact friction. Reviews of Modern Physics, 2007, 79, 1291-1329.	45.6	613
3	Radiative heat transfer between nanostructures. Physical Review B, 2001, 63, .	3.2	244
4	Resonant photon tunneling enhancement of the radiative heat transfer. Physical Review B, 2004, 69, .	3.2	137
5	Quantum Friction. Physical Review Letters, 2011, 106, 094502.	7.8	104
6	Rubber friction on smooth surfaces. European Physical Journal E, 2006, 21, 69-80.	1.6	95
7	Theory of friction: the contribution from a fluctuating electromagnetic field. Journal of Physics Condensed Matter, 1999, 11, 345-359.	1.8	93
8	Infrared reflection-absorption spectroscopy of dipole-forbidden adsorbate vibrations. Surface Science, 1994, 310, 314-336.	1.9	83
9	Theory of the interaction forces and the radiative heat transfer between moving bodies. Physical Review B, 2008, 78, .	3.2	79
10	Electronic friction of physisorbed molecules. Journal of Chemical Physics, 1995, 103, 8679-8683.	3.0	78
11	Heat transfer between elastic solids with randomly rough surfaces. European Physical Journal E, 2010, 31, 3-24.	1.6	78
12	Dissipative van der Waals interaction between a small particle and a metal surface. Physical Review B, 2002, 65, .	3.2	72
13	Resonant Photon Tunneling Enhancement of the van der Waals Friction. Physical Review Letters, 2003, 91, 106101.	7.8	72
14	Noncontact friction between nanostructures. Physical Review B, 2003, 68, .	3.2	69
15	Near-field radiative heat transfer between closely spaced graphene and amorphous SiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>. Physical Review B, 2011, 83, .	3.2	67
16	On the origin of Amontonâ€™s friction law. Journal of Physics Condensed Matter, 2008, 20, 395006.	1.8	59
17	Phononic heat transfer across an interface: thermal boundary resistance. Journal of Physics Condensed Matter, 2011, 23, 045009.	1.8	59
18	Adsorbate-Induced Enhancement of Electrostatic Noncontact Friction. Physical Review Letters, 2005, 94, 086104.	7.8	54

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19	FTIR overtone spectroscopy on surfaces. The Câ€”O mode in chemisorbed methoxy on Ni(111). Chemical Physics Letters, 1993, 208, 414-419.	2.6	49
20	Comment on â€œBrownian Motion of Microscopic Solids under the Action of Fluctuating Electromagnetic Fieldsâ€• Physical Review Letters, 2000, 84, 3504-3504.	7.8	43
21	Adsorbate vibrational dynamics in the anomalous skin effect frequency region. Surface Science, 1994, 317, L1141-L1146.	1.9	38
22	On the origin of anti-absorption resonances in adsorbate vibrational spectroscopy. Chemical Physics Letters, 1991, 185, 292-297.	2.6	37
23	Quantum theory of infrared-reflection spectroscopy from adsorbate-covered metal surfaces in the anomalous-skin-effect frequency region. Physical Review B, 1995, 52, 2899-2906.	3.2	31
24	Quantum field theory of van der Waals friction. Physical Review B, 2006, 74, .	3.2	31
25	Electromagnetic Fluctuations at the Nanoscale. Nanoscience and Technology, 2017, , .	1.5	31
26	Enhancement of noncontact friction between closely spaced bodies by two-dimensional systems. Physical Review B, 2006, 73, .	3.2	30
27	Title is missing!. Physics-Uspekhi, 2007, 50, 879.	2.2	30
28	Role of the external pressure on the dewetting of soft interfaces. European Physical Journal E, 2003, 11, 409-413.	1.6	29
29	The frictional drag force between quantum wells mediated by a fluctuating electromagnetic field. Journal of Physics Condensed Matter, 2001, 13, 859-873.	1.8	28
30	Theory of rubber friction:â€‚â€‚Nonstationary sliding. Physical Review B, 2002, 65, .	3.2	28
31	Effect of an Electric Field in the Heat Transfer between Metals in the Extreme Near Field. JETP Letters, 2019, 109, 749-754.	1.4	25
32	Casimir frictional drag force between a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SiO</mml:mi><mml:mn>2</mml:mn></mml:msub></mm and a graphene-covered<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SiO</mml:mi><mml:mn>2</mml:mn></mml:msub></mm Physical Review B, 2016, 94, .	3.2	21
33	Comment on â€˜No quantum friction between uniformly moving platesâ€™. New Journal of Physics, 2011, 13, 068001.	2.9	19
34	Influence of electric current on the Casimir forces between graphene sheets. Europhysics Letters, 2013, 103, 24002.	2.0	19
35	Contribution of the acoustic waves to near-field heat transfer. Journal of Physics Condensed Matter, 2020, 32, 215001.	1.8	16
36	Adsorbate vibrational mode enhancement of radiative heat transfer. JETP Letters, 2003, 78, 457-460.	1.4	15

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37	Giant enhancement of noncontact friction between closely spaced bodies by dielectric films and two-dimensional systems. Journal of Experimental and Theoretical Physics, 2007, 104, 96-110.	0.9	15
38	Contact electrification and the work of adhesion. Europhysics Letters, 2013, 103, 36003.	2.0	15
39	Comment on â€˜Fully covariant radiation force on a polarizable particleâ€™. New Journal of Physics, 2014, 16, 118001.	2.9	12
40	Blackbody friction force on a relativistic small neutral particle. Physical Review A, 2015, 91, .	2.5	12
41	Casimir friction force between a SiO2 probe and a graphene-coated SiO2 substrate. JETP Letters, 2016, 104, 504-509.	1.4	12
42	Electric double layer effect in an extreme near-field heat transfer between metal surfaces. Physical Review B, 2021, 103, .	3.2	12
43	Sliding friction: the contribution from defects. Journal of Physics Condensed Matter, 1997, 9, 2869-2889.	1.8	10
44	Dynamical interactions in sliding friction. Surface Science, 2000, 457, 345-356.	1.9	9
45	Quantum Cherenkov radiation at the motion of a small neutral particle parallel to the surface of a transparent dielectric. JETP Letters, 2016, 103, 228-233.	1.4	9
46	Electric field effect in heat transfer in 2D devices. Journal of Physics Condensed Matter, 2020, 32, 255301.	1.8	9
47	Anomalous Doppler-effect singularities in radiative heat generation, interaction forces, and frictional torque for two rotating nanoparticles. Physical Review A, 2017, 96, .	2.5	6
48	Boundary lubrication: Squeeze-out dynamics of a compressible two-dimensional liquid. Physical Review B, 2002, 66, .	3.2	5
49	Vibrational heating of molecules adsorbed on insulating surfaces using localized photon tunneling. Physical Review B, 2007, 75, .	3.2	5
50	van der Waals frictional drag induced by liquid flow in low-dimensional systems. Physical Review B, 2008, 77, .	3.2	5
51	Friction force at the motion of a small relativistic neutral particle with respect to blackbody radiation. JETP Letters, 2015, 101, 427-433.	1.4	5
52	Cubic anharmonicity and multiphonon vibrational relaxation of absorbed molecules. Chemical Physics Letters, 1991, 184, 301-304.	2.6	4
53	Adsorbate vibrational mode enhancement of radiative heat transfer and van der Waals friction. Surface Science, 2005, 587, 88-101.	1.9	4
54	Quantum Vavilov-Cherenkov radiation from shearing two transparent dielectric plates. Physical Review B, 2016, 93, .	3.2	3

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55	Singularities in radiative heat generation and interaction forces for two rotating nanoparticles caused by the anomalous Doppler effect. JETP Letters, 2017, 105, 733-738.	1.4	3
56	Singular Resonance in Fluctuation-Induced Electromagnetic Phenomena at the Rotation of a Nanoparticle near the Surface of a Condensed Medium. JETP Letters, 2018, 108, 147-154.	1.4	3
57	Resonant photon emission during relative sliding of two dielectric plates. Modern Physics Letters A, 2020, 35, 2040011.	1.2	3
58	Near-field radiative heat transfer and van der Waals friction between closely spaced graphene and amorphous SiO₂. Journal of Physics: Conference Series, 2011, 291, 012018.	0.4	2
59	Singular resonance in fluctuation-electromagnetic phenomena during the rotation of a nanoparticle near a surface. Europhysics Letters, 2018, 122, 14003.	2.0	2
60	Quantum Cherenkov radiation at the relative sliding of two transparent plates. JETP Letters, 2016, 103, 223-227.	1.4	1
61	Effect of Resonant Photon Emission in Radiative Heat Transfer and Generation. JETP Letters, 2019, 110, 397-404.	1.4	1
62	Isolated solutions of a local polaron model. Theoretical and Mathematical Physics(Russian) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 Td	0.9	0
63	Theory of Noncontact Friction. Nanoscience and Technology, 2007, , 393-438.	1.5	0
64	Electronic and phononic friction. , 1996, , 253-264.		0