James C Phillips

List of Publications by Citations

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	Topology of covalent non-crystalline solids I: Short-range order in chalcogenide alloys. *Journal of Non-Crystalline Solids*, **1979**, 34, 153-181	3.9	1598
97	Topology of covalent non-crystalline solids II: Medium-range order in chalcogenide alloys and A?Si(Ge). *Journal of Non-Crystalline Solids*, **1981**, 43, 37-77	3.9	699
96	Stretched exponential relaxation in molecular and electronic glasses. *Reports on Progress in Physics*, **1996**, 59, 1133-1207	14.4	684
95	Self-organization in network glasses. *Journal of Non-Crystalline Solids*, **2000**, 266-269, 859-866	3.9	218
94	Self-organization and the physics of glassy networks. *Philosophical Magazine*, **2005**, 85, 3823-3838	1.6	135
93	Rings and rigidity transitions in network glasses. *Physical Review B*, **2003**, 67,	3.3	120
92	Giant defect-enhanced electron-phonon interactions in ternary copper oxide superconductors. *Physical Review Letters*, **1987**, 59, 1856-1859	7.4	84
91	Quantitative principles of silicate glass chemistry. *Solid State Communications*, **2000**, 117, 47-51	1.6	63
90	Topological derivation of shape exponents for stretched exponential relaxation. *Journal of Chemical Physics*, **2005**, 122, 074510	3.9	62
89	Global multinary structural chemistry of stable quasicrystals, high-TC ferroelectrics, and high-Tc superconductors. *Physical Review B*, **1992**, 45, 7650-7676	3.3	61
88	Onset of rigidity in glasses: From random to self-organized networks. *Journal of Non-Crystalline Solids*, **2007**, 353, 1732-1740	3.9	58
87	Universal intermediate phases of dilute electronic and molecular glasses. *Physical Review Letters*, **2002**, 88, 216401	7.4	58
86	Pseudogaps, dopants, and strong disorder in cuprate high-temperature superconductors. *Reports on Progress in Physics*, **2003**, 66, 2111-2182	14.4	55
85	Microscopic aspects of Stretched Exponential Relaxation (SER) in homogeneous molecular and network glasses and polymers. *Journal of Non-Crystalline Solids*, **2011**, 357, 3853-3865	3.9	43
84	Scaling and self-organized criticality in proteins: Lysozyme c. *Physical Review E*, **2009**, 80, 051916	2.4	37
83	Slow dynamics in glasses: A comparison between theory and experiment. *Physical Review B*, **2006**, 73,	3.3	36
82	Self-organized networks and lattice effects in high-temperature superconductors. *Physical Review B*, **2007**, 75,	3.3	36

81	Revealing the Effect of Irradiation on Cement Hydrates: Evidence of a Topological Self-Organization. *ACS Applied Materials & Interfaces*, **2017**, 9, 32377-32385	9.5	30
80	Fractals and self-organized criticality in proteins. *Physica A: Statistical Mechanics and Its Applications* , **2014**, 415, 440-448	3.3	28
79	Bifurcation of stretched exponential relaxation in microscopically homogeneous glasses. *Journal of Non-Crystalline Solids*, **2012**, 358, 893-897	3.9	28
78	Scaling and self-organized criticality in proteins I. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 3107-12	11.5	25
77	Direct evidence for the quantum interlayer defect-assisted percolation model of cuprate high-Tc superconductivity. *Physical Review B*, **1989**, 39, 7356-7358	3.3	25
76	Microscopic origin of collective exponentially small resistance states. *Solid State Communications*, **2003**, 127, 233-236	1.6	22
75	Structure and function of window glass and Pyrex. *Journal of Chemical Physics*, **2008**, 128, 174506	3.9	21
74	Nature and scaling properties of the intermediate phase of the impurity band metal–insulator transition. *Solid State Communications*, **1999**, 109, 301-304	1.6	21
73	Coherent resonant pinning, oxygen ordering, and high-temperature superconductivity in the multilayer cuprates. *Physical Review Letters*, **1994**, 72, 3863-3866	7.4	21
72	Percolative theories of strongly disordered ceramic high-temperature superconductors. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 1307-10	11.5	20
71	Scaling and self-organized criticality in proteins II. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 3113-8	11.5	20
70	Ideally glassy hydrogen-bonded networks. *Physical Review B*, **2006**, 73,	3.3	19
69	Nanodomain structure and function of high-temperature superconductors. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **2001**, 81, 745-756		19
68	Quantum percolation and lattice instabilities in high-Tc cuprate superconductors. *Physical Review B*, **1989**, 40, 8774-8779	3.3	18
67	A stringent test for hydrophobicity scales: two proteins with 88% sequence identity but different structure and function. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 9233-7	11.5	15
66	Quantum percolation in cuprate high-temperature superconductors. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 9917-9	11.5	15
65	Topological theory of electron-phonon interactions in high-temperature superconductors. *Physical Review B*, **2005**, 71,	3.3	14
64	Diffusion of knowledge and globalization in the web of twentieth century science. *Physica A: Statistical Mechanics and Its Applications*, **2012**, 391, 3995-4003	3.3	12

63	Ineluctable Complexity of High Temperature Superconductivity Elucidated. *Journal of Superconductivity and Novel Magnetism*, **2014**, 27, 345-347	1.5	12
62	Hydropathic self-organized criticality: a magic wand for protein physics. *Protein and Peptide Letters*, **2012**, 19, 1089-93	1.9	12
61	Self-organized criticality and color vision: A guide to water‐protein landscape evolution. *Physica A: Statistical Mechanics and Its Applications*, **2013**, 392, 468-473	3.3	10
60	Zigzag filamentary theory of longitudinal optical phonons in high-temperature superconductors. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **2001**, 81, 35-53		10
59	Is there an ideal phase diagram for high-temperature superconductors?. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1999**, 79, 527-536		10
58	Why Aβ42 Is Much More Toxic than Aβ40. *ACS Chemical Neuroscience*, **2019**, 10, 2843-2847	5.7	9
57	Thermodynamic description of Beta amyloid formation using physicochemical scales and fractal bioinformatic scales. *ACS Chemical Neuroscience*, **2015**, 6, 745-50	5.7	9
56	Fractals and self-organized criticality in anti-inflammatory drugs. *Physica A: Statistical Mechanics and Its Applications*, **2014**, 415, 538-543	3.3	9
55	Self-organized networks: Darwinian evolution of dynein rings, stalks, and stalk heads. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 7799-7802	11.5	7
54	A note on compacted networks. *Physics Today*, **2013**, 66, 10-11	0.9	7
53	High temperature cuprate-like superconductivity. *Chemical Physics Letters*, **2009**, 473, 274-278	2.5	7
52	Anomalous glass transitions and stretched exponential relaxation in fused salts and polar organic compounds. *Physical Review E*, **1996**, 53, 1732-1739	2.4	7
51	Evolution of the ubiquitin-activating enzyme Uba1 (E1). *Physica A: Statistical Mechanics and Its Applications*, **2017**, 483, 456-461	3.3	6
50	Punctuated evolution of influenza virus neuraminidase (A/H1N1) under opposing migration and vaccination pressures. *BioMed Research International*, **2014**, 2014, 907381	3	6
49	A new class of intermediate phases in non-crystalline films based on a confluent double percolation mechanism. *Journal of Physics Condensed Matter*, **2007**, 19, 455219	1.8	6
48	Percolative model of nanoscale phase separation in high-temperature superconductors. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **2002**, 82, 783-790		6
47	Allometric scaling in evolutionary biology: Implications for the metal-insulator and network glass stiffness transitions and high-temperature superconductivity, and the converse. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **2000**, 80, 1773-1787		6
46	Self-organized criticality in proteins: Hydropathic roughening profiles of G-protein-coupled receptors. *Physical Review E*, **2013**, 87,	2.4	5

45	Hard-Wired Dopant Networks and the Prediction of High Transition Temperatures in Ceramic Superconductors. *Advances in Condensed Matter Physics*, **2010**, 2010, 1-13	1	5
44	Superconductive excitations and the infrared vibronic spectra of BSCCO. *Physica Status Solidi (B): Basic Research*, **2005**, 242, 51-57	1.3	5
43	Electron-phonon interactions cause high-temperature superconductivity. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **2002**, 82, 931-942		5
42	Oxygen channels and fractal wave–particle duality in the evolution of myoglobin and neuroglobin. *Physica A: Statistical Mechanics and Its Applications*, **2016**, 463, 1-11	3.3	5
41	Phase transitions in the web of science. *Physica A: Statistical Mechanics and Its Applications*, **2015**, 428, 173-177	3.3	4
40	Frequency–rank correlations of rhodopsin mutations with tuned hydropathic roughness based on self-organized criticality. *Physica A: Statistical Mechanics and Its Applications*, **2012**, 391, 5473-5478	3.3	4
39	Universal non-Landau, self-organized, lattice disordering percolative dopant network sub-T(c) phase transition in ceramic superconductors. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 15534-7	11.5	4
38	Nanostructural model of metal-insulator transition in layered LixZrNCl superconductors. *Physical Review B*, **2008**, 77,	3.3	4
37	Is there a lowest upper bound for superconductive transition temperatures?. *Chemical Physics Letters*, **2008**, 451, 98-101	2.5	4
36	Why are cuprates the only high-temperature superconductors?. *Philosophical Magazine*, **2005**, 85, 931-947	1.6	4
35	Nanoscopic filters as the origin of d-wave energy gaps. *Philosophical Magazine*, **2003**, 83, 3255-3265	1.6	4
34	Electron-phonon interactions cause high-temperature superconductivity. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **2002**, 82, 931-942		4
33	Thermodynamic Scaling of Interfering Hemoglobin Strain Field Waves. *Journal of Physical Chemistry B*, **2018**, 122, 9324-9330	3.4	4
32	Similarity is not enough: Tipping points of Ebola Zaire mortalities. *Physica A: Statistical Mechanics and Its Applications*, **2015**, 427, 277-281	3.3	3
31	Autoantibody recognition mechanisms of p53 epitopes. *Physica A: Statistical Mechanics and Its Applications*, **2016**, 451, 162-170	3.3	3
30	Hard-Wired Dopant Networks and the Prediction of High Transition Temperatures in Ceramic Superconductors. *Journal of Superconductivity and Novel Magnetism*, **2010**, 23, 1267-1279	1.5	3
29	Universal Intermediate Phases and Nanostructures of High-Temperature Superconductors. *Journal of Superconductivity and Novel Magnetism*, **2002**, 15, 393-398		3
28	Network topology and subgap resonances observed by Fourier transform scanning tunnelling microscopy of cuprate high-temperature superconductors. *Philosophical Magazine*, **2003**, 83, 3267-3281	1.6	3

27	Fractal nature and scaling exponents of non-Drude currents in non-Fermi liquids. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **2001**, 81, 757-770		3
26	Giant hub Src and Syk tyrosine kinase thermodynamic profiles recapitulate evolution. *Physica A: Statistical Mechanics and Its Applications*, **2017**, 483, 330-336	3.3	2
25	Is there a lowest upper bound for superconductive transition temperatures?. *Journal of Physics: Conference Series*, **2008**, 108, 012033	0.3	2
24	Chemical Bonding Self-Organizations and Percolation Theory Applied to Minimization of Macroscopic Strain: Internal Interfaces in Non-Crystalline and Nano-Crystalline Thin Films. *E-Journal of Surface Science and Nanotechnology*, **2009**, 7, 375-380	0.7	2
23	Chemical self-organization length scales in non- and nano-crystalline thin films. *Solid-State Electronics*, **2007**, 51, 1308-1318	1.7	2
22	Hierarchical space-filling in network and molecular glasses. *Journal of Physics Condensed Matter*, **2007**, 19, 455213	1.8	2
21	Network topology and dispersive kinks observed by high-resolution photoemission spectroscopy in cuprate high-temperature superconductors. *Philosophical Magazine*, **2003**, 83, 1949-1962	1.6	2
20	Zigzag filamentary theory of broken symmetry of neutron and infrared vibronic spectra of YBa2Cu3O6+x. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **2002**, 82, 1163-1200		2
19	Hidden thermodynamic information in protein amino acid mutation tables. *Physica A: Statistical Mechanics and Its Applications*, **2017**, 469, 676-680	3.3	1
18	Autoantibody recognition mechanisms of MUC1. *Physica A: Statistical Mechanics and Its Applications* , **2017**, 469, 244-249	3.3	1
17	Prediction (early recognition) of emerging flu strain clusters. *Physica A: Statistical Mechanics and Its Applications*, **2017**, 479, 371-378	3.3	1
16	Modern discovery in soft-matter physics. *Physics Today*, **2020**, 73, 11-11	0.9	1
15	Vaccine escape in 2013[illegible] and the hydropathic evolution of glycoproteins of A/H3N2 viruses. *Physica A: Statistical Mechanics and Its Applications*, **2016**, 455, 38-43	3.3	1
14	Why Ubiquitin Has Not Evolved. *International Journal of Molecular Sciences*, **2017**, 18,	6.3	1
13	Internal stresses and formation of switchable nanowires at thin silica film edges. *Journal of Applied Physics*, **2011**, 109, 034312	2.5	1
12	Phillips Replies:. *Physical Review Letters*, **2003**, 90,	7.4	1
11	Ted Geballe and HTSC. *Journal of Superconductivity and Novel Magnetism*, **2020**, 33, 11-13	1.5	1
10	Synchronized attachment and the Darwinian evolution of coronaviruses CoV-1 and CoV-2. *Physica A: Statistical Mechanics and Its Applications*, **2021**, 581, 126202	3.3	1

9	Hydropathic wave ordering of alpha crystallinMembrane interactions enhances human lens transparency and resists cataracts. *Physica A: Statistical Mechanics and Its Applications*, **2019**, 514, 573-579	3.3	0
8	Phase transitions may explain why SARS-CoV-2 spreads so fast and why new variants are spreading faster.. *Physica A: Statistical Mechanics and Its Applications*, **2022**, 127318	3.3	0
7	Why human milk is more nutritious than cow milk. *Physica A: Statistical Mechanics and Its Applications*, **2018**, 497, 302-309	3.3	
6	Configuration interaction of hydropathic waves enables ubiquitin functionality. *Physica A: Statistical Mechanics and Its Applications*, **2018**, 491, 377-381	3.3	
5	Proteinquakes in the evolution of influenza virus hemagglutinin (A/H1N1) under opposing migration and vaccination pressures. *BioMed Research International*, **2015**, 2015, 243162	3	
4	Microscopic description of strain-reducing chemical bonding self-organizations in non-crystalline alloys. *Physica Status Solidi (A) Applications and Materials Science*, **2009**, 206, 885-891	1.6	
3	Filamentary model of vibronic spectra of YBa2Cu3O6.95. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **2002**, 82, 1703-1714		
2	Reply to Koonin et al.: Evolution of proteins is Darwinian. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 19641-19642	11.5	
1	Bioinformatic scaling of allosteric interactions in biomedical isozymes. *Physica A: Statistical Mechanics and Its Applications*, **2016**, 457, 289-294	3.3	