

# Bo N J Persson

## List of Publications by Citations

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407  
papers

22,854  
citations

80  
h-index

136  
g-index

414  
ext. papers

24,661  
ext. citations

3.3  
avg, IF

7.56  
L-index

#	Paper	IF	Citations
407	Theory of rubber friction and contact mechanics. <i>Journal of Chemical Physics</i> , <b>2001</b> , 115, 3840-3861	3.9	932
406	Sliding Friction. <i>Nanoscience and Technology</i> , <b>2000</b> ,	0.6	631
405	On the nature of surface roughness with application to contact mechanics, sealing, rubber friction and adhesion. <i>Journal of Physics Condensed Matter</i> , <b>2005</b> , 17, R1-R62	1.8	613
404	Vibrational interaction between molecules adsorbed on a metal surface: The dipole-dipole interaction. <i>Physical Review B</i> , <b>1981</b> , 24, 6954-6970	3.3	509
403	Contact mechanics for randomly rough surfaces. <i>Surface Science Reports</i> , <b>2006</b> , 61, 201-227	12.9	477
402	Near-field radiative heat transfer and noncontact friction. <i>Reviews of Modern Physics</i> , <b>2007</b> , 79, 1291-1324	40.5	474
401	Sliding Friction. <i>Nanoscience and Technology</i> , <b>1998</b> ,	0.6	414
400	Vibrational lifetime for CO adsorbed on Cu(100). <i>Solid State Communications</i> , <b>1980</b> , 36, 175-179	1.6	328
399	The effect of surface roughness on the adhesion of elastic plates with application to biological systems. <i>Journal of Chemical Physics</i> , <b>2003</b> , 119, 11437-11444	3.9	327
398	Lateral hopping of molecules induced by excitation of internal vibration mode. <i>Science</i> , <b>2002</b> , 295, 2055-2058	33.3	317
397	Electron-hole-pair quenching of excited states near a metal. <i>Physical Review B</i> , <b>1982</b> , 26, 5409-5415	3.3	296
396	The potential energy surface, vibrational phase relaxation and the order-disorder transition in the adsorption system Pt{111}-CO. <i>Surface Science</i> , <b>1989</b> , 213, 49-89	1.8	289
395	Inelastic electron tunneling from a metal tip: The contribution from resonant processes. <i>Physical Review Letters</i> , <b>1987</b> , 59, 339-342	7.4	289
394	On the mechanism of adhesion in biological systems. <i>Journal of Chemical Physics</i> , <b>2003</b> , 118, 7614	3.9	281
393	Polarizability of small spherical metal particles: influence of the matrix environment. <i>Surface Science</i> , <b>1993</b> , 281, 153-162	1.8	270
392	On the theory of surface-enhanced Raman scattering. <i>Chemical Physics Letters</i> , <b>1981</b> , 82, 561-565	2.5	254
391	Elastoplastic contact between randomly rough surfaces. <i>Physical Review Letters</i> , <b>2001</b> , 87, 116101	7.4	250

390	Surface resistivity and vibrational damping in adsorbed layers. <i>Physical Review B</i> , <b>1991</b> , 44, 3277-3296	3.3	248
389	Brownian motion and vibrational phase relaxation at surfaces: CO on Ni(111). <i>Physical Review B</i> , <b>1985</b> , 32, 3586-3596	3.3	240
388	Influence of surface roughness on superhydrophobicity. <i>Physical Review Letters</i> , <b>2006</b> , 97, 116103	7.4	226
387	The effect of surface roughness on the adhesion of elastic solids. <i>Journal of Chemical Physics</i> , <b>2001</b> , 115, 5597-5610	3.9	224
386	Excited states at metal surfaces and their non-radiative relaxation. <i>The Journal of Physical Chemistry</i> , <b>1984</b> , 88, 837-848		205
385	Radiative heat transfer between nanostructures. <i>Physical Review B</i> , <b>2001</b> , 63,	3.3	194
384	Ordered structures and phase transitions in adsorbed layers. <i>Surface Science Reports</i> , <b>1992</b> , 15, 1-135	12.9	180
383	Crack propagation in rubber-like materials. <i>Journal of Physics Condensed Matter</i> , <b>2005</b> , 17, R1071-R1142	1.8	178
382	On the theory of rubber friction. <i>Surface Science</i> , <b>1998</b> , 401, 445-454	1.8	174
381	On the Fractal Dimension of Rough Surfaces. <i>Tribology Letters</i> , <b>2014</b> , 54, 99-106	2.8	173
380	Theory of photon emission in electron tunneling to metallic particles. <i>Physical Review Letters</i> , <b>1992</b> , 68, 3224-3227	7.4	172
379	Relation between interfacial separation and load: a general theory of contact mechanics. <i>Physical Review Letters</i> , <b>2007</b> , 99, 125502	7.4	166
378	Adhesion between an elastic body and a randomly rough hard surface. <i>European Physical Journal E</i> , <b>2002</b> , 8, 385-401	1.5	166
377	Elastic contact between randomly rough surfaces: Comparison of theory with numerical results. <i>Physical Review B</i> , <b>2002</b> , 65,	3.3	164
376	Meeting the Contact-Mechanics Challenge. <i>Tribology Letters</i> , <b>2017</b> , 65, 1	2.8	163
375	Femtosecond surface vibrational spectroscopy of CO adsorbed on Ru(001) during desorption. <i>Physical Review Letters</i> , <b>2000</b> , 84, 4653-6	7.4	158
374	Chemical contribution to surface-enhanced Raman scattering. <i>Physical Review Letters</i> , <b>2006</b> , 96, 207401	7.4	156
373	Crack propagation in viscoelastic solids. <i>Physical Review E</i> , <b>2005</b> , 71, 036123	2.4	156

372	Influence of exciton motion on the shape of optical absorption lines: Applications to vibrations at surfaces. <i>Physical Review B</i> , <b>1986</b> , 34, 2266-2283	3.3	154
371	Vibrational phase relaxation at surfaces: CO on Ni(111). <i>Physical Review Letters</i> , <b>1985</b> , 54, 2119-2122	7.4	152
370	Temperature-Dependent Surface States and Transitions of Si(111)-7 $\times$ 7. <i>Physical Review Letters</i> , <b>1983</b> , 51, 2214-2217	7.4	150
369	Inelastic scattering of slow electrons from Si(111) surfaces. <i>Physical Review B</i> , <b>1984</b> , 30, 5968-5986	3.3	149
368	On the nature of dense CO adlayers. <i>Journal of Chemical Physics</i> , <b>1990</b> , 92, 5034-5046	3.9	142
367	Optical In Situ Micro Tribometer for Analysis of Real Contact Area for Contact Mechanics, Adhesion, and Sliding Experiments. <i>Tribology Letters</i> , <b>2012</b> , 45, 185-194	2.8	140
366	Sliding friction. <i>Surface Science Reports</i> , <b>1999</b> , 33, 83-119	12.9	137
365	Electron-hole pair production at metal surfaces. <i>Physical Review B</i> , <b>1985</b> , 31, 1863-1872	3.3	137
364	Rubber friction: role of the flash temperature. <i>Journal of Physics Condensed Matter</i> , <b>2006</b> , 18, 7789-823	1.8	130
363	Theory of adhesion: role of surface roughness. <i>Journal of Chemical Physics</i> , <b>2014</b> , 141, 124701	3.9	126
362	Theory of the damping of excited molecules located above a metal surface. <i>Journal of Physics C: Solid State Physics</i> , <b>1978</b> , 11, 4251-4269		126
361	Adsorption of potassium and oxygen on graphite: A theoretical study. <i>Journal of Chemical Physics</i> , <b>1998</b> , 108, 3332-3341	3.9	121
360	Contact mechanics: contact area and interfacial separation from small contact to full contact. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 215214	1.8	114
359	Reference-plane position for the atom-surface van der Waals interaction. <i>Physical Review B</i> , <b>1984</b> , 30, 5669-5679	3.3	114
358	Self-affine elastic contacts: percolation and leakage. <i>Physical Review Letters</i> , <b>2012</b> , 108, 244301	7.4	113
357	Optical properties of two-dimensional systems of randomly distributed particles. <i>Physical Review B</i> , <b>1983</b> , 28, 4247-4254	3.3	113
356	Damping of vibrations in molecules adsorbed on a metal surface. <i>Surface Science</i> , <b>1980</b> , 97, 609-624	1.8	113
355	Theory of friction: Stress domains, relaxation, and creep. <i>Physical Review B</i> , <b>1995</b> , 51, 13568-13585	3.3	111

354	Local bond breaking via STM-induced excitations: the role of temperature. <i>Surface Science</i> , <b>1997</b> , 390, 45-54	1.8	110
353	Theory and simulation of sliding friction. <i>Physical Review Letters</i> , <b>1993</b> , 71, 1212-1215	7.4	107
352	Interfacial separation between elastic solids with randomly rough surfaces: Comparison between theory and numerical techniques. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2011</b> , 59, 2355-2369	5	106
351	Contact mechanics and rubber friction for randomly rough surfaces with anisotropic statistical properties. <i>European Physical Journal E</i> , <b>2009</b> , 29, 275-84	1.5	105
350	Contact area between a viscoelastic solid and a hard, randomly rough, substrate. <i>Journal of Chemical Physics</i> , <b>2004</b> , 120, 8779-93	3.9	105
349	Inelastic electron tunnelling from a metal tip. <i>Solid State Communications</i> , <b>1986</b> , 57, 769-772	1.6	104
348	Transverse and normal interfacial stiffness of solids with randomly rough surfaces. <i>Journal of Physics Condensed Matter</i> , <b>2011</b> , 23, 085001	1.8	97
347	A multiscale molecular dynamics approach to contact mechanics. <i>European Physical Journal E</i> , <b>2006</b> , 19, 47-58	1.5	97
346	Resonant photon tunneling enhancement of the radiative heat transfer. <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	97
345	Influence of surface roughness on adhesion between elastic bodies. <i>Physical Review Letters</i> , <b>2005</b> , 95, 124301	7.4	95
344	Layering transition in confined molecular thin films: Nucleation and growth. <i>Physical Review B</i> , <b>1994</b> , 50, 5590-5599	3.3	95
343	On the nature of the static friction, kinetic friction and creep. <i>Wear</i> , <b>2003</b> , 254, 835-851	3.5	94
342	Inelastic Electron Scattering by a Collective Vibrational Mode of Adsorbed CO. <i>Physical Review Letters</i> , <b>1980</b> , 45, 1421-1424	7.4	94
341	Wet adhesion with application to tree frog adhesive toe pads and tires. <i>Journal of Physics Condensed Matter</i> , <b>2007</b> , 19, 376110	1.8	92
340	Theory of friction: The role of elasticity in boundary lubrication. <i>Physical Review B</i> , <b>1994</b> , 50, 4771-4786	3.3	92
339	Vibrational energy and phase relaxation at surfaces. <i>Journal of Physics C: Solid State Physics</i> , <b>1984</b> , 17, 4741-4750		92
338	Theory of the leak-rate of seals. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 315011	1.8	90
337	Theory of friction and boundary lubrication. <i>Physical Review B</i> , <b>1993</b> , 48, 18140-18158	3.3	90

- 336 Vibrational line shapes of low-frequency adsorbate modes: CO on Pt(111). *Physical Review B*, **1989**, 40, 10273-10281 3.3 89
- 335 Vibrational Damping of Adsorbed Molecules: Methoxide on Cu(100). *Physical Review Letters*, **1982**, 48, 549-552 7.4 88
- 334 Self-consistent dynamic image potential in tunneling. *Physical Review B*, **1988**, 38, 9616-9627 3.3 86
- 333 Rubber friction on smooth surfaces. *European Physical Journal E*, **2006**, 21, 69-80 1.5 84
- 332 Theory of friction: the contribution from a fluctuating electromagnetic field. *Journal of Physics Condensed Matter*, **1999**, 11, 345-359 1.8 84
- 331 Dynamical processes at surfaces: Excitation of electron-hole pairs. *Physical Review B*, **1984**, 29, 4382-4394 3.3 84
- 330 Applications of surface resistivity to atomic scale friction, to the migration of Botadatoms, and to electrochemistry. *Journal of Chemical Physics*, **1993**, 98, 1659-1672 3.9 81
- 329 Quantum friction. *Physical Review Letters*, **2011**, 106, 094502 7.4 80
- 328 Leak rate of seals: Effective-medium theory and comparison with experiment. *European Physical Journal E*, **2010**, 31, 159-67 1.5 80
- 327 Collective vibrational modes of isotopic mixtures of CO on Cu(111) and Cu(001). *Surface Science*, **1981**, 110, 356-368 1.8 79
- 326 Surface and superconducting properties of cleaved high-temperature superconductors. *Physical Review Letters*, **1990**, 64, 603-606 7.4 78
- 325 Infrared reflection-absorption spectroscopy of dipole-forbidden adsorbate vibrations. *Surface Science*, **1994**, 310, 314-336 1.8 77
- 324 Theory of inelastic scattering of slow electrons by molecules absorbed on metal surfaces. *Solid State Communications*, **1977**, 24, 573-575 1.6 77
- 323 Optical properties of small metallic particles in a continuous dielectric medium. *Journal of Physics C: Solid State Physics*, **1983**, 16, 5375-5391 7.5 75
- 322 Finite-size scaling in the interfacial stiffness of rough elastic contacts. *Physical Review E*, **2013**, 87, 062802 2.4 74
- 321 Rubber friction on wet and dry road surfaces: The sealing effect. *Physical Review B*, **2005**, 71, 034104 3.3 74
- 320 Adhesion between elastic bodies with randomly rough surfaces. *Physical Review Letters*, **2002**, 89, 245502 2.4 74
- 319 Electronic friction of physisorbed molecules. *Journal of Chemical Physics*, **1995**, 103, 8679-8683 3.9 74

318	Theory of the interaction forces and the radiative heat transfer between moving bodies. <i>Physical Review B</i> , <b>2008</b> , 78,	3.3	71
317	Squeeze-out and wear: fundamental principles and applications. <i>Journal of Physics Condensed Matter</i> , <b>2004</b> , 16, R295-R355	1.8	71
316	Infrared spectroscopy of overtones and combination bands. <i>Journal of Chemical Physics</i> , <b>1998</b> , 109, 8641-8651	3.9	71
315	Linear sliding friction: on the origin of the microscopic friction for Xe on silver. <i>Surface Science</i> , <b>1996</b> , 367, 261-275	1.8	71
314	Inelastic scattering of slow electrons from adsorbed molecules. <i>Surface Science</i> , <b>1980</b> , 92, 265-282	1.8	70
313	Rubber friction on road surfaces: Experiment and theory for low sliding speeds. <i>Journal of Chemical Physics</i> , <b>2015</b> , 142, 194701	3.9	69
312	Electronic friction and liquid-flow-induced voltage in nanotubes. <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	69
311	Sum rules for surface response functions with application to the van der Waals interaction between an atom and a metal. <i>Physical Review B</i> , <b>1983</b> , 27, 6058-6065	3.3	69
310	Rolling friction for hard cylinder and sphere on viscoelastic solid. <i>European Physical Journal E</i> , <b>2010</b> , 33, 327-33	1.5	65
309	Resonant photon tunneling enhancement of the van der Waals friction. <i>Physical Review Letters</i> , <b>2003</b> , 91, 106101	7.4	65
308	Dissipative van der Waals interaction between a small particle and a metal surface. <i>Physical Review B</i> , <b>2002</b> , 65,	3.3	65
307	Near-field radiative heat transfer between closely spaced graphene and amorphous SiO <sub>2</sub> . <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	64
306	Heat transfer between elastic solids with randomly rough surfaces. <i>European Physical Journal E</i> , <b>2010</b> , 31, 3-24	1.5	64
305	The atomic force microscope: Can it be used to study biological molecules?. <i>Chemical Physics Letters</i> , <b>1987</b> , 141, 366-368	2.5	64
304	Optical properties of inhomogeneous media. <i>Solid State Communications</i> , <b>1982</b> , 44, 1637-1640	1.6	61
303	Capillary adhesion between elastic solids with randomly rough surfaces. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 315007	1.8	59
302	Molecular dynamics study of contact mechanics: contact area and interfacial separation from small to full contact. <i>Physical Review Letters</i> , <b>2008</b> , 100, 024303	7.4	59
301	The effect of surface roughness and viscoelasticity on rubber adhesion. <i>Soft Matter</i> , <b>2017</b> , 13, 3602-3623	3.6	58

300	Theory of inelastic tunneling induced motion of adsorbates on metal surfaces. <i>Surface Science</i> , <b>2002</b> , 502-503, 18-25	1.8	58
299	Surface resistivity and vibrational damping in adsorbed layers. <i>Chemical Physics Letters</i> , <b>1991</b> , 178, 204-212		58
298	Inelastic vacuum tunneling. <i>Physica Scripta</i> , <b>1988</b> , 38, 282-290	2.6	58
297	Lubrication in soft rough contacts: A novel homogenized approach. Part I - Theory. <i>Soft Matter</i> , <b>2011</b> , 7, 10395	3.6	57
296	Depolarization and metallization in alkali-metal overlayers. <i>Physical Review B</i> , <b>1990</b> , 42, 3171-3174	3.3	57
295	Dynamic polarizability of small metal particles. <i>Physical Review B</i> , <b>1987</b> , 35, 596-606	3.3	57
294	Leak rate of seals: Comparison of theory with experiment. <i>Europhysics Letters</i> , <b>2009</b> , 86, 44006	1.6	56
293	Dephasing of localized and delocalized vibrational modes: CO adsorbed on Ru(001). <i>Physical Review B</i> , <b>1997</b> , 56, 10644-10650	3.3	56
292	Biological adhesion for locomotion: basic principles. <i>Journal of Adhesion Science and Technology</i> , <b>2007</b> , 21, 1145-1173	2	56
291	Noncontact friction between nanostructures. <i>Physical Review B</i> , <b>2003</b> , 68,	3.3	56
290	Work function, optical absorption, and second-harmonic generation from alkali-metal atoms adsorbed on metal surfaces. <i>Physical Review B</i> , <b>1989</b> , 39, 8220-8235	3.3	56
289	Rubber friction: comparison of theory with experiment. <i>European Physical Journal E</i> , <b>2011</b> , 34, 1-11	1.5	55
288	Theory of friction: Dynamical phase transitions in adsorbed layers. <i>Journal of Chemical Physics</i> , <b>1995</b> , 103, 3849-3860	3.9	54
287	High temperature surface metallization of Ge(111) detected by electron energy loss spectroscopy. <i>Physical Review Letters</i> , <b>1994</b> , 73, 1951-1954	7.4	54
286	Theory of the local tunneling spectrum of a vibrating adsorbate. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>1988</b> , 6, 331-335	2.9	54
285	Low-frequency adsorbate vibrational relaxation and sliding friction. <i>Physical Review B</i> , <b>1999</b> , 59, 11777-11791	3.3	53
284	Nanodroplets on rough hydrophilic and hydrophobic surfaces. <i>European Physical Journal E</i> , <b>2008</b> , 25, 139-52	1.5	52
283	Collective vibrational modes in isotopic mixtures of CO adsorbed on Cu (100). <i>Solid State Communications</i> , <b>1980</b> , 36, 613-617	1.6	52



282	Biological Adhesion for Locomotion on Rough Surfaces: Basic Principles and A Theorist's View. <i>MRS Bulletin</i> , <b>2007</b> , 32, 486-490	3.2	51
281	Crack motion in viscoelastic solids: the role of the flash temperature. <i>European Physical Journal E</i> , <b>2005</b> , 17, 261-81	1.5	51
280	Surface resistivity: theory and applications. <i>Surface Science</i> , <b>1992</b> , 269-270, 103-112	1.8	51
279	On the elastic energy and stress correlation in the contact between elastic solids with randomly rough surfaces. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 312001	1.8	50
278	Adsorbate-induced enhancement of electrostatic noncontact friction. <i>Physical Review Letters</i> , <b>2005</b> , 94, 086104	7.4	50
277	On the origin of Amontons' friction law. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 395006	1.8	49
276	Dynamics of atomic adsorbates: hydrogen on Cu(111). <i>Chemical Physics Letters</i> , <b>1995</b> , 243, 429-434	2.5	48
275	High-resolution electron-energy-loss study of the surfaces and energy gaps of cleaved high-temperature superconductors. <i>Physical Review B</i> , <b>1990</b> , 42, 8057-8072	3.3	48
274	Elastic Contact Mechanics of Randomly Rough Surfaces: An Assessment of Advanced Asperity Models and Persson's Theory. <i>Tribology Letters</i> , <b>2018</b> , 66, 1	2.8	48
273	Phononic heat transfer across an interface: thermal boundary resistance. <i>Journal of Physics Condensed Matter</i> , <b>2011</b> , 23, 045009	1.8	47
272	Adhesion between a thin elastic plate and a hard randomly rough substrate. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	47
271	Relation between Dynamical Processes at Surfaces and Electron-Energy-Loss Measurements. <i>Physical Review Letters</i> , <b>1983</b> , 50, 1089-1091	7.4	47
270	Contact Mechanics and Friction on Dry and Wet Human Skin. <i>Tribology Letters</i> , <b>2013</b> , 50, 17-30	2.8	46
269	Qualitative theory of rubber friction and wear. <i>Journal of Chemical Physics</i> , <b>2000</b> , 112, 2021-2029	3.9	46
268	Absorption of photons by molecules adsorbed on metal surfaces. <i>Solid State Communications</i> , <b>1979</b> , 30, 163-166	1.6	46
267	Nanoadhesion. <i>Wear</i> , <b>2003</b> , 254, 832-834	3.5	45
266	Adsorbate motions induced by inelastic-tunneling current: theoretical scenarios of two-electron processes. <i>Journal of Chemical Physics</i> , <b>2005</b> , 123, 084707	3.9	45
265	Vibrational lineshapes for NO on Ni(111). <i>Surface Science</i> , <b>1989</b> , 218, 494-506	1.8	45

264	Vibrational excitation cross-sections for adsorbed CO. <i>Solid State Communications</i> , <b>1980</b> , 34, 473-476	1.6	45
263	FTIR overtone spectroscopy on surfaces. The CO mode in chemisorbed methoxy on Ni(111). <i>Chemical Physics Letters</i> , <b>1993</b> , 208, 414-419	2.5	44
262	Theory of viscoelastic lubrication. <i>Tribology International</i> , <b>2014</b> , 72, 118-130	4.9	43
261	Squeezing lubrication films: Layering transition for curved solid surfaces with long-range elasticity. <i>Journal of Chemical Physics</i> , <b>2000</b> , 112, 9524-9542	3.9	43
260	Theory of friction: Coulomb drag between two closely spaced solids. <i>Physical Review B</i> , <b>1998</b> , 57, 7327-7334	3.4	43
259	Long-Range Scattering of Electrons by Electron-Hole Pair Excitations at Metal Surfaces. <i>Physical Review Letters</i> , <b>1983</b> , 50, 2028-2031	7.4	42
258	Long-Range Electron-Phonon Coupling at Metal Surfaces. <i>Physical Review Letters</i> , <b>1984</b> , 52, 2073-2076	7.4	42
257	Contact mechanics between the human finger and a touchscreen under electroadhesion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 12668-12673	11.5	42
256	Effective viscosity of confined hydrocarbons. <i>Physical Review Letters</i> , <b>2012</b> , 108, 036102	7.4	41
255	The effects of the electric field in the STM on excitation localization. Implications for local bond breaking. <i>Chemical Physics Letters</i> , <b>1995</b> , 242, 483-489	2.5	41
254	Elastic contact mechanics: percolation of the contact area and fluid squeeze-out. <i>European Physical Journal E</i> , <b>2012</b> , 35, 5	1.5	40
253	Adhesion: role of bulk viscoelasticity and surface roughness. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 225004	1.8	40
252	Comment on "Brownian motion of microscopic solids under the action of fluctuating electromagnetic fields". <i>Physical Review Letters</i> , <b>2000</b> , 84, 3504	7.4	40
251	On the transition from boundary lubrication to hydrodynamic lubrication in soft contacts. <i>Journal of Physics Condensed Matter</i> , <b>2009</b> , 21, 185002	1.8	39
250	Master curve of viscoelastic solid: Using causality to determine the optimal shifting procedure, and to test the accuracy of measured data. <i>Polymer</i> , <b>2014</b> , 55, 565-571	3.9	38
249	Hot cracks in rubber: origin of the giant toughness of rubberlike materials. <i>Physical Review Letters</i> , <b>2005</b> , 95, 114301	7.4	38
248	Rubber contact mechanics: adhesion, friction and leakage of seals. <i>Soft Matter</i> , <b>2017</b> , 13, 9103-9121	3.6	37
247	Heat transfer between weakly coupled systems: Graphene on a-SiO <sub>2</sub> . <i>Europhysics Letters</i> , <b>2010</b> , 91, 560016	16	37

246	Rubber friction and tire dynamics. <i>Journal of Physics Condensed Matter</i> , <b>2011</b> , 23, 015003	1.8	37
245	Vibrational dephasing of terminally bonded CO on Ru(001). <i>Physical Review B</i> , <b>1986</b> , 34, 4354-4357	3.3	37
244	Rubber friction for tire tread compound on road surfaces. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 095007	1.8	36
243	Adsorbate vibrational dynamics in the anomalous skin effect frequency region. <i>Surface Science</i> , <b>1994</b> , 317, L1141-L1146	1.8	36
242	Adhesion of cellulose fibers in paper. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 045002	1.8	35
241	Heat transfer between graphene and amorphous SiO <sub>2</sub> . <i>Journal of Physics Condensed Matter</i> , <b>2010</b> , 22, 462201	1.8	35
240	Sealing is at the origin of rubber slipping on wet roads. <i>Nature Materials</i> , <b>2004</b> , 3, 882-5	27	35
239	Friction and universal contact area law for randomly rough viscoelastic contacts. <i>Journal of Physics Condensed Matter</i> , <b>2015</b> , 27, 105102	1.8	34
238	Fluid dynamics at the interface between contacting elastic solids with randomly rough surfaces. <i>Journal of Physics Condensed Matter</i> , <b>2010</b> , 22, 265004	1.8	34
237	Theory of friction: Friction dynamics for boundary lubricated surfaces. <i>Physical Review B</i> , <b>1997</b> , 55, 8004-8004	3.9	34
236	Squeezing molecular thin alkane lubrication films between curved solid surfaces with long-range elasticity: Layering transitions and wear. <i>Journal of Chemical Physics</i> , <b>2003</b> , 119, 2314-2321	3.9	34
235	On the origin of anti-absorption resonances in adsorbate vibrational spectroscopy. <i>Chemical Physics Letters</i> , <b>1991</b> , 185, 292-297	2.5	34
234	Interfacial separation between elastic solids with randomly rough surfaces: comparison of experiment with theory. <i>Journal of Physics Condensed Matter</i> , <b>2009</b> , 21, 015003	1.8	33
233	Action spectroscopy for single-molecule motion induced by vibrational excitation with a scanning tunneling microscope. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	33
232	Adhesion between elastic bodies with rough surfaces. <i>Solid State Communications</i> , <b>2002</b> , 123, 173-177	1.6	33
231	Dipole-coupling-induced line narrowing in adsorbate vibrational spectroscopy. <i>Chemical Physics Letters</i> , <b>1990</b> , 174, 443-448	2.5	33
230	Vibrational phase relaxation at surfaces: The role of lateral interaction. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , <b>1987</b> , 45, 215-225	1.7	33
229	Velocity dependence of friction of confined hydrocarbons. <i>Langmuir</i> , <b>2010</b> , 26, 8721-8	4	32

228	Adhesion between elastic solids with randomly rough surfaces: Comparison of analytical theory with molecular-dynamics simulations. <i>Europhysics Letters</i> , <b>2011</b> , 96, 66003	1.6	32
227	Vibrational energy relaxation at surfaces: O <sub>2</sub> chemisorbed on Pt(111). <i>Chemical Physics Letters</i> , <b>1987</b> , 139, 457-462	2.5	32
226	Vibrational dephasing by the exchange mechanism: Some new results. <i>Journal of Chemical Physics</i> , <b>1985</b> , 83, 5610-5618	3.9	32
225	Lubricated sliding dynamics: flow factors and Stribeck curve. <i>European Physical Journal E</i> , <b>2011</b> , 34, 113	1.5	31
224	Application of a boson Hubbard model to vibrational dynamics in adsorbate layers. <i>Physical Review B</i> , <b>1992</b> , 46, 12701-12716	3.3	31
223	Variation of the DC-resistance of smooth and atomically rough silver films during exposure to C <sub>2</sub> H <sub>6</sub> and C <sub>2</sub> H <sub>4</sub> . <i>Surface Science</i> , <b>1992</b> , 264, 327-340	1.8	31
222	On the nature of adsorbate phase diagrams: beyond lattice gas models. <i>Surface Science</i> , <b>1991</b> , 258, 451-463	3.3	31
221	Impact of molecular structure on the lubricant squeeze-out between curved surfaces with long range elasticity. <i>Journal of Chemical Physics</i> , <b>2006</b> , 125, 014704	3.9	30
220	Theory of friction: elastic coherence length and earthquake dynamics. <i>Solid State Communications</i> , <b>1999</b> , 109, 739-744	1.6	30
219	Monte Carlo calculations of adsorbate structures and the role of the vibrational entropy in phase transitions at surfaces. <i>Physical Review B</i> , <b>1989</b> , 40, 7115-7123	3.3	30
218	Electron-energy-loss study of the space-charge region at semiconductor surfaces. <i>Physical Review B</i> , <b>1987</b> , 35, 9128-9134	3.3	30
217	On the nature and decay of electronically excited states at metal surfaces. <i>Journal of Chemical Physics</i> , <b>1983</b> , 79, 5156-5162	3.9	30
216	Time-dependent fluid squeeze-out between solids with rough surfaces. <i>European Physical Journal E</i> , <b>2010</b> , 32, 281-90	1.5	29
215	Quantum theory of infrared-reflection spectroscopy from adsorbate-covered metal surfaces in the anomalous-skin-effect frequency region. <i>Physical Review B</i> , <b>1995</b> , 52, 2899-2906	3.3	29
214	Adsorbate-induced surface resistivity and nonlocal optics. <i>Chemical Physics Letters</i> , <b>1992</b> , 197, 7-11	2.5	29
213	Cluster study of the interaction of a Co molecule with an aluminium surface. <i>Surface Science</i> , <b>1986</b> , 171, 219-225	1.8	29
212	Surface topography and contact mechanics of dry and wet human skin. <i>Beilstein Journal of Nanotechnology</i> , <b>2014</b> , 5, 1341-8	3	28
211	Role of the external pressure on the dewetting of soft interfaces. <i>European Physical Journal E</i> , <b>2003</b> , 11, 409-13	1.5	28

210	Rubber friction on (apparently) smooth lubricated surfaces. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 085223	1.8	27
209	Frictional properties of confined polymers. <i>European Physical Journal E</i> , <b>2008</b> , 27, 37-46	1.5	27
208	On pattern transfer in replica molding. <i>Langmuir</i> , <b>2008</b> , 24, 6636-9	4	27
207	Quantum field theory of van der Waals friction. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	27
206	Theoretical state-of-the art in adsorbate motions and reactions induced by inelastic tunneling current with STM. <i>Surface Science</i> , <b>2004</b> , 566-568, 1-12	1.8	27
205	Rubber Friction on Ice: Experiments and Modeling. <i>Tribology Letters</i> , <b>2016</b> , 62, 1	2.8	26
204	The frictional drag force between quantum wells mediated by a fluctuating electromagnetic field. <i>Journal of Physics Condensed Matter</i> , <b>2001</b> , 13, 859-873	1.8	26
203	Determination of the frequency-dependent resistivity of ultrathin metallic films on Si(111). <i>Physical Review B</i> , <b>1985</b> , 31, 1856-1862	3.3	26
202	Ice friction: Role of non-uniform frictional heating and ice premelting. <i>Journal of Chemical Physics</i> , <b>2015</b> , 143, 224701	3.9	25
201	Theory of time-dependent plastic deformation in disordered solids. <i>Physical Review B</i> , <b>2000</b> , 61, 5949-5966	3.6	25
200	On the nature of the frustrated translations for CO on metal surfaces. <i>Chemical Physics Letters</i> , <b>1988</b> , 149, 278-283	2.5	25
199	Surface-roughness-induced electric-field enhancement and triboluminescence. <i>Europhysics Letters</i> , <b>2010</b> , 91, 46003	1.6	24
198	The puzzling collapse of electronic sliding friction on a superconductor surface. <i>Surface Science</i> , <b>1998</b> , 411, L855-L857	1.8	24
197	Contact mechanics with adhesion: Interfacial separation and contact area. <i>Europhysics Letters</i> , <b>2008</b> , 84, 46004	1.6	24
196	Enhancement of noncontact friction between closely spaced bodies by two-dimensional systems. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	24
195	Phenomenology of squeezing and sliding of molecularly thin Xe, CH <sub>4</sub> and C <sub>16</sub> H <sub>34</sub> lubrication films between smooth and rough curved solid surfaces with long-range elasticity. <i>Journal of Chemical Physics</i> , <b>2002</b> , 117, 3897-3914	3.9	24
194	Antiabsorption resonances in infrared reflectance spectroscopy of alkali-Cu(111) adsorbate systems: Is the ground state a surface charge density wave condensate?. <i>Physical Review Letters</i> , <b>1994</b> , 72, 1256-1259	7.4	24
193	Role of Preload in Adhesion of Rough Surfaces. <i>Physical Review Letters</i> , <b>2017</b> , 118, 238001	7.4	23

192	Tire Road Contact Stiffness. <i>Tribology Letters</i> , <b>2014</b> , 56, 397-402	2.8	23
191	Dewetting at soft viscoelastic interfaces. <i>Journal of Chemical Physics</i> , <b>2004</b> , 121, 2246-52	3.9	23
190	Theory of rubber friction: Nonstationary sliding. <i>Physical Review B</i> , <b>2002</b> , 65,	3.3	23
189	Inelastic electron scattering from thin metal films. <i>Solid State Communications</i> , <b>1984</b> , 52, 811-813	1.6	23
188	Static or breakloose friction for lubricated contacts: the role of surface roughness and dewetting. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 445013	1.8	22
187	Surface roughness of peeled adhesive tape: A mystery?. <i>Europhysics Letters</i> , <b>2010</b> , 92, 46001	1.6	22
186	Theory of powdery rubber wear. <i>Journal of Physics Condensed Matter</i> , <b>2009</b> , 21, 485001	1.8	22
185	Determination of the surface conductivity of ultrathin metallic films on Si(111) by high-resolution electron-energy-loss spectroscopy. <i>Physical Review Letters</i> , <b>1985</b> , 54, 584-587	7.4	22
184	Indirect vibrational coupling between adsorbed molecules. <i>Surface Science</i> , <b>1982</b> , 116, 585-595	1.8	22
183	Probing the Surface Brillouin Zone by Infrared Absorption Spectroscopy: Asymmetric Line Shape of Vibrational Combination Band. <i>Physical Review Letters</i> , <b>1997</b> , 78, 3503-3506	7.4	21
182	Role of surface roughness in superlubricity. <i>Journal of Physics Condensed Matter</i> , <b>2006</b> , 18, 4143-60	1.8	21
181	Damping of excited molecules located above a metal surface. <i>Solid State Communications</i> , <b>1978</b> , 27, 417-421	1.8	21
180	Electroadhesion with application to touchscreens. <i>Soft Matter</i> , <b>2019</b> , 15, 1758-1775	3.6	20
179	General contact mechanics theory for randomly rough surfaces with application to rubber friction. <i>Journal of Chemical Physics</i> , <b>2015</b> , 143, 224111	3.9	20
178	Fluid contact angle on solid surfaces: Role of multiscale surface roughness. <i>Journal of Chemical Physics</i> , <b>2015</b> , 143, 134705	3.9	20
177	Time-Dependent Fluid Squeeze-Out Between Soft Elastic Solids with Randomly Rough Surfaces. <i>Tribology Letters</i> , <b>2012</b> , 47, 409-416	2.8	20
176	Contact mechanics for layered materials with randomly rough surfaces. <i>Journal of Physics Condensed Matter</i> , <b>2012</b> , 24, 095008	1.8	20
175	Nanoadhesion of elastic bodies: Roughness and temperature effects. <i>Journal of Chemical Physics</i> , <b>2003</b> , 118, 6473-6480	3.9	20

174	Boundary lubrication: dynamics of squeeze-out. <i>Physical Review E</i> , <b>2001</b> , 63, 055103	2.4	20
173	Electronic damping of a vibrating dipole near a metal. <i>Journal of Physics C: Solid State Physics</i> , <b>1981</b> , 14, 5583-5589		20
172	The dependency of adhesion and friction on electrostatic attraction. <i>Journal of Chemical Physics</i> , <b>2018</b> , 148, 144701	3.9	19
171	Rubber friction: The contribution from the area of real contact. <i>Journal of Chemical Physics</i> , <b>2018</b> , 148, 224701	3.9	19
170	On the dependence of the leak rate of seals on the skewness of the surface height probability distribution. <i>Europhysics Letters</i> , <b>2010</b> , 90, 38002	1.6	19
169	. <i>Physics-Uspekhi</i> , <b>2007</b> , 50, 879	2.8	19
168	Role of Frictional Heating in Rubber Friction. <i>Tribology Letters</i> , <b>2014</b> , 56, 77-92	2.8	18
167	Heating of adsorbate by vibrational-mode coupling. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	18
166	Vibrational dynamics at surfaces. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , <b>1990</b> , 54-55, 81-101	1.7	18
165	Lateral interactions and vibrational lifetimes. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , <b>1983</b> , 29, 43-57	1.7	18
164	General theory of frictional heating with application to rubber friction. <i>Journal of Physics Condensed Matter</i> , <b>2015</b> , 27, 175008	1.8	17
163	On the origin of why static or breakloose friction is larger than kinetic friction, and how to reduce it: the role of aging, elasticity and sequential interfacial slip. <i>Journal of Physics Condensed Matter</i> , <b>2012</b> , 24, 225008	1.8	17
162	The effect of surface roughness on the adhesion of solid surfaces for systems with and without liquid lubricant. <i>Journal of Chemical Physics</i> , <b>2004</b> , 121, 9639-47	3.9	17
161	Electronic friction on a superconductor surface. <i>Solid State Communications</i> , <b>2000</b> , 115, 145-148	1.6	17
160	Friction of molecules at metallic surfaces: experimental approach using synchrotron infrared spectroscopy. <i>Surface Science</i> , <b>1999</b> , 433-435, 797-805	1.8	17
159	Theory of friction: on the origin of the stick-slip motion of lubricated surfaces. <i>Chemical Physics Letters</i> , <b>1996</b> , 254, 114-121	2.5	17
158	Monte-Carlo calculations of adsorbate structures. <i>Solid State Communications</i> , <b>1989</b> , 70, 211-214	1.6	17
157	Rolling Friction: Comparison of Analytical Theory with Exact Numerical Results. <i>Tribology Letters</i> , <b>2014</b> , 55, 15-21	2.8	16

156	Elastic instabilities at a sliding interface. <i>Physical Review B</i> , <b>2001</b> , 63,	3.3	16
155	Vibrational phase relaxation at surfaces: The role of lateral interaction. <i>Journal of Chemical Physics</i> , <b>1988</b> , 88, 3349-3352	3.9	16
154	High resolution electron energy loss studies of Fermi level states of clean and metallized Si(111) surfaces. <i>Journal of Vacuum Science &amp; Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , <b>1984</b> , 2, 384		16
153	Leakage of Metallic Seals: Role of Plastic Deformations. <i>Tribology Letters</i> , <b>2016</b> , 63, 1	2.8	16
152	Influence of anisotropic surface roughness on lubricated rubber friction: Extended theory and an application to hydraulic seals. <i>Wear</i> , <b>2018</b> , 410-411, 43-62	3.5	15
151	On the dependency of friction on load: Theory and experiment. <i>Europhysics Letters</i> , <b>2016</b> , 113, 56002	1.6	15
150	Comment on No quantum friction between uniformly moving plates <i>New Journal of Physics</i> , <b>2011</b> , 13, 068001	2.9	15
149	Heat transfer at surfaces exposed to short-pulsed laser fields. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	15
148	Adsorbate vibrational mode enhancement of radiative heat transfer. <i>JETP Letters</i> , <b>2003</b> , 78, 457-460	1.2	15
147	On the origin of the transition from slip to stick. <i>Solid State Communications</i> , <b>2000</b> , 114, 261-266	1.6	15
146	Model Study of Brittle Fracture of Polymers. <i>Physical Review Letters</i> , <b>1998</b> , 81, 3439-3442	7.4	15
145	Fracture of polymers. <i>Journal of Chemical Physics</i> , <b>1999</b> , 110, 9713-9724	3.9	15
144	Electronic conductivity of Si(111)-7 x 7. <i>Physical Review B</i> , <b>1986</b> , 34, 5916-5917	3.3	15
143	Dependency of Rubber Friction on Normal Force or Load: Theory and Experiment. <i>Tire Science and Technology</i> , <b>2017</b> , 45, 25-54	0.7	15
142	Soft matter dynamics: Accelerated fluid squeeze-out during slip. <i>Journal of Chemical Physics</i> , <b>2016</b> , 144, 124903	3.9	15
141	Silicone Rubber Adhesion and Sliding Friction. <i>Tribology Letters</i> , <b>2016</b> , 62, 1	2.8	15
140	Adhesion and Friction for Three Tire Tread Compounds. <i>Lubricants</i> , <b>2019</b> , 7, 20	3.1	14
139	Contact electrification and the work of adhesion. <i>Europhysics Letters</i> , <b>2013</b> , 103, 36003	1.6	14



138	Inelastic scattering of slow electrons from adsorbed CO. <i>Surface Science</i> , <b>1980</b> , 99, 283-288	1.8	14
137	Role of hydrophobicity on interfacial fluid flow: theory and some applications. <i>European Physical Journal E</i> , <b>2014</b> , 37, 12	1.5	13
136	Comment on "Friction between a viscoelastic body and a rigid surface with random self-affine roughness". <i>Physical Review Letters</i> , <b>2013</b> , 111, 189401	7.4	13
135	Giant enhancement of noncontact friction between closely spaced bodies by dielectric films and two-dimensional systems. <i>Journal of Experimental and Theoretical Physics</i> , <b>2007</b> , 104, 96-110	1	13
134	Crack propagation in finite-sized viscoelastic solids with application to adhesion. <i>Europhysics Letters</i> , <b>2017</b> , 119, 18002	1.6	12
133	Interfacial leakage of elastomer seals at low temperatures. <i>International Journal of Pressure Vessels and Piping</i> , <b>2018</b> , 160, 14-23	2.4	12
132	On the Use of Silicon Rubber Replica for Surface Topography Studies. <i>Tribology Letters</i> , <b>2018</b> , 66, 1	2.8	12
131	On the Validity of the Method of Reduction of Dimensionality: Area of Contact, Average Interfacial Separation and Contact Stiffness. <i>Tribology Letters</i> , <b>2013</b> , 52, 223-229	2.8	11
130	Boundary lubrication: layering transition for curved solid surfaces with long-range elasticity. <i>Solid State Communications</i> , <b>2000</b> , 115, 599-604	1.6	11
129	Infrared reflection-absorption spectroscopy of dipole forbidden adsorbate vibrations. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , <b>1993</b> , 64-65, 23-38	1.7	11
128	Sphere and cylinder contact mechanics during slip. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2020</b> , 143, 104094	5	11
127	Physics of suction cups. <i>Soft Matter</i> , <b>2019</b> , 15, 9482-9499	3.6	11
126	Contact mechanics for polydimethylsiloxane: from liquid to solid. <i>Soft Matter</i> , <b>2018</b> , 14, 1142-1148	3.6	10
125	Comment on "Bully covariant radiation force on a polarizable particle". <i>New Journal of Physics</i> , <b>2014</b> , 16, 118001	2.9	10
124	Dynamics of squeeze-out: Theory and experiments. <i>Journal of Chemical Physics</i> , <b>2003</b> , 118, 11160-11167	3.9	10
123	Theory and simulations of squeeze-out dynamics in boundary lubrication. <i>Journal of Chemical Physics</i> , <b>2001</b> , 115, 11268-11277	3.9	10
122	Layering transition: dynamical instabilities during squeeze-out. <i>Chemical Physics Letters</i> , <b>2000</b> , 324, 231-239		10
121	Optical properties of orientationally disordered systems. <i>Physical Review B</i> , <b>1986</b> , 34, 8941-8943	3.3	10

120	Electroadhesion for soft adhesive pads and robotics: theory and numerical results. <i>Soft Matter</i> , <b>2019</b> , 15, 8032-8039	3.6	10
119	Adhesion, friction and viscoelastic properties for non-aged and aged Styrene Butadiene rubber. <i>Tribology International</i> , <b>2018</b> , 121, 78-83	4.9	9
118	Fluid squeeze-out between rough surfaces: comparison of theory with experiment. <i>Journal of Physics Condensed Matter</i> , <b>2011</b> , 23, 355005	1.8	9
117	Sliding friction: the contribution from defects. <i>Journal of Physics Condensed Matter</i> , <b>1997</b> , 9, 2869-2889	1.8	9
116	Dynamical interactions in sliding friction. <i>Surface Science</i> , <b>2000</b> , 457, 345-356	1.8	9
115	Contact Mechanics for Randomly Rough Surfaces: On the Validity of the Method of Reduction of Dimensionality. <i>Tribology Letters</i> , <b>2015</b> , 58, 1	2.8	8
114	Some Comments on Hydrogel and Cartilage Contact Mechanics and Friction. <i>Tribology Letters</i> , <b>2018</b> , 66, 1	2.8	8
113	Adhesion between rubber and glass in dry and lubricated condition. <i>Journal of Chemical Physics</i> , <b>2018</b> , 148, 234702	3.9	8
112	Thermal interface resistance: crossover from nanoscale to macroscale. <i>Journal of Physics Condensed Matter</i> , <b>2014</b> , 26, 015009	1.8	8
111	Adsorbate hopping via vibrational-mode coupling induced by femtosecond laser pulses. <i>Physical Review B</i> , <b>2008</b> , 78,	3.3	8
110	Influence of frozen capillary waves on contact mechanics. <i>Wear</i> , <b>2008</b> , 264, 746-749	3.5	8
109	Squeezing wetting and nonwetting liquids. <i>Journal of Chemical Physics</i> , <b>2004</b> , 120, 1997-2004	3.9	8
108	Friction dynamics for curved solid surfaces with long-range elasticity. <i>Journal of Chemical Physics</i> , <b>2000</b> , 113, 5477	3.9	8
107	Reply to "Comment on 'Surface resistivity and vibrational damping in adsorbed layers' ". <i>Physical Review B</i> , <b>1993</b> , 48, 15471	3.3	8
106	Optical absorption and exciton motion in the photosynthetic unit. <i>Chemical Physics Letters</i> , <b>1986</b> , 128, 107-112	2.5	8
105	On the nature of low-frequency vibrational modes in globular protein molecules immersed in water. <i>Chemical Physics Letters</i> , <b>1986</b> , 127, 428-431	2.5	8
104	Adhesion paradox: Why adhesion is usually not observed for macroscopic solids. <i>Physical Review E</i> , <b>2020</b> , 102, 042803	2.4	8
103	Linear and Nonlinear Viscoelastic Modulus of Rubber. <i>Lubricants</i> , <b>2019</b> , 7, 22	3.1	7

102	Multiscale Contact Mechanics with Application to Seals and Rubber Friction on Dry and Lubricated Surfaces. <i>Advances in Polymer Science</i> , <b>2016</b> , 103-156	1.3	7
101	Adhesion and friction between glass and rubber in the dry state and in water: role of contact hydrophobicity. <i>Soft Matter</i> , <b>2018</b> , 14, 5428-5441	3.6	7
100	Numerical and Experimental Investigation on O-Ring-Seals in Dynamic Applications. <i>International Journal of Fluid Power</i> , <b>2009</b> , 10, 51-59		7
99	Heat transfer between adsorbate and laser-heated hot electrons. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 224016	1.8	7
98	On the theory of friction and boundary lubrication. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , <b>1993</b> , 64-65, 403-412	1.7	7
97	On the mathematical structure of the Lindhard dielectric tensor. <i>Journal of Physics C: Solid State Physics</i> , <b>1980</b> , 13, 435-439		7
96	Rubber friction directional asymmetry. <i>Europhysics Letters</i> , <b>2016</b> , 116, 66002	1.6	7
95	The effect of finite roughness size and bulk thickness on the prediction of rubber friction and contact mechanics. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , <b>2016</b> , 230, 1398-1409	1.3	6
94	How do liquids confined at the nanoscale influence adhesion?. <i>Journal of Physics Condensed Matter</i> , <b>2006</b> , 18, 11521-11530	1.8	6
93	On the role of inertia and temperature in continuum and atomistic models of brittle fracture. <i>Journal of Physics Condensed Matter</i> , <b>1998</b> , 10, 10529-10538	1.8	6
92	Inelastic scattering of electrons from accumulation and inversion layers. <i>Physical Review B</i> , <b>1989</b> , 40, 7819-7824	3.3	6
91	Plastic Deformation of Rough Metallic Surfaces. <i>Tribology Letters</i> , <b>2020</b> , 68, 1	2.8	6
90	The effect of surface nano-corrugation on the squeeze-out of molecular thin hydrocarbon films between curved surfaces with long range elasticity. <i>Nanotechnology</i> , <b>2016</b> , 27, 445401	3.4	6
89	Viscoelastic Crack Propagation: Review of Theories and Applications. <i>Advances in Polymer Science</i> , <b>2020</b> , 377-420	1.3	6
88	Lubricated sliding friction: Role of interfacial fluid slip and surface roughness. <i>European Physical Journal E</i> , <b>2020</b> , 43, 9	1.5	5
87	Shearing Nanometer-Thick Confined Hydrocarbon Films: Friction and Adhesion. <i>Tribology Letters</i> , <b>2016</b> , 62, 1	2.8	5
86	Lateral hopping of CO molecules on Pt(111) surface by femtosecond laser pulses. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	5
85	Vibrational heating of molecules adsorbed on insulating surfaces using localized photon tunneling. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	5

84	Boundary lubrication: Squeeze-out dynamics of a compressible two-dimensional liquid. <i>Physical Review B</i> , <b>2002</b> , 66,	3.3	5
83	On the role of the vibrational entropy in phase transitions at surfaces. <i>Solid State Communications</i> , <b>1989</b> , 70, 215-218	1.6	5
82	Novel microstructure and surface conductivity of ultra-thin metallic films on Si(111). <i>Solid State Communications</i> , <b>1985</b> , 54, 425-428	1.6	5
81	Quasielastic peak in electron scattering from metallic surfaces. <i>Physical Review Letters</i> , <b>1985</b> , 55, 2957-2959	1.7	5
80	Theory of Friction: Elastic Coherence Length and Earthquake Dynamics <b>1996</b> , 179-189		5
79	Electric field effect in heat transfer in 2D devices. <i>Journal of Physics Condensed Matter</i> , <b>2020</b> , 32, 255301	1.8	5
78	Fluid Leakage in Metallic Seals. <i>Tribology Letters</i> , <b>2020</b> , 68, 1	2.8	5
77	Interfacial fluid flow for systems with anisotropic roughness. <i>European Physical Journal E</i> , <b>2020</b> , 43, 25	1.5	5
76	Ice friction: Glacier sliding on hard randomly rough bed surface. <i>Journal of Chemical Physics</i> , <b>2018</b> , 149, 234701	3.9	5
75	Contact Mechanics for Solids with Randomly Rough Surfaces and Plasticity. <i>Lubricants</i> , <b>2019</b> , 7, 90	3.1	4
74	Simple contact mechanics model of the vertebrate cartilage. <i>Soft Matter</i> , <b>2017</b> , 13, 6349-6362	3.6	4
73	van der Waals frictional drag induced by liquid flow in low-dimensional systems. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	4
72	Adsorbate vibrational mode enhancement of radiative heat transfer and van der Waals friction. <i>Surface Science</i> , <b>2005</b> , 587, 88-101	1.8	4
71	Cubic anharmonicity and multiphonon vibrational relaxation of absorbed molecules. <i>Chemical Physics Letters</i> , <b>1991</b> , 184, 301-304	2.5	4
70	On the Debye-Waller factor in molecular beam scattering experiments. <i>Solid State Communications</i> , <b>1980</b> , 36, 271-273	1.6	4
69	Area of Real Contact: Elastic and Plastic Deformations. <i>Nanoscience and Technology</i> , <b>2000</b> , 45-91	0.6	4
68	Sliding on Lubricated Surfaces. <i>Nanoscience and Technology</i> , <b>2000</b> , 101-170	0.6	4
67	Conveyor Belt Drive Physics. <i>Tribology Letters</i> , <b>2020</b> , 68, 1	2.8	4

66	Contact mechanics for poroelastic, fluid-filled media, with application to cartilage. <i>Journal of Chemical Physics</i> , <b>2016</b> , 145, 234703	3.9	4
65	Rolling friction of elastomers: role of strain softening. <i>Soft Matter</i> , <b>2019</b> , 15, 9233-9243	3.6	4
64	Cylinder-Flat Contact Mechanics with Surface Roughness. <i>Tribology Letters</i> , <b>2021</b> , 69, 1	2.8	4
63	A simple model for viscoelastic crack propagation. <i>European Physical Journal E</i> , <b>2021</b> , 44, 3	1.5	4
62	Atomistic modeling of tribological properties of Pd and Al nanoparticles on a graphene surface. <i>Beilstein Journal of Nanotechnology</i> , <b>2018</b> , 9, 1239-1246	3	4
61	On Opening Crack Propagation in Viscoelastic Solids. <i>Tribology Letters</i> , <b>2021</b> , 69, 1	2.8	4
60	Elastohydrodynamics for Soft Solids with Surface Roughness: Transient Effects. <i>Tribology Letters</i> , <b>2017</b> , 65, 1	2.8	3
59	On the load dependence of friction: Role of the long-range elastic coupling. <i>Tribology International</i> , <b>2018</b> , 123, 209-215	4.9	3
58	Quantum Vavilov-Cherenkov radiation from shearing two transparent dielectric plates. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	3
57	Lateral hopping of CO on Cu(111) induced by femtosecond laser pulses. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	3
56	Squeezing Molecularly Thin Alkane Lubrication Films: Layering Transitions and Wear. <i>Tribology Letters</i> , <b>2004</b> , 16, 195-200	2.8	3
55	Comment on "Nanoadhesion between rough surfaces". <i>Physical Review Letters</i> , <b>2002</b> , 88, 129601	7.4	3
54	Sliding Friction of Lubricated Surfaces <b>1996</b> , 69-91		3
53	Rubber Wear and the Role of Transfer Films on Rubber Friction on Hard Rough Substrates. <i>Tribology Letters</i> , <b>2021</b> , 69, 1	2.8	3
52	Comments on the Theory of Fluid Flow Between Solids with Anisotropic Roughness. <i>Tribology Letters</i> , <b>2021</b> , 69, 1	2.8	3
51	Surface topography and water contact angle of sandblasted and thermally annealed glass surfaces. <i>Journal of Chemical Physics</i> , <b>2019</b> , 150, 054701	3.9	2
50	Near-field radiative heat transfer and van der Waals friction between closely spaced graphene and amorphous SiO <sub>2</sub> . <i>Journal of Physics: Conference Series</i> , <b>2011</b> , 291, 012018	0.3	2
49	Persson, Zhao, and Zhang Reply:. <i>Physical Review Letters</i> , <b>2006</b> , 97,	7.4	2

48	Effect of Surface Roughness and Adsorbates on Superlubricity <b>2007</b> , 131-146		2
47	Contact Mechanics, Friction and Adhesion with Application to Quasicrystals. <i>Nanoscience and Technology</i> , <b>2007</b> , 269-306	0.6	2
46	Sliding on Lubricated Surfaces. <i>Nanoscience and Technology</i> , <b>1998</b> , 97-154	0.6	2
45	Stress Domains, Relaxation, and Creep. <i>Nanoscience and Technology</i> , <b>2000</b> , 363-393	0.6	2
44	Theory of Friction: Friction Dynamics for Boundary Lubricated Surfaces <b>1997</b> , 555-577		2
43	Rubber Adhesion and Friction: Role of Surface Energy and Contamination Films. <i>Frontiers in Mechanical Engineering</i> , <b>2021</b> , 6,	2.6	2
42	Side-leakage of face mask. <i>European Physical Journal E</i> , <b>2021</b> , 44, 75	1.5	2
41	General theory of electroadhesion. <i>Journal of Physics Condensed Matter</i> , <b>2021</b> , 33,	1.8	2
40	Physics of Suction Cups in Air and in Water. <i>Biologically-inspired Systems</i> , <b>2021</b> , 187-209	0.7	2
39	On the Stability of Spinning Asteroids. <i>Tribology Letters</i> , <b>2022</b> , 70, 1	2.8	2
38	Comment on On the Origin of Frictional Energy Dissipation <i>Tribology Letters</i> , <b>2020</b> , 68, 1	2.8	1
37	Effect of the electric current on the Casimir force between graphene sheets. <i>JETP Letters</i> , <b>2013</b> , 98, 143-149		1
36	Author Response to the Comment by Popov on Contact Mechanics for Randomly Rough Surfaces: On the Validity of the Method of Reduction of Dimensionality <i>Tribology Letters</i> , <b>2015</b> , 60, 1	2.8	1
35	Reply to the Discussion of the Paper by Krick et al.: Optical In Situ Micro Tribometer for Analysis of Real Contact Area for Contact Mechanics, Adhesion, and Sliding Experiments <i>Tribology Letters</i> , <b>2012</b> , 46, 207-209	2.8	1
34	Dimethyl Ether: New Advances in Wear Testing: Theoretical and Experimental Results <b>2003</b> ,		1
33	Thermodynamics and Kinetics of Shear Induced Melting of a thin Lubrication film Trapped between Solids. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 651, 1		1
32	A Multiscale Molecular Dynamics Approach to Contact Mechanics and Friction: From Continuum Mechanics to Molecular Dynamics. <i>Nanoscience and Technology</i> , <b>2007</b> , 307-343	0.6	1
31	Novel Sliding Systems. <i>Nanoscience and Technology</i> , <b>1998</b> , 387-444	0.6	1

30	Lubricated Friction Dynamics. <i>Nanoscience and Technology</i> , <b>2000</b> , 395-413	0.6	1
29	Boundary Lubrication. <i>Nanoscience and Technology</i> , <b>2000</b> , 313-334	0.6	1
28	Cylinder-flat-surface contact mechanics during sliding. <i>Physical Review E</i> , <b>2020</b> , 102, 043002	2.4	1
27	Fundamentals of Adhesion <b>2016</b> ,		1
26	Inelastic electron scattering from ultrathin metallic films on Si(111). <i>Journal of Electron Spectroscopy and Related Phenomena</i> , <b>1986</b> , 39, 83-88	1.7	0
25	Air, Helium and Water Leakage in Rubber O-ring Seals with Application to Syringes. <i>Tribology Letters</i> , <b>2022</b> , 70, 1	2.8	0
24	Fluid Leakage in Static Rubber Seals. <i>Tribology Letters</i> , <b>2022</b> , 70, 1	2.8	0
23	Comment on "Diffusion and dimer formation of CO molecules induced by femtosecond laser pulses". <i>Physical Review Letters</i> , <b>2010</b> , 104, 239601	7.4	
22	What can high-resolution electron energy loss spectroscopy tell about pre-melting of semiconductor surfaces at high temperatures?. <i>Surface Science</i> , <b>1994</b> , 312, 198-200	1.8	
21	Vibrational phase relaxation at surfaces. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , <b>1986</b> , 39, 79-82	1.7	
20	Lateral Interactions and Vibrational Lifetimes. <i>Studies in Surface Science and Catalysis</i> , <b>1983</b> , 43-57	1.8	
19	Properties of ultrathin metallic films on Si(111) determined by high-resolution electron energy loss spectroscopy. <i>Applications of Surface Science</i> , <b>1985</b> , 22-23, 415-425		
18	Vibrational Phase Relaxation at Surfaces. <i>Studies in Surface Science and Catalysis</i> , <b>1986</b> , 26, 79-82	1.8	
17	Inelastic Electron Scattering from Ultrathin Metallic Films on Si(111). <i>Studies in Surface Science and Catalysis</i> , <b>1986</b> , 83-88	1.8	
16	Sliding of Adsorbate Layers. <i>Nanoscience and Technology</i> , <b>2000</b> , 171-311	0.6	
15	Novel Sliding Systems. <i>Nanoscience and Technology</i> , <b>2000</b> , 435-496	0.6	
14	Elastic Interactions and Instability Transitions. <i>Nanoscience and Technology</i> , <b>2000</b> , 335-362	0.6	
13	Modern Experimental Methods and Results. <i>Nanoscience and Technology</i> , <b>2000</b> , 17-36	0.6	

- 12 Theory of Noncontact Friction. *Nanoscience and Technology*, **2007**, 393-438 0.6
- 11 Surface Resistivity and Atomic Scale Friction **1993**, 21-41
- 10 Electronic and phononic friction **1996**, 253-264
- 9 Stress Domains, Relaxation, and Creep. *Nanoscience and Technology*, **1998**, 315-345 0.6
- 8 Sliding of Adsorbate Layers. *Nanoscience and Technology*, **1998**, 155-268 0.6
- 7 Modern Experimental Methods and Results. *Nanoscience and Technology*, **1998**, 17-35 0.6
- 6 Lubricated Friction Dynamics. *Nanoscience and Technology*, **1998**, 347-365 0.6
- 5 Elastic Interactions and Instability Transitions. *Nanoscience and Technology*, **1998**, 289-313 0.6
- 4 Boundary Lubrication. *Nanoscience and Technology*, **1998**, 269-288 0.6
- 3 Vibrational Lifetimes for Molecules Adsorbed on Metal Surfaces **1982**, 113-122
- 2 Dynamical Processes at Surfaces: Excitation of Electron-Hole Pairs and Phonons. *Jerusalem Symposia on Quantum Chemistry and Biochemistry*, **1984**, 257-269
- 1 Air leakage in seals with application to syringes. *Applied Surface Science Advances*, **2022**, 8, 100222 2.6