

# Jeffrey B Sokoloff

## List of Publications by Year in descending order

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134  
papers

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218381

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times ranked

876  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrical image potential and solvation energies for an ion in a pore in a metallic electrode or in a nanotube. <i>Physical Review E</i> , 2022, 105, 044606.	0.8	0
2	Droplet evaporation residue indicating SARS-COV-2 survivability on surfaces. <i>Physics of Fluids</i> , 2021, 33, 013309.	1.6	23
3	Effects of electrical image potentials and solvation energy on salt ions near a metallic or dielectric wall. <i>European Physical Journal E</i> , 2021, 44, 122.	0.7	1
4	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. <i>Physical Review E</i> , 2020, 102, 052606.	0.8	3
5	Effects of electrical image forces on salt dissolved in water. <i>Physical Review E</i> , 2020, 101, 013110.	0.8	2
6	Effects of electronic friction from the walls on water flow in carbon nanotubes and on water desalination. <i>Physical Review E</i> , 2019, 100, 023112.	0.8	7
7	Enhancement of the water flow velocity through carbon nanotubes resulting from the radius dependence of the friction due to electron excitations. <i>Physical Review E</i> , 2018, 97, 033107.	0.8	13
8	Diffusion mechanism for highly compressed microgel particles. <i>Journal of Chemical Physics</i> , 2018, 149, 064901.	1.2	0
9	Effects of Capillary Forces on a Hydrogel Sphere Pressed against a Surface. <i>Langmuir</i> , 2016, 32, 135-139.	1.6	8
10	Compression and lubrication of salt free polyelectrolyte microgel particles in highly compressed suspensions by counterion osmotic pressure. <i>Journal of Chemical Physics</i> , 2015, 142, 234903.	1.2	1
11	Multiscale treatment of theoretical mechanisms for the protection of hydrogel surfaces from adhesive forces. <i>Physical Review E</i> , 2014, 90, 032408.	0.8	4
12	Optical properties of titanium dioxide nanotube arrays. <i>Journal of Applied Physics</i> , 2014, 115, .	1.1	11
13	Theory of lubrication due to polyelectrolyte hydrogels with arbitrary salt concentration and degree of compression. <i>Journal of Chemical Physics</i> , 2013, 139, 084902.	1.2	5
14	Discrete model studies of two grafted polyelectrolyte polymer hydrogels pressed in contact. <i>Journal of Chemical Physics</i> , 2013, 139, 144902.	1.2	3
15	Theory of Fluid Lubrication of Hydrogels and Articular Cartilage during Compression Under an Applied Load. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1418, 39.	0.1	0
16	Surface roughness and dry friction. <i>Physical Review E</i> , 2012, 85, 027102.	0.8	4
17	Comparison of the kinetic friction of planar neutral and polyelectrolyte polymer brushes using molecular dynamics simulations. <i>Physical Review E</i> , 2012, 85, 011801.	0.8	25
18	Theory of the effects of surface roughness on fluid lubrication of hydrogels. <i>Soft Matter</i> , 2012, 8, 8164.	1.2	14

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19	Theory of Hydrostatic Lubrication for Polymer Hydrogel-Coated Surfaces with Excess Salt. Journal of Physical Chemistry B, 2011, 115, 2709-2716.	1.2	10
20	Theory of the Short Time Mechanical Relaxation in Articular Cartilage. Journal of Biomechanical Engineering, 2011, 133, 104504.	0.6	4
21	Theory of the observed ultralow friction between sliding polyelectrolyte brushes. Journal of Chemical Physics, 2008, 129, 014901.	1.2	31
22	Theory of depinning of monolayer films adsorbed on a quartz crystal microbalance. Physical Review E, 2008, 77, 042601.	0.8	1
23	Static and dry friction due to multiscale surface roughness. Physical Review E, 2008, 78, 036111.	0.8	5
24	Superlubricity for Incommensurate Crystalline and Disordered Interfaces. , 2007, , 1-15.		0
25	Theory of Lubrication due to Poly-Electrolyte Polymer Brushes. Materials Research Society Symposia Proceedings, 2007, 1049, 1.	0.1	0
26	Theory of Friction between Neutral Polymer Brushes. Macromolecules, 2007, 40, 4053-4058.	2.2	13
27	Theory of the effects of multiscale surface roughness and stiffness on static friction. Physical Review E, 2006, 73, 016104.	0.8	13
28	Theory of lubrication due to collective pinning. Physical Review E, 2005, 71, 056107.	0.8	4
29	Adiabatic molecular-dynamics-simulation-method studies of kinetic friction. Physical Review E, 2005, 71, 066125.	0.8	2
30	Effects on Friction of Adsorbed Molecules: How They Modify Dry Friction. ACS Symposium Series, 2004, , 69-84.	0.5	0
31	Friction in the zero sliding velocity limit. Physical Review E, 2003, 68, 066118.	0.8	9
32	Dry Friction due to Adsorbed Molecules. Physical Review Letters, 2003, 90, 246101.	2.9	15
33	Possible microscopic explanation of the virtually universal occurrence of static friction. Physical Review B, 2002, 65, .	1.1	30
34	Kinetic friction due to Ohm's law heating. Journal of Physics Condensed Matter, 2002, 14, 5277-5287.	0.7	5
35	Static Friction between Elastic Solids due to Random Asperities. Physical Review Letters, 2001, 86, 3312-3315.	2.9	33
36	Static Friction between Elastic Solids due to Random Asperities. Materials Research Society Symposia Proceedings, 2000, 651, 1.	0.1	0

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37	Strongly Temperature Dependent Sliding Friction for a Superconducting Interface. Physical Review Letters, 2000, 84, 515-517.	2.9	16
38	Reduction of energy absorption by phonons and spin waves in a disordered solid due to localization. Physical Review B, 2000, 61, 9380-9386.	1.1	3
39	Effects of defects on friction for a Xe film sliding on Ag(111). Physical Review B, 1999, 60, 4005-4017.	1.1	10
40	Effects of stick-slip motion on energy dissipation in small sliding solids. Journal of Physics Condensed Matter, 1998, 10, 9991-9998.	0.7	3
41	Effects of surface defects on friction for a thin solid film sliding over a solid surface. Physical Review B, 1998, 57, 4888-4894.	1.1	18
42	Dominance of Phonon Friction for a Xenon Film on a Silver (111) Surface. Physical Review Letters, 1997, 79, 4798-4801.	2.9	112
43	Uncoiling transition for DNA in solution. Physical Review E, 1996, 54, 691-705.	0.8	3
44	Theory of Electron and Phonon Contributions to Sliding Friction. , 1996, , 217-229.		10
45	Effects of defects on the friction between film and substrate in a microbalance experiment. Physical Review B, 1995, 51, 15573-15574.	1.1	27
46	Theory of the contribution to sliding friction from electronic excitations in the microbalance experiment. Physical Review B, 1995, 52, 5318-5322.	1.1	57
47	Microscopic mechanisms for kinetic friction: Nearly frictionless sliding for small solids. Physical Review B, 1995, 52, 7205-7214.	1.1	35
48	Theory of energy dissipation in sliding crystal surfaces at nonzero temperature. Physical Review B, 1993, 47, 6106-6109.	1.1	10
49	Ferrimagnetic resonance lineshape asymmetry due to Suhl instabilities. Journal of Applied Physics, 1993, 74, 1938-1943.	1.1	10
50	Determination of an atomic-scale frictional force law through quartz-crystal microbalance measurements. Physical Review B, 1993, 48, 9134-9137.	1.1	46
51	Possible nearly frictionless sliding for mesoscopic solids. Physical Review Letters, 1993, 71, 3450-3453.	2.9	55
52	Intrinsic ferrimagnetic resonance linewidth of barium ferrite due to spin-wave scattering by trigonal site single-particle excitations. Journal of Applied Physics, 1992, 72, 612-614.	1.1	10
53	Possible low-loss Faraday rotation and phase shifts using multilayer ferrite structures. Journal of Applied Physics, 1992, 71, 1494-1498.	1.1	0
54	Theory of atomic level sliding friction between ideal crystal interfaces. Journal of Applied Physics, 1992, 72, 1262-1270.	1.1	47

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55	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
56	Calculation of the ferromagnetic resonance linewidth of barium ferrite. Journal of Applied Physics, 1991, 69, 6183-6185.	1.1	4
57	Phonon spectrum for barium ferrite. Physical Review B, 1991, 44, 619-627.	1.1	19
58	Comment on "First principles theory of atomic-scale friction". Physical Review Letters, 1991, 66, 965-965.	2.9	14
59	Theory of acoustic mode vibrations of DNA fibers. Biopolymers, 1990, 30, 555-562.	1.2	0
60	Spin-wave spectrum for barium ferrite (abstract). Journal of Applied Physics, 1990, 67, 5534-5534.	1.1	0
61	Theory of energy dissipation in sliding crystal surfaces. Physical Review B, 1990, 42, 760-765.	1.1	186
62	Spin-wave spectrum for barium ferrite. Journal of Applied Physics, 1990, 67, 2017-2023.	1.1	21
63	Comment on "Microwave absorption by dissolved DNA". Physical Review A, 1989, 39, 2745-2746.	1.0	0
64	Theory of the microwave-frequency magnetic susceptibility of insulating ferrites and ferromagnets. Journal of Applied Physics, 1989, 66, 3187-3191.	1.1	3
65	Comment on "DNA plasmon". Physical Review Letters, 1989, 63, 2316-2316.	2.9	6
66	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.	1.2	5
67	Perturbation theory for the electrical conductivity of quasiperiodic lattices. Physical Review B, 1988, 37, 7091-7093.	1.1	2
68	Single-impurity model for charge-density-wave dynamics. Physical Review B, 1988, 38, 3841-3845.	1.1	0
69	Perturbation-theoretic studies of the anomalous electronic structure and transport properties of quasicrystals. Physical Review B, 1987, 36, 6361-6371.	1.1	18
70	Anomalous Electrical Conduction in Quasicrystals and Fibonacci Lattices. Physical Review Letters, 1987, 58, 2267-2270.	2.9	22
71	Electron Localization in Quasicrystals. Physical Review Letters, 1986, 57, 2223-2226.	2.9	47
72	Screening of charges in quantum Hall systems. Journal of Physics C: Solid State Physics, 1985, 18, L997-L1002.	1.5	0

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73	Dynamical threshold behaviour of a sliding charge density wave. Journal of Physics C: Solid State Physics, 1985, 18, 1641-1646.	1.5	0
74	Domain motion and threshold behavior of charge-density waves. Physical Review B, 1985, 31, 2270-2276.	1.1	31
75	Charged vortex excitations in quantum Hall systems. Physical Review B, 1985, 31, 1924-1928.	1.1	25
76	Dynamical Threshold Behavior of A Sliding Charge Density Wave. Molecular Crystals and Liquid Crystals, 1985, 121, 91-94.	0.9	0
77	Anomalous Rigid-Layer Modes in Layered Compounds. Molecular Crystals and Liquid Crystals, 1985, 121, 161-164.	0.9	0
78	Chiral Anomaly and the Rational Quantization of the Hall Conductance. Physical Review Letters, 1984, 52, 1587-1589.	2.9	53
79	Friedman et al. Respond. Physical Review Letters, 1984, 53, 2592-2592.	2.9	12
80	Oscillatory length-dependent conductivity in periodic and almost periodic crystals. Journal of Physics C: Solid State Physics, 1984, 17, 1703-1708.	1.5	16
81	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
82	Static and dynamic properties of one-dimensional disordered magnetic Ising Systems. Physical Review B, 1983, 27, 334-345.	1.1	6
83	Localization in an Almost Periodically Modulated Array of Potential Barriers. Physical Review Letters, 1982, 49, 334-337.	2.9	47
84	Localization in an Almost Periodically Modulated Array of Potential Barriers.. Physical Review Letters, 1982, 49, 700-700.	2.9	3
85	Excitations of modulated crystals near the commensurate-incommensurate transition. Physical Review B, 1982, 25, 5901-5906.	1.1	17
86	Remanent magnetization in a random antiferromagnetic Ising chain. Physical Review B, 1982, 25, 2026-2029.	1.1	4
87	Molecular-dynamical studies of the depinning of charge-density waves. Physical Review B, 1981, 23, 1992-1998.	1.1	64
88	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
89	Quasiclassical theory of quantum particles in two incommensurate periodic potentials. Physical Review B, 1981, 23, 2039-2041.	1.1	29
90	Band structure and localization in incommensurate lattice potentials. Physical Review B, 1981, 23, 6422-6429.	1.1	55

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91	Monte Carlo studies of the two-dimensional registry transition. Physical Review B, 1980, 22, 2506-2513.	1.1	2
92	Electron localization in crystals with quasiperiodic lattice potentials. Physical Review B, 1980, 22, 5823-5828.	1.1	70
93	Polarized neutron measurement of $\pi$ -forbidden magnon scattering in nickel. Journal of Applied Physics, 1979, 50, 1961-1962.	1.1	12
94	Dynamical friction in sliding condensed-matter systems. Physical Review B, 1979, 20, 5071-5083.	1.1	25
95	Impurity pinning in one, two, and three dimensions in incommensurate modulated lattices. Physical Review B, 1979, 20, 4713-4720.	1.1	9
96	Commensurability in one-dimensional lattices at finite temperature. Journal of Statistical Physics, 1979, 21, 497-516.	0.5	15
97	Free sliding in lattices with two incommensurate periodicities. Physical Review B, 1978, 18, 6549-6559.	1.1	52
98	Optical absorption and neutron scattering by lattice vibrations of incommensurate lattices. Physical Review B, 1978, 18, 3275-3281.	1.1	7
99	Entropy of vacancy formation in solid He3. Physical Review B, 1978, 18, 3293-3297.	1.1	5
100	Ionic order and defect conductivity in the one-dimensional superionic conductor hollandite. Physical Review B, 1978, 17, 4843-4849.	1.1	11
101	A droplet model for ferromagnetic spin waves above $T_C$ . Physical Review B, 1978, 17, 2380-2383.	1.1	8
102	Undamped Lattice Vibrations in Systems with Two Incommensurate Periodicities. Physical Review Letters, 1978, 41, 1561-1564.	2.9	26
103	Sliding charge-density waves in periodic and disordered lattices. Physical Review B, 1977, 16, 3367-3372.	1.1	38
104	Lack of superconducting behavior of sliding frohlich waves. Ferroelectrics, 1977, 16, 79-81.	0.3	1
105	Ferromagnetic ordering in solid He3 due to ground state vacancies. AIP Conference Proceedings, 1976, , .	0.3	0
106	Spin-wave-Stoner-mode interaction in ferromagnetic metals above $T_C$ . Physical Review B, 1976, 13, 4172-4173.	1.1	5
107	Charge ordering and lattice distortion in Fe3O4. Physical Review B, 1976, 13, 2003-2006.	1.1	14
108	Ferromagnetism on the solid He3 melting curve. Physical Review B, 1976, 14, 1146-1150.	1.1	7

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109	Ground state vacancies and magnetic ordering in solid <sup>3</sup> He. Journal of Low Temperature Physics, 1975, 21, 463-471.	0.6	11
110	Magnetic Ordering in Solid Helium-3. Physical Review Letters, 1975, 35, 673-676.	2.9	20
111	Fluctuation induced band splitting in ferromagnetic and nearly ferromagnetic metals. Journal of Physics F: Metal Physics, 1975, 5, 528-542.	1.6	17
112	Consequences of the persistence of Stoner splitting up to and above T <sub>c</sub> for the phase transition and the elementary excitations of ferromagnetic metals. Journal of Physics F: Metal Physics, 1975, 5, 1946-1956.	1.6	40
113	The Role of Harmonics in the First Order Antiferromagnetic to Paramagnetic Transition in Chromium. , 1974, , .		0
114	Persistence of the Stoner Splitting in Metallic Ferromagnets above T <sub>c</sub> . Physical Review Letters, 1973, 31, 1417-1421.	2.9	29
115	Absence of a Hall Effect in Ice Crystals. Physical Review Letters, 1973, 31, 90-92.	2.9	4
116	Theory of Inelastic Neutron Scattering from Orientationally Disordered Molecular Crystals, with Particular Application to ND <sub>4</sub> Br and ND <sub>4</sub> Cl. Physical Review B, 1973, 7, 1644-1650.	1.1	8
117	Remnant Bose Condensation in He <sup>4</sup> Submonolayer Films. Physical Review A, 1972, 5, 475-476.	1.0	10
118	Theory of Critical-Fluctuation-Enhanced Raman Scattering by Phonons in NH <sub>4</sub> Br. Physical Review B, 1972, 5, 4962-4966.	1.1	12
119	Theory of Verwey and Charge-Density-Wave-State Ordering in Magnetite. Physical Review B, 1972, 5, 4496-4505.	1.1	21
120	Theory of Ferromagnetism in Narrow-Band Solids, with Application to Experiments on Co <sub>x</sub> Fe <sub>1-x</sub> S <sub>2</sub> . Physical Review B, 1971, 3, 3826-3834.	1.1	18
121	Phenomenological Molecular-Field Theory of the Mott-Wigner Transition in Magnetite. Physical Review B, 1971, 3, 3162-3170.	1.1	18
122	Ferromagnetism in the Nearly-Half-Filled-Band Hubbard Model at Nonzero Temperatures. Physical Review B, 1971, 4, 232-235.	1.1	3
123	Effects of Phonons and Impurities on Single-Particle-Mode Neutron Scattering in Chromium. Physical Review B, 1971, 3, 2367-2369.	1.1	0
124	Antiferromagnetism in Narrow Band Solids. Journal of Applied Physics, 1970, 41, 873-874.	1.1	1
125	Free-Spin Magnetic Behavior of the One-Dimensional Near-Neighbor Hubbard-Model Electron System. Physical Review B, 1970, 2, 779-781.	1.1	49
126	Theory of Magnetic Properties of Narrow-Band Solids. Physical Review B, 1970, 2, 3707-3713.	1.1	20

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127	Antiferromagnetism in Narrow-Band Solids. <i>Physical Review B</i> , 1970, 1, 1144-1150.	1.1	21
128	Multiband Theory of Inelastic Neutron Scattering by Ferromagnetic Metals at Low Temperatures. <i>Physical Review</i> , 1969, 180, 613-621.	2.7	14
129	Theory of Neutron Scattering in the Itinerant Model of Antiferromagnetic Metals. II. <i>Physical Review</i> , 1969, 185, 783-791.	2.7	26
130	Theory of Longitudinal Spin Fluctuations and the Antiferromagnetic Phase Transition in Chromium Metal. <i>Physical Review</i> , 1969, 187, 584-586.	2.7	7
131	Theory of Inelastic Neutron Scattering in the Itinerant Model Antiferromagnetic Metals. I. <i>Physical Review</i> , 1969, 185, 770-782.	2.7	51
132	Polar Spin Waves in Ferromagnetic Metals. <i>Physical Review</i> , 1968, 173, 617-630.	2.7	13
133	Electronic Structure of Magnetic Impurities in Copper. <i>Physical Review</i> , 1967, 161, 540-556.	2.7	19
134	Lorentz Transformation in the Undergraduate Curriculum. <i>American Journal of Physics</i> , 1963, 31, 444-446.	0.3	0