

# James C Phillips

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

98  
papers

4,662  
citations

22  
h-index

68  
g-index

104  
ext. papers

4,933  
ext. citations

4.1  
avg, IF

6.07  
L-index

#	Paper	IF	Citations
98	Phase transitions may explain why SARS-CoV-2 spreads so fast and why new variants are spreading faster.. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2022</b> , 127318	3.3	0
97	Synchronized attachment and the Darwinian evolution of coronaviruses CoV-1 and CoV-2. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2021</b> , 581, 126202	3.3	1
96	Self-organized networks: Darwinian evolution of dynein rings, stalks, and stalk heads. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 7799-7802	11.5	7
95	Modern discovery in soft-matter physics. <i>Physics Today</i> , <b>2020</b> , 73, 11-11	0.9	1
94	Reply to Koonin et al.: Evolution of proteins is Darwinian. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 19641-19642	11.5	
93	Ted Geballe and HTSC. <i>Journal of Superconductivity and Novel Magnetism</i> , <b>2020</b> , 33, 11-13	1.5	1
92	Why A $\beta$ 2 Is Much More Toxic than A $\beta$ 0. <i>ACS Chemical Neuroscience</i> , <b>2019</b> , 10, 2843-2847	5.7	9
91	Hydrophobic wave ordering of alpha crystallin Membrane interactions enhances human lens transparency and resists cataracts. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2019</b> , 514, 573-579	3.3	0
90	Why human milk is more nutritious than cow milk. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2018</b> , 497, 302-309	3.3	
89	Configuration interaction of hydrophobic waves enables ubiquitin functionality. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2018</b> , 491, 377-381	3.3	
88	Thermodynamic Scaling of Interfering Hemoglobin Strain Field Waves. <i>Journal of Physical Chemistry B</i> , <b>2018</b> , 122, 9324-9330	3.4	4
87	Hidden thermodynamic information in protein amino acid mutation tables. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2017</b> , 469, 676-680	3.3	1
86	Autoantibody recognition mechanisms of MUC1. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2017</b> , 469, 244-249	3.3	1
85	Prediction (early recognition) of emerging flu strain clusters. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2017</b> , 479, 371-378	3.3	1
84	Giant hub Src and Syk tyrosine kinase thermodynamic profiles recapitulate evolution. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2017</b> , 483, 330-336	3.3	2
83	Evolution of the ubiquitin-activating enzyme Uba1 (E1). <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2017</b> , 483, 456-461	3.3	6
82	Revealing the Effect of Irradiation on Cement Hydrates: Evidence of a Topological Self-Organization. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 32377-32385	9.5	30

81	Why Ubiquitin Has Not Evolved. <i>International Journal of Molecular Sciences</i> , <b>2017</b> , 18,	6.3	1
80	Vaccine escape in 2013 and the hydrophobic evolution of glycoproteins of A/H3N2 viruses. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2016</b> , 455, 38-43	3.3	1
79	Autoantibody recognition mechanisms of p53 epitopes. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2016</b> , 451, 162-170	3.3	3
78	Bioinformatic scaling of allosteric interactions in biomedical isozymes. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2016</b> , 457, 289-294	3.3	
77	Oxygen channels and fractal wave-particle duality in the evolution of myoglobin and neuroglobin. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2016</b> , 463, 1-11	3.3	5
76	Similarity is not enough: Tipping points of Ebola Zaire mortalities. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2015</b> , 427, 277-281	3.3	3
75	Thermodynamic description of Beta amyloid formation using physicochemical scales and fractal bioinformatic scales. <i>ACS Chemical Neuroscience</i> , <b>2015</b> , 6, 745-50	5.7	9
74	Proteinquakes in the evolution of influenza virus hemagglutinin (A/H1N1) under opposing migration and vaccination pressures. <i>BioMed Research International</i> , <b>2015</b> , 2015, 243162	3	
73	Phase transitions in the web of science. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2015</b> , 428, 173-177	3.3	4
72	Fractals and self-organized criticality in anti-inflammatory drugs. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2014</b> , 415, 538-543	3.3	9
71	Fractals and self-organized criticality in proteins. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2014</b> , 415, 440-448	3.3	28
70	Punctuated evolution of influenza virus neuraminidase (A/H1N1) under opposing migration and vaccination pressures. <i>BioMed Research International</i> , <b>2014</b> , 2014, 907381	3	6
69	Ineluctable Complexity of High Temperature Superconductivity Elucidated. <i>Journal of Superconductivity and Novel Magnetism</i> , <b>2014</b> , 27, 345-347	1.5	12
68	Self-organized criticality and color vision: A guide to water-protein landscape evolution. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2013</b> , 392, 468-473	3.3	10
67	Self-organized criticality in proteins: Hydrophobic roughening profiles of G-protein-coupled receptors. <i>Physical Review E</i> , <b>2013</b> , 87,	2.4	5
66	A note on compacted networks. <i>Physics Today</i> , <b>2013</b> , 66, 10-11	0.9	7
65	Diffusion of knowledge and globalization in the web of twentieth century science. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2012</b> , 391, 3995-4003	3.3	12
64	Bifurcation of stretched exponential relaxation in microscopically homogeneous glasses. <i>Journal of Non-Crystalline Solids</i> , <b>2012</b> , 358, 893-897	3.9	28

63	FrequencyBank correlations of rhodopsin mutations with tuned hydrophobic roughness based on self-organized criticality. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2012</b> , 391, 5473-5478	3.3	4
62	Hydrophobic self-organized criticality: a magic wand for protein physics. <i>Protein and Peptide Letters</i> , <b>2012</b> , 19, 1089-93	1.9	12
61	Microscopic aspects of Stretched Exponential Relaxation (SER) in homogeneous molecular and network glasses and polymers. <i>Journal of Non-Crystalline Solids</i> , <b>2011</b> , 357, 3853-3865	3.9	43
60	Internal stresses and formation of switchable nanowires at thin silica film edges. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 034312	2.5	1
59	Hard-Wired Dopant Networks and the Prediction of High Transition Temperatures in Ceramic Superconductors. <i>Advances in Condensed Matter Physics</i> , <b>2010</b> , 2010, 1-13	1	5
58	Percolative theories of strongly disordered ceramic high-temperature superconductors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 1307-10	11.5	20
57	Hard-Wired Dopant Networks and the Prediction of High Transition Temperatures in Ceramic Superconductors. <i>Journal of Superconductivity and Novel Magnetism</i> , <b>2010</b> , 23, 1267-1279	1.5	3
56	Scaling and self-organized criticality in proteins I. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 3107-12	11.5	25
55	Universal non-Landau, self-organized, lattice disordering percolative dopant network sub-T(c) phase transition in ceramic superconductors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 15534-7	11.5	4
54	Scaling and self-organized criticality in proteins II. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 3113-8	11.5	20
53	Microscopic description of strain-reducing chemical bonding self-organizations in non-crystalline alloys. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2009</b> , 206, 885-891	1.6	
52	High temperature cuprate-like superconductivity. <i>Chemical Physics Letters</i> , <b>2009</b> , 473, 274-278	2.5	7
51	Scaling and self-organized criticality in proteins: Lysozyme c. <i>Physical Review E</i> , <b>2009</b> , 80, 051916	2.4	37
50	Chemical Bonding Self-Organizations and Percolation Theory Applied to Minimization of Macroscopic Strain: Internal Interfaces in Non-Crystalline and Nano-Crystalline Thin Films. <i>E-Journal of Surface Science and Nanotechnology</i> , <b>2009</b> , 7, 375-380	0.7	2
49	A stringent test for hydrophobicity scales: two proteins with 88% sequence identity but different structure and function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 9233-7	11.5	15
48	Quantum percolation in cuprate high-temperature superconductors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 9917-9	11.5	15
47	Structure and function of window glass and Pyrex. <i>Journal of Chemical Physics</i> , <b>2008</b> , 128, 174506	3.9	21
46	Nanostructural model of metal-insulator transition in layered $\text{Li}_x\text{ZrNCl}$ superconductors. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	4

45	Is there a lowest upper bound for superconductive transition temperatures?. <i>Journal of Physics: Conference Series</i> , <b>2008</b> , 108, 012033	0.3	2
44	Is there a lowest upper bound for superconductive transition temperatures?. <i>Chemical Physics Letters</i> , <b>2008</b> , 451, 98-101	2.5	4
43	Chemical self-organization length scales in non- and nano-crystalline thin films. <i>Solid-State Electronics</i> , <b>2007</b> , 51, 1308-1318	1.7	2
42	Hierarchical space-filling in network and molecular glasses. <i>Journal of Physics Condensed Matter</i> , <b>2007</b> , 19, 455213	1.8	2
41	Self-organized networks and lattice effects in high-temperature superconductors. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	36
40	A new class of intermediate phases in non-crystalline films based on a confluent double percolation mechanism. <i>Journal of Physics Condensed Matter</i> , <b>2007</b> , 19, 455219	1.8	6
39	Onset of rigidity in glasses: From random to self-organized networks. <i>Journal of Non-Crystalline Solids</i> , <b>2007</b> , 353, 1732-1740	3.9	58
38	Slow dynamics in glasses: A comparison between theory and experiment. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	36
37	Ideally glassy hydrogen-bonded networks. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	19
36	Self-organization and the physics of glassy networks. <i>Philosophical Magazine</i> , <b>2005</b> , 85, 3823-3838	1.6	135
35	Why are cuprates the only high-temperature superconductors?. <i>Philosophical Magazine</i> , <b>2005</b> , 85, 931-947	6	4
34	Topological derivation of shape exponents for stretched exponential relaxation. <i>Journal of Chemical Physics</i> , <b>2005</b> , 122, 074510	3.9	62
33	Superconductive excitations and the infrared vibronic spectra of BSCCO. <i>Physica Status Solidi (B): Basic Research</i> , <b>2005</b> , 242, 51-57	1.3	5
32	Topological theory of electron-phonon interactions in high-temperature superconductors. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	14
31	Pseudogaps, dopants, and strong disorder in cuprate high-temperature superconductors. <i>Reports on Progress in Physics</i> , <b>2003</b> , 66, 2111-2182	14.4	55
30	Microscopic origin of collective exponentially small resistance states. <i>Solid State Communications</i> , <b>2003</b> , 127, 233-236	1.6	22
29	Network topology and dispersive kinks observed by high-resolution photoemission spectroscopy in cuprate high-temperature superconductors. <i>Philosophical Magazine</i> , <b>2003</b> , 83, 1949-1962	1.6	2
28	Nanosopic filters as the origin of d-wave energy gaps. <i>Philosophical Magazine</i> , <b>2003</b> , 83, 3255-3265	1.6	4

27	Phillips Replies.. <i>Physical Review Letters</i> , <b>2003</b> , 90,	7.4	1
26	Network topology and subgap resonances observed by Fourier transform scanning tunnelling microscopy of cuprate high-temperature superconductors. <i>Philosophical Magazine</i> , <b>2003</b> , 83, 3267-3281	1.6	3
25	Rings and rigidity transitions in network glasses. <i>Physical Review B</i> , <b>2003</b> , 67,	3.3	120
24	Universal Intermediate Phases and Nanostructures of High-Temperature Superconductors. <i>Journal of Superconductivity and Novel Magnetism</i> , <b>2002</b> , 15, 393-398		3
23	Percolative model of nanoscale phase separation in high-temperature superconductors. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>2002</b> , 82, 783-790		6
22	Electron-phonon interactions cause high-temperature superconductivity. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>2002</b> , 82, 931-942		5
21	Zigzag filamentary theory of broken symmetry of neutron and infrared vibronic spectra of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>6+x</sub> . <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>2002</b> , 82, 1163-1200		2
20	Filamentary model of vibronic spectra of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>6.95</sub> . <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>2002</b> , 82, 1703-1714		
19	Universal intermediate phases of dilute electronic and molecular glasses. <i>Physical Review Letters</i> , <b>2002</b> , 88, 216401	7.4	58
18	Electron-phonon interactions cause high-temperature superconductivity. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>2002</b> , 82, 931-942		4
17	Nanodomain structure and function of high-temperature superconductors. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>2001</b> , 81, 745-756		19
16	Fractal nature and scaling exponents of non-Drude currents in non-Fermi liquids. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>2001</b> , 81, 757-770		3
15	Zigzag filamentary theory of longitudinal optical phonons in high-temperature superconductors. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>2001</b> , 81, 35-53		10
14	Quantitative principles of silicate glass chemistry. <i>Solid State Communications</i> , <b>2000</b> , 117, 47-51	1.6	63
13	Allometric scaling in evolutionary biology: Implications for the metal-insulator and network glass stiffness transitions and high-temperature superconductivity, and the converse. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>2000</b> , 80, 1773-1787		6
12	Self-organization in network glasses. <i>Journal of Non-Crystalline Solids</i> , <b>2000</b> , 266-269, 859-866	3.9	218
11	Is there an ideal phase diagram for high-temperature superconductors?. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>1999</b> , 79, 527-536		10
10	Nature and scaling properties of the intermediate phase of the impurity band metal-insulator transition. <i>Solid State Communications</i> , <b>1999</b> , 109, 301-304	1.6	21

9	Stretched exponential relaxation in molecular and electronic glasses. <i>Reports on Progress in Physics</i> , <b>1996</b> , 59, 1133-1207	14.4	684
8	Anomalous glass transitions and stretched exponential relaxation in fused salts and polar organic compounds. <i>Physical Review E</i> , <b>1996</b> , 53, 1732-1739	2.4	7
7	Coherent resonant pinning, oxygen ordering, and high-temperature superconductivity in the multilayer cuprates. <i>Physical Review Letters</i> , <b>1994</b> , 72, 3863-3866	7.4	21
6	Global multinary structural chemistry of stable quasicrystals, high-TC ferroelectrics, and high-Tc superconductors. <i>Physical Review B</i> , <b>1992</b> , 45, 7650-7676	3.3	61
5	Quantum percolation and lattice instabilities in high-Tc cuprate superconductors. <i>Physical Review B</i> , <b>1989</b> , 40, 8774-8779	3.3	18
4	Direct evidence for the quantum interlayer defect-assisted percolation model of cuprate high-Tc superconductivity. <i>Physical Review B</i> , <b>1989</b> , 39, 7356-7358	3.3	25
3	Giant defect-enhanced electron-phonon interactions in ternary copper oxide superconductors. <i>Physical Review Letters</i> , <b>1987</b> , 59, 1856-1859	7.4	84
2	Topology of covalent non-crystalline solids II: Medium-range order in chalcogenide alloys and A <sub>2</sub> Si(Ge). <i>Journal of Non-Crystalline Solids</i> , <b>1981</b> , 43, 37-77	3.9	699
1	Topology of covalent non-crystalline solids I: Short-range order in chalcogenide alloys. <i>Journal of Non-Crystalline Solids</i> , <b>1979</b> , 34, 153-181	3.9	1598