Jeffrey B Sokoloff

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Theory of energy dissipation in sliding crystal surfaces. Physical Review B, 1990, 42, 760-765.	3.2	186
2	Dominance of Phonon Friction for a Xenon Film on a Silver (111) Surface. Physical Review Letters, 1997, 79, 4798-4801.	7.8	112
3	Electron localization in crystals with quasiperiodic lattice potentials. Physical Review B, 1980, 22, 5823-5828.	3.2	70
4	Molecular-dynamical studies of the depinning of charge-density waves. Physical Review B, 1981, 23, 1992-1998.	3.2	64
5	Theory of the contribution to sliding friction from electronic excitations in the microbalance experiment. Physical Review B, 1995, 52, 5318-5322.	3.2	57
6	Band structure and localization in incommensurate lattice potentials. Physical Review B, 1981, 23, 6422-6429.	3.2	55
7	Possible nearly frictionless sliding for mesoscopic solids. Physical Review Letters, 1993, 71, 3450-3453.	7.8	55
8	Chiral Anomaly and the Rational Quantization of the Hall Conductance. Physical Review Letters, 1984, 52, 1587-1589.	7.8	53
9	Free sliding in lattices with two incommensurate periodicities. Physical Review B, 1978, 18, 6549-6559.	3.2	52
10	Theory of Inelastic Neutron Scattering in the Itinerant Model Antiferromagnetic Metals. I. Physical Review, 1969, 185, 770-782.	2.7	51
11	Free-Spin Magnetic Behavior of the One-Dimensional Near-Neighbor Hubbard-Model Electron System. Physical Review B, 1970, 2, 779-781.	3.2	49
12	Localization in an Almost Periodically Modulated Array of Potential Barriers. Physical Review Letters, 1982, 49, 334-337.	7.8	47
13	Electron Localization in Quasicrystals. Physical Review Letters, 1986, 57, 2223-2226.	7.8	47
14	Theory of atomic level sliding friction between ideal crystal interfaces. Journal of Applied Physics, 1992, 72, 1262-1270.	2.5	47
15	Determination of an atomic-scale frictional force law through quartz-crystal microbalance measurements. Physical Review B, 1993, 48, 9134-9137.	3.2	46
16	Consequences of the persistence of Stoner splitting up to and above Tcfor the phase transition and the elementary excitations of ferromagnetic metals. Journal of Physics F: Metal Physics, 1975, 5, 1946-1956.	1.6	40
17	Sliding charge-density waves in periodic and disordered lattices. Physical Review B, 1977, 16, 3367-3372.	3.2	38
18	Microscopic mechanisms for kinetic friction: Nearly frictionless sliding for small solids. Physical Review B, 1995, 52, 7205-7214.	3.2	35

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19	Static Friction between Elastic Solids due to Random Asperities. Physical Review Letters, 2001, 86, 3312-3315.	7.8	33
20	Domain motion and threshold behavior of charge-density waves. Physical Review B, 1985, 31, 2270-2276.	3.2	31
21	Theory of the observed ultralow friction between sliding polyelectrolyte brushes. Journal of Chemical Physics, 2008, 129, 014901.	3.0	31
22	Possible microscopic explanation of the virtually universal occurrence of static friction. Physical Review B, 2002, 65, .	3.2	30
23	Persistence of the Stoner Splitting in Metallic Ferromagnets aboveTc. Physical Review Letters, 1973, 31, 1417-1421.	7.8	29
24	Quasiclassical theory of quantum particles in two incommensurate periodic potentials. Physical Review B, 1981, 23, 2039-2041.	3.2	29
25	A polarised-neutron scattering demonstration of deviations from Stoner-theory behaviour in nickel. Journal of Physics F: Metal Physics, 1983, 13, 249-279.	1.6	27
26	Effects of defects on the friction between film and substrate in a microbalance experiment. Physical Review B, 1995, 51, 15573-15574.	3.2	27
27	Theory of Neutron Scattering in the Itinerant Model of Antiferromagnetic Metals. II. Physical Review, 1969, 185, 783-791.	2.7	26
28	Undamped Lattice Vibrations in Systems with Two Incommensurate Periodicities. Physical Review Letters, 1978, 41, 1561-1564.	7.8	26
29	Dynamical friction in sliding condensed-matter systems. Physical Review B, 1979, 20, 5071-5083.	3.2	25
30	Charged vortex excitations in quantum Hall systems. Physical Review B, 1985, 31, 1924-1928.	3.2	25
31	Comparison of the kinetic friction of planar neutral and polyelectrolyte polymer brushes using molecular dynamics simulations. Physical Review E, 2012, 85, 011801.	2.1	25
32	Droplet evaporation residue indicating SARS-COV-2 survivability on surfaces. Physics of Fluids, 2021, 33, 013309.	4.0	23
33	Anomalous Electrical Conduction in Quasicrystals and Fibonacci Lattices. Physical Review Letters, 1987, 58, 2267-2270.	7.8	22
34	Antiferromagnetism in Narrow-Band Solids. Physical Review B, 1970, 1, 1144-1150.	3.2	21
35	Theory of Verwey and Charge-Density-Wave-State Ordering in Magnetite. Physical Review B, 1972, 5, 4496-4505.	3.2	21
36	Spinâ€wave spectrum for barium ferrite. Journal of Applied Physics, 1990, 67, 2017-2023.	2.5	21

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37	Theory of Magnetic Properties of Narrow-Band Solids. Physical Review B, 1970, 2, 3707-3713.	3.2	20
38	Magnetic Ordering in Solid Helium-3. Physical Review Letters, 1975, 35, 673-676.	7.8	20
39	Electronic Structure of Magnetic Impurities in Copper. Physical Review, 1967, 161, 540-556.	2.7	19
40	Phonon spectrum for barium ferrite. Physical Review B, 1991, 44, 619-627.	3.2	19
41	Theory of Ferromagnetism in Narrow-Band Solids, with Application to Experiments onCoxFe1â^'xS2. Physical Review B, 1971, 3, 3826-3834.	3.2	18
42	Phenomenological Molecular-Field Theory of the Mott-Wigner Transition in Magnetite. Physical Review B, 1971, 3, 3162-3170.	3.2	18
43	Perturbation-theoretic studies of the anomalous electronic structure and transport properties of quasicrystals. Physical Review B, 1987, 36, 6361-6371.	3.2	18
44	Effects of surface defects on friction for a thin solid film sliding over a solid surface. Physical Review B, 1998, 57, 4888-4894.	3.2	18
45	Fluctuation induced band splitting in ferromagnetic and nearly ferromagnetic metals. Journal of Physics F: Metal Physics, 1975, 5, 528-542.	1.6	17
46	Excitations of modulated crystals near the commensurate-incommensurate transition. Physical Review B, 1982, 25, 5901-5906.	3.2	17
47	Oscillatory length-dependent conductivity in periodic and almost periodic crystals. Journal of Physics C: Solid State Physics, 1984, 17, 1703-1708.	1.5	16
48	Strongly Temperature Dependent Sliding Friction for a Superconducting Interface. Physical Review Letters, 2000, 84, 515-517.	7.8	16
49	Commensurability in one-dimensional lattices at finite temperature. Journal of Statistical Physics, 1979, 21, 497-516.	1.2	15
50	Dry Friction due to Adsorbed Molecules. Physical Review Letters, 2003, 90, 246101.	7.8	15
51	Multiband Theory of Inelastic Neutron Scattering by Ferromagnetic Metals at Low Temperatures. Physical Review, 1969, 180, 613-621.	2.7	14
52	Charge ordering and lattice distortion inFe3O4. Physical Review B, 1976, 13, 2003-2006.	3.2	14
53	Comment on â€~â€~First principles theory of atomic-scale friction''. Physical Review Letters, 1991, 66, 965-965.	7.8	14
54	Theory of the effects of surface roughness on fluid lubrication of hydrogels. Soft Matter, 2012, 8, 8164.	2.7	14

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55	Polar Spin Waves in Ferromagnetic Metals. Physical Review, 1968, 173, 617-630.	2.7	13
56	Theory of the effects of multiscale surface roughness and stiffness on static friction. Physical Review E, 2006, 73, 016104.	2.1	13
57	Theory of Friction between Neutral Polymer Brushes. Macromolecules, 2007, 40, 4053-4058.	4.8	13
58	Enhancement of the water flow velocity through carbon nanotubes resulting from the radius dependence of the friction due to electron excitations. Physical Review E, 2018, 97, 033107.	2.1	13
59	Theory of Critical-Fluctuation-Enhanced Raman Scattering by Phonons in NH4Br. Physical Review B, 1972, 5, 4962-4966.	3.2	12
60	Polarized neutron measurement of ''forbidden magnon scattering'' in nickel. Journal of Applied Physics, 1979, 50, 1961-1962.	2.5	12
61	Friedmanet al.Respond. Physical Review Letters, 1984, 53, 2592-2592.	7.8	12
62	Ground state vacancies and magnetic ordering in solid3He. Journal of Low Temperature Physics, 1975, 21, 463-471.	1.4	11
63	Ionic order and defect conductivity in the one-dimensional superionic conductor hollandite. Physical Review B, 1978, 17, 4843-4849.	3.2	11
64	Optical properties of titanium dioxide nanotube arrays. Journal of Applied Physics, 2014, 115, .	2.5	11
65	Remnant Bose Condensation inHe4Submonolayer Films. Physical Review A, 1972, 5, 475-476.	2.5	10
66	Intrinsic ferrimagnetic resonance linewidth of barium ferrite due to spinâ€wave scattering by trigonal site singleâ€particle excitations. Journal of Applied Physics, 1992, 72, 612-614.	2.5	10
67	Theory of energy dissipation in sliding crystal surfaces at nonzero temperature. Physical Review B, 1993, 47, 6106-6109.	3.2	10
68	Ferrimagnetic resonance lineshape asymmetry due to Suhl instabilities. Journal of Applied Physics, 1993, 74, 1938-1943.	2.5	10
69	Effects of defects on friction for a Xe film sliding on Ag(111). Physical Review B, 1999, 60, 4005-4017.	3.2	10
70	Theory of Hydrostatic Lubrication for Polymer Hydrogel-Coated Surfaces with Excess Salt. Journal of Physical Chemistry B, 2011, 115, 2709-2716.	2.6	10
71	Theory of Electron and Phonon Contributions to Sliding Friction. , 1996, , 217-229.		10
72	Impurity pinning in one, two, and three dimensions in incommensurate modulated lattices. Physical Review B, 1979, 20, 4713-4720.	3.2	9

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73	Friction in the zero sliding velocity limit. Physical Review E, 2003, 68, 066118.	2.1	9
74	Theory of Inelastic Neutron Scattering from Orientationally Disordered Molecular Crystals, with Particular Application to ND4Br and ND4Cl. Physical Review B, 1973, 7, 1644-1650.	3.2	8
75	A droplet model for ferromagnetic spin waves aboveTC. Physical Review B, 1978, 17, 2380-2383.	3.2	8
76	Effects of Capillary Forces on a Hydrogel Sphere Pressed against a Surface. Langmuir, 2016, 32, 135-139.	3.5	8
77	Theory of Longitudinal Spin Fluctuations and the Antiferromagnetic Phase Transition in Chromium Metal. Physical Review, 1969, 187, 584-586.	2.7	7
78	Ferromagnetism on the solidHe3melting curve. Physical Review B, 1976, 14, 1146-1150.	3.2	7
79	Optical absorption and neutron scattering by lattice vibrations of incommensurate lattices. Physical Review B, 1978, 18, 3275-3281.	3.2	7
80	Effects of electronic friction from the walls on water flow in carbon nanotubes and on water desalination. Physical Review E, 2019, 100, 023112.	2.1	7
81	Static and dynamic properties of one-dimensional disordered magnetic Ising Systems. Physical Review B, 1983, 27, 334-345.	3.2	6
82	Comment on â€~â€~DNA plasmon''. Physical Review Letters, 1989, 63, 2316-2316.	7.8	6
83	Spin-wave—Stoner-mode interaction in ferromagnetic metals aboveTc. Physical Review B, 1976, 13, 4172-4173.	3.2	5
84	Entropy of vacancy formation in solidHe3. Physical Review B, 1978, 18, 3293-3297.	3.2	5
85	Damping and softening of low frequency vibrational modes of long molecules when placed in a viscous solvent. Journal of Chemical Physics, 1988, 89, 2330-2335.	3.0	5
86	Kinetic friction due to Ohm's law heating. Journal of Physics Condensed Matter, 2002, 14, 5277-5287.	1.8	5
87	Static and dry friction due to multiscale surface roughness. Physical Review E, 2008, 78, 036111.	2.1	5
88	Theory of lubrication due to polyelectrolyte hydrogels with arbitrary salt concentration and degree of compression. Journal of Chemical Physics, 2013, 139, 084902.	3.0	5
89	Absence of a Hall Effect in Ice Crystals. Physical Review Letters, 1973, 31, 90-92.	7.8	4
90	Remanent magnetization in a random antiferromagnetic Ising chain. Physical Review B, 1982, 25, 2026-2029.	3.2	4

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91	Calculation of the ferromagnetic resonance linewidth of barium ferrite. Journal of Applied Physics, 1991, 69, 6183-6185.	2.5	4
92	Theory of lubrication due to collective pinning. Physical Review E, 2005, 71, 056107.	2.1	4
93	Theory of the Short Time Mechanical Relaxation in Articular Cartilage. Journal of Biomechanical Engineering, 2011, 133, 104504.	1.3	4
94	Surface roughness and dry friction. Physical Review E, 2012, 85, 027102.	2.1	4
95	Multiscale treatment of theoretical mechanisms for the protection of hydrogel surfaces from adhesive forces. Physical Review E, 2014, 90, 032408.	2.1	4
96	Ferromagnetism in the Nearly-Half-Filled-Band Hubbard Model at Nonzero Temperatures. Physical Review B, 1971, 4, 232-235.	3.2	3
97	Localization in an Almost Periodically Modulated Array of Potential Barriers Physical Review Letters, 1982, 49, 700-700.	7.8	3
98	Theory of the microwaveâ€frequency magnetic susceptibility of insulating ferri―and ferromagnets. Journal of Applied Physics, 1989, 66, 3187-3191.	2.5	3
99	Uncoiling transition for DNA in solution. Physical Review E, 1996, 54, 691-705.	2.1	3
100	Effects of stick-slip motion on energy dissipation in small sliding solids. Journal of Physics Condensed Matter, 1998, 10, 9991-9998.	1.8	3
101	Reduction of energy absorption by phonons and spin waves in a disordered solid due to localization. Physical Review B, 2000, 61, 9380-9386.	3.2	3
102	Discrete model studies of two grafted polyelectrolyte polymer hydrogels pressed in contact. Journal of Chemical Physics, 2013, 139, 144902.	3.0	3
103	Enhancement of the ion concentration in a salt solution near a wall due to electrical image potentials and enhancement of surface tension due to the presence of salt. Physical Review E, 2020, 102, 052606.	2.1	3
104	Monte Carlo studies of the two-dimensional registry transition. Physical Review B, 1980, 22, 2506-2513.	3.2	2
105	Perturbation theory for the electrical conductivity of quasiperiodic lattices. Physical Review B, 1988, 37, 7091-7093.	3.2	2
106	Adiabatic molecular-dynamics-simulation-method studies of kinetic friction. Physical Review E, 2005, 71, 066125.	2.1	2
107	Effects of electrical image forces on salt dissolved in water. Physical Review E, 2020, 101, 013110.	2.1	2
108	Antiferromagnetism in Narrow Band Solids. Journal of Applied Physics, 1970, 41, 873-874.	2.5	1

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109	Lack of superconducting behavior of sliding frohlich waves. Ferroelectrics, 1977, 16, 79-81.	0.6	1
110	Theory of depinning of monolayer films adsorbed on a quartz crystal microbalance. Physical Review E, 2008, 77, 042601.	2.1	1
111	Compression and lubrication of salt free polyelectrolyte microgel particles in highly compressed suspensions by counterion osmotic pressure. Journal of Chemical Physics, 2015, 142, 234903.	3.0	1
112	Effects of electrical image potentials and solvation energy on salt ions near a metallic or dielectric wall. European Physical Journal E, 2021, 44, 122.	1.6	1
113	Lorentz Transformation in the Undergraduate Curriculum. American Journal of Physics, 1963, 31, 444-446.	0.7	0
114	Effects of Phonons and Impurities on Single-Particle-Mode Neutron Scattering in Chromium. Physical Review B, 1971, 3, 2367-2369.	3.2	0
115	The Role of Harmonics in the First Order Antiferromagnetic to Paramagnetic Transition in Chromium. , 1974, , .		0
116	Ferromagnetic ordering in solid He3 due to ground state vacancies. AIP Conference Proceedings, 1976, , .	0.4	0
117	Metastable states in the random antiferromagnetic ising chain. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1981, 108, 1325-1326.	0.9	0
118	Screening of charges in quantum Hall systems. Journal of Physics C: Solid State Physics, 1985, 18, L997-L1002.	1.5	0
119	Dynamical threshold behaviour of a sliding charge density wave. Journal of Physics C: Solid State Physics, 1985, 18, 1641-1646.	1.5	0
120	Dynamical Threshold Behavior of A Sliding Charge Density Wave. Molecular Crystals and Liquid Crystals, 1985, 121, 91-94.	0.8	0
121	Anomalous Rigid-Layer Modes in Layered Compounds. Molecular Crystals and Liquid Crystals, 1985, 121, 161-164.	0.8	0
122	Single-impurity model for charge-density-wave dynamics. Physical Review B, 1988, 38, 3841-3845.	3.2	0
123	Comment on â€~â€~Microwave absorption by dissolved DNA''. Physical Review A, 1989, 39, 2745-2746.	2.5	0
124	Theory of acoustic mode vibrations of DNA fibers. Biopolymers, 1990, 30, 555-562.	2.4	0
125	Spinâ€wave spectrum for barium ferrite (abstract). Journal of Applied Physics, 1990, 67, 5534-5534	2.5	0
126	Applicability of the ratchet model to the polarization of charge density waves below the threshold field. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1991, 63, 551-555.	0.6	0

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127	Possible lowâ€loss Faraday rotation and phase shifts using multilayer ferrite structures. Journal of Applied Physics, 1992, 71, 1494-1498.	2.5	0
128	Static Friction between Elastic Solids due to Random Asperities. Materials Research Society Symposia Proceedings, 2000, 651, 1.	0.1	0
129	Effects on Friction of Adsorbed Molecules: How They Modify Dry Friction. ACS Symposium Series, 2004, , 69-84.	0.5	0
130	Superlubricity for Incommensurate Crystalline and Disordered Interfaces. , 2007, , 1-15.		0
131	Theory of Lubrication due to Poly-Electrolyte Polymer Brushes. Materials Research Society Symposia Proceedings, 2007, 1049, 1.	0.1	0
132	Theory of Fluid Lubrication of Hydrogels and Articular Cartilage during Compression Under an Applied Load. Materials Research Society Symposia Proceedings, 2012, 1418, 39.	0.1	0
133	Diffusion mechanism for highly compressed microgel particles. Journal of Chemical Physics, 2018, 149, 064901.	3.0	0
134	Electrical image potential and solvation energies for an ion in a pore in a metallic electrode or in a nanotube. Physical Review E, 2022, 105, 044606.	2.1	0