Mario Nicodemi

List of Publications by Year
in descending order

172	6,780	39	72
papers	citations	h-index	g-index
		81900	82547

190	190	190	5140
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Physical mechanisms of chromatin spatial organization. FEBS Journal, 2022, 289, 1180-1190.	4.7	10
2	A Polymer Physics Model to Dissect Genome Organization in Healthy and Pathological Phenotypes. Methods in Molecular Biology, 2022, 2301, 307-316.	0.9	1
3	8-oxodG accumulation within super-enhancers marks fragile CTCF-mediated chromatin loops. Nucleic Acids Research, 2022, 50, 3292-3306.	14.5	11
4	Polymer physics reveals a combinatorial code linking 3D chromatin architecture to 1D chromatin states. Cell Reports, 2022, 38, 110601.	6.4	18
5	Further Delineation of Duplications of ARX Locus Detected in Male Patients with Varying Degrees of Intellectual Disability. International Journal of Molecular Sciences, 2022, 23, 3084.	4.1	1
6	Loop-extrusion and polymer phase-separation can co-exist at the single-molecule level to shape chromatin folding. Nature Communications, 2022, 13, .	12.8	35
7	CTCF mediates dosage- and sequence-context-dependent transcriptional insulation by forming local chromatin domains. Nature Genetics, 2021, 53, 1064-1074.	21.4	90
8	Comparison of the Hi-C, GAM and SPRITE methods using polymer models of chromatin. Nature Methods, 2021, 18, 482-490.	19.0	39
9	Polymer models are a versatile tool to study chromatin 3D organization. Biochemical Society Transactions, 2021, 49, 1675-1684.	3.4	8
10	Promoter-proximal CTCF binding promotes distal enhancer-dependent gene activation. Nature Structural and Molecular Biology, 2021, 28, 152-161.	8.2	172
11	Cell-type specialization is encoded by specific chromatin topologies. Nature, 2021, 599, 684-691.	27.8	112
12	Inference of chromosome 3D structures from GAM data by a physics computational approach. Methods, 2020, 181-182, 70-79.	3.8	12
13	Chromosomes Phase Transition to Function. Biophysical Journal, 2020, 119, 724-725.	0.5	4
14	Divergent Transcription of the Nkx2-5 Locus Generates Two Enhancer RNAs with Opposing Functions. IScience, 2020, 23, 101539.	4.1	11
15	Polymer physics indicates chromatin folding variability across single-cells results from state degeneracy in phase separation. Nature Communications, 2020, 11, 3289.	12.8	79
16	A Dynamic Folded Hairpin Conformation Is Associated with Î±-Globin Activation in Erythroid Cells. Cell Reports, 2020, 30, 2125-2135.e5.	6.4	38
17	Computational approaches from polymer physics to investigate chromatin folding. Current Opinion in Cell Biology, 2020, 64, 10-17.	5.4	31
18	Modeling Single-Molecule Conformations of the HoxD Region in Mouse Embryonic Stem and Cortical Neuronal Cells. Cell Reports, 2019, 28, 1574-1583.e4.	6.4	21

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19	Preformed chromatin topology assists transcriptional robustness of <i>Shh</i> during limb development. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12390-12399.	7.1	131
20	Release of paused RNA polymerase II at specific loci favors DNA double-strand-break formation and promotes cancer translocations. Nature Genetics, 2019, 51, 1011-1023.	21.4	73
21	Models of polymer physics for the architecture of the cell nucleus. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2019, 11, e1444.	6.6	14
22	The Strings and Binders Switch Model of Chromatin. , 2019, , 57-68.		0
23	Molecular Dynamics simulations of the Strings and Binders Switch model of chromatin. Methods, 2018, 142, 81-88.	3.8	27
24	Polymer physics predicts the effects of structural variants on chromatin architecture. Nature Genetics, 2018, 50, 662-667.	21.4	179
25	Dynamic 3D chromatin architecture contributes to enhancer specificity and limb morphogenesis. Nature Genetics, 2018, 50, 1463-1473.	21.4	147
26	Challenges and guidelines toward 4D nucleome data and model standards. Nature Genetics, 2018, 50, 1352-1358.	21.4	47
27	Single-allele chromatin interactions identify regulatory hubs in dynamic compartmentalized domains. Nature Genetics, 2018, 50, 1744-1751.	21.4	150
28	Predicting chromatin architecture from models of polymer physics. Chromosome Research, 2017, 25, 25-34.	2.2	42
29	Complex multi-enhancer contacts captured by genome architecture mapping. Nature, 2017, 543, 519-524.	27.8	562
30	Active and poised promoter states drive folding of the extended HoxB locus in mouse embryonic stem cells. Nature Structural and Molecular Biology, 2017, 24, 515-524.	8.2	80
31	Nonequilibrium Chromosome Looping via Molecular Slip Links. Physical Review Letters, 2017, 119, 138101.	7.8	105
32	<scp>RNA</scp> polymerase <scp>II</scp> primes Polycombâ€repressed developmental genes throughout terminal neuronal differentiation. Molecular Systems Biology, 2017, 13, 946.	7.2	44
33	The scaling features of the 3D organization of chromosomes are highlighted by a transformation Ã la Kadanoff of Hi-C data. Europhysics Letters, 2017, 120, 40004.	2.0	6
34	On the Nature of Chromatin 3D Organization. , 2017, , 191-201.		0
35	A Polymer Physics Investigation of the Architecture of the Murine Orthologue of the 7q11.23 Human Locus. Frontiers in Neuroscience, 2017, 11, 559.	2.8	11
36	Structure of the human chromosome interaction network. PLoS ONE, 2017, 12, e0188201.	2.5	27

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37	Polymer physics of chromosome large-scale 3D organisation. Scientific Reports, 2016, 6, 29775.	3.3	160
38	Polymer Physics of the Large-Scale Structure of Chromatin. Methods in Molecular Biology, 2016, 1480, 201-206.	0.9	4
39	Polymer models of the hierarchical folding of the Hox-B chromosomal locus. Physical Review E, 2016, 94, 042402.	2.1	22
40	Single-cell analysis of CD4+ T-cell differentiation reveals three major cell states and progressive acceleration of proliferation. Genome Biology, 2016, 17, 103.	8.8	65
41	Hierarchical folding and reorganization of chromosomes are linked to transcriptional changesÂin cellular differentiation. Molecular Systems Biology, 2015, 11, 852.	7.2	305
42	Dynamic membrane patterning, signal localization and polarity in living cells. Soft Matter, 2015, 11, 838-849.	2.7	9
43	Polymer models of the organization of chromosomes in the nucleus of cells. Modern Physics Letters B, 2015, 29, 1530003.	1.9	8
44	Physical mechanisms behind the large scale features of chromatin organization. Transcription, 2014, 5, e28447.	3.1	11
45	Models of chromosome structure. Current Opinion in Cell Biology, 2014, 28, 90-95.	5.4	100
46	A stochastic model dissects cell states in biological transition processes. Scientific Reports, 2014, 4, 3692.	3.3	24
47	Single-Cell States in the Estrogen Response of Breast Cancer Cell Lines. PLoS ONE, 2014, 9, e88485.	2.5	4
48	Polymer physics, scaling and heterogeneity in the spatial organisation of chromosomes in the cell nucleus. Soft Matter, 2013, 9, 8631.	2.7	15
49	A model of the large-scale organization of chromatin. Biochemical Society Transactions, 2013, 41, 508-512.	3.4	19
50	A polymer model explains the complexity of large-scale chromatin folding. Nucleus, 2013, 4, 267-273.	2.2	32
51	Polymer models of chromatin organization. Frontiers in Genetics, 2013, 4, 113.	2.3	15
52	Complexity of chromatin folding is captured by the strings and binders switch model. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16173-16178.	7.1	493
53	Colocalization of Multiple DNA Loci: A Physical Mechanism. Biophysical Journal, 2012, 103, 2223-2232.	0.5	8
54	Critical Behavior and Axis Defining Symmetry Breaking in<i>Hydra</i>Embryonic Development. Physical Review Letters, 2012, 108, 158103.	7.8	18

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55	Flow regimes of a fluid driven granular suspension. Granular Matter, 2012, 14, 175-178.	2.2	0
56	Extreme Value Statistics. , 2012, , 1066-1072.		2
57	Jamming phase diagram for frictional particles. Physical Review E, 2011, 84, 041308.	2.1	76
58	Stochastic transitions and jamming in granular pipe flow. Physical Review E, 2011, 83, 031309.	2.1	1
59	Mean-Field Theory of the Symmetry Breaking Model for X Chromosome Inactivation. Progress of Theoretical Physics Supplement, 2011, 191, 40-45.	0.1	3
60	Conformation Regulation of the X Chromosome Inactivation Center: A Model. PLoS Computational Biology, 2011, 7, e1002229.	3.2	29
61	A novel approach to simulate gene-environment interactions in complex diseases. BMC Bioinformatics, 2010, 11, 8.	2.6	31
62	Diffusion-based DNA target colocalization by thermodynamic mechanisms. Development (Cambridge), 2010, 137, 3877-3885.	2.5	8
63	COMPLEX FLOW IN GRANULAR MEDIA. International Journal of Modeling, Simulation, and Scientific Computing, 2010, 13, 339-347.	1.4	0
64	STATISTICAL MECHANICS MODELS FOR X-CHROMOSOME INACTIVATION. International Journal of Modeling, Simulation, and Scientific Computing, 2010, 13, 367-376.	1.4	0
65	Passive DNA shuttling. Europhysics Letters, 2010, 92, 20002.	2.0	3
66	Recent results on the jamming phase diagram. Soft Matter, 2010, 6, 2871.	2.7	56
67	Aggregation of fibrils and plaques in amyloid molecular systems. Physical Review E, 2009, 80, 041914.	2.1	4
68	Symmetry breaking mechanism for epithelial cell polarization. Physical Review E, 2009, 80, 031919.	2.1	10
69	STATISTICAL MECHANICS OF STATIC GRANULAR PACKINGS UNDER GRAVITY. International Journal of Modern Physics B, 2009, 23, 5345-5358.	2.0	1
70	Flow and jamming of sheared granular media. , 2009, , .		0
71	DNA Loci Cross-Talk through Thermodynamics. Journal of Biomedicine and Biotechnology, 2009, 2009, 1-8.	3.0	2
72	Electrical resistivity tomography and statistical analysis in landslide modelling: A conceptual approach. Journal of Applied Geophysics, 2009, 68, 151-158.	2.1	46

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73	Rheology of sheared monodisperse granular suspensions. European Physical Journal: Special Topics, 2009, 179, 157-163.	2.6	0
74	Thermodynamic Pathways to Genome Spatial Organization in the Cell Nucleus. Biophysical Journal, 2009, 96, 2168-2177.	0.5	113
75	Statistical properties and universality in earthquake and solar flare occurrence. European Physical Journal B, 2008, 64, 551-555.	1.5	12
76	A Thermodynamic Switch for Chromosome Colocalization. Genetics, 2008, 179, 717-721.	2.9	43
77	A model of volcanic magma transport by fracturing stress mechanisms. Geophysical Research Letters, 2008, 35, .	4.0	6
78	Mechanics and Dynamics of X-Chromosome Pairing at X Inactivation. PLoS Computational Biology, 2008, 4, e1000244.	3.2	20
79	The colocalization transition of homologous chromosomes at meiosis. Physical Review E, 2008, 77, 061913.	2.1	14
80	Flow, Ordering, and Jamming of Sheared Granular Suspensions. Physical Review Letters, 2008, 100, 078001.	7.8	38
81	Self-Assembly and DNA Binding of the Blocking Factor in X Chromosome Inactivation. PLoS Computational Biology, 2007, 3, e210.	3.2	27
82	Symmetry-Breaking Model forX-Chromosome Inactivation. Physical Review Letters, 2007, 98, 108104.	7.8	64
83	Phase transitions and aging phenomena in dielectriclike polymeric materials investigated by ac measurements. Journal of Applied Physics, 2007, 101, 044910.	2.5	7
84	Pairing of homologous chromosomes as phase transition. Proceedings of SPIE, 2007, , .	0.8	1
85	Granular packs under vertical tapping: Structure evolution, grain motion, and dynamical heterogeneities. Physical Review E, 2007, 75, 021303.	2.1	20
86	Phenomenology and theory of horizontally oscillated granular mixtures. European Physical Journal E, 2007, 22, 227-34.	1.6	11
87	Editorial. European Physical Journal E, 2007, 22, 193-193.	1.6	0
88	Shear- and vibration-induced order-disorder transitions in granular media. European Physical Journal E, 2007, 24, 411-415.	1.6	8
89	Granular Species Segregation under Vertical Tapping: Effects of Size, Density, Friction, and Shaking Amplitude. Physical Review Letters, 2006, 96, 058001.	7.8	69
90	Thermodynamics and Statistical Mechanics of Dense Granular Media. Physical Review Letters, 2006, 97, 158001.	7.8	70

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91	A cellular automaton for the factor of safety field in landslides modeling. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	32
92	Performance of genetic programming to extract the trend in noisy data series. Physica A: Statistical Mechanics and Its Applications, 2006, 370, 104-108.	2.6	28
93	Finite driving rate and anisotropy effects in landslide modeling. Physical Review E, 2006, 73, 026123.	2.1	22
94	Universality in Solar Flare and Earthquake Occurrence. Physical Review Letters, 2006, 96, 051102.	7.8	95
95	Dynamically Induced Effective Interaction in Periodically Driven Granular Mixtures. Physical Review Letters, 2006, 97, 038001.	7.8	16
96	Slow relaxation and compaction of granular systems. Nature Materials, 2005, 4, 121-128.	27.5	351
97	Shear-induced segregation of a granular mixture under horizontal oscillation. Journal of Physics Condensed Matter, 2005, 17, S2549-S2556.	1.8	14
98	Shear Instabilities in Granular Mixtures. Physical Review Letters, 2005, 94, 188001.	7.8	71
99	Jamming transition in granular media: A mean-field approximation and numerical simulations. Physical Review E, 2005, 71, 061305.	2.1	13
100	Record dynamics and the observed temperature plateau in the magnetic creep-rate of type-II superconductors. Physical Review B, 2005, 71, .	3.2	42
101	Size Segregation in Granular Media Induced by Phase Transition. Physical Review Letters, 2005, 95, 078001.	7.8	12
102	Statistical mechanics of dense granular media. , 2005, , .		0
103	Self-assembly and DNA binding of the blocking factor in X Chromosome Inactivation. PLoS Computational Biology, 2005, preprint, e210.	3.2	0
104	Granular media. Journal of Physics Condensed Matter, 2005, 17, .	1.8	0
105	UNIFYING APPROACH TO THE JAMMING TRANSITION IN GRANULAR MEDIA AND THE GLASS TRANSITION IN THERMAL SYSTEMS. , 2005, , .		0
106	Statistical Mechanics of jamming and segregation in granular media. , 2004, , 47-61.		0
107	Phase coexistence and relaxation of the spherical frustrated Blume-Emery-Griffiths model with attractive particles coupling. Europhysics Letters, 2004, 65, 256-261.	2.0	3
108	Time dependent phenomena in transport properties andlâ€"Vcharacteristics of a model for driven vortex matter. Journal of Physics Condensed Matter, 2004, 16, 6789-6810.	1.8	0

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109	Segregation in Fluidized versus Tapped Packs. Physical Review Letters, 2004, 93, 198002.	7.8	12
110	Glass-Glass Transition and New Dynamical Singularity Points in an Analytically Solvablep-Spin Glasslike Model. Physical Review Letters, 2004, 93, 215701.	7.8	18
111	Stationary probability distribution in granular media. Physica D: Nonlinear Phenomena, 2004, 193, 292-302.	2.8	6
112	On Edwardsâ€™ theory of powders. Physica A: Statistical Mechanics and Its Applications, 2004, 339, 1-6.	2.6	6
113	Statistical mechanics approach to the jamming transition in granular materials. Physica A: Statistical Mechanics and Its Applications, 2004, 344, 431-439.	2.6	5
114	Glass transition in granular media. Europhysics Letters, 2004, 66, 531-537.	2.0	38
115	EdwardsÂ approach to horizontal and vertical segregation in a mixture of hard spheres under gravity. Journal of Physics Condensed Matter, 2003, 15, S1095-S1105.	1.8	7
116	Peak effect in a driven lattice gas model. Physical Review E, 2003, 67, 041103.	2.1	2
117	VORTEX MATTER OUT OF EQUILIBRIUM. Fractals, 2003, 11, 149-159.	3.7	1
118	Dynamics and thermodynamics of the spherical frustrated Blume-Emery-Griffiths model. Physical Review E, 2002, 66, 046101.	2.1	6
119	Thermodynamics and statistical mechanics of frozen systems in inherent states. Physical Review E, 2002, 66, 061301.	2.1	36
120	Equilibrium and off-equilibrium dynamics in a model for vortices in superconductors. Physical Review B, 2002, 65, .	3.2	14
121	BramwelletÂal.Reply:. Physical Review Letters, 2002, 89, .	7.8	15
122	Interplay of dynamical and equilibrium phenomena in vortex matter. Journal of Physics Condensed Matter, 2002, 14, 2403-2412.	1.8	2
123	Memory effects in response functions of driven vortex matter. Europhysics Letters, 2002, 57, 348-354.	2.0	8
124	Segregation in hard-sphere mixtures under gravity. An extension of Edwards approach with two thermodynamical parameters. Europhysics Letters, 2002, 60, 684-690.	2.0	33
125	Equilibrium distribution of the inherent states and their dynamics in glassy systems and granular media. Europhysics Letters, 2002, 59, 642-647.	2.0	40
126	Probability distribution of inherent states in models of granular media and glasses. European Physical Journal E, 2002, 9, 219-226.	1.6	8

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127	Continuously driven OFC: A simple model of solar flare statistics. Astronomy and Astrophysics, 2002, 387, 326-334.	5.1	31
128	The Inherent States of Glassy Systems and Granular Media. , 2002, , 74-83.		0
129	Statistical mechanics models for jamming in granular media. AIP Conference Proceedings, 2001, , .	0.4	0
130	A statistical mechanics approach to the inherent states of granular media. Physica A: Statistical Mechanics and Its Applications, 2001, 296, 451-459.	2.6	44
131	Applications of the statistical mechanics of inherent states to granular media. Physica A: Statistical Mechanics and Its Applications, 2001, 302, 193-201.	2.6	14
132	Ageing and memory phenomena in magnetic and transport properties of vortex matter. Journal of Physics A, 2001, 34, 8425-8443.	1.6	26
133	Off-equilibrium magnetic properties in a model of repulsive particles for vortices in superconductors. Journal of Physics A, 2001, 34, L11-L18.	1.6	18
134	Off-equilibrium properties of vortex creep in superconductors. Europhysics Letters, 2001, 54, 566-572.	2.0	10
135	Slow dynamics and aging in a constrained diffusion model. Physical Review E, 2001, 63, 031106.	2.1	2
136	Creep of Superconducting Vortices in the Limit of Vanishing Temperature: A Fingerprint of Off-Equilibrium Dynamics. Physical Review Letters, 2001, 86, 4378-4381.	7.8	39
137	Nicodemi and Jensen Reply:. Physical Review Letters, 2001, 87, .	7.8	3
138	Bramwellet al.Reply:. Physical Review Letters, 2001, 87, .	7.8	11
139	Second magnetisation peak relaxation in a model for vortices in superconductors. Physica C: Superconductivity and Its Applications, 2000, 341-348, 1065-1066.	1.2	1
140	Domains growth and packing properties in driven granular media subject to gravity. Physica A: Statistical Mechanics and Its Applications, 2000, 285, 267-278.	2.6	9
141	Vortex clustering: The origin of the second peak in the magnetisation loops of type-two superconductors. Europhysics Letters, 2000, 52, 210-216.	2.0	10
142	The jamming transition of granular media. Journal of Physics Condensed Matter, 2000, 12, 6601-6610.	1.8	35
143	Universal Fluctuations in Correlated Systems. Physical Review Letters, 2000, 84, 3744-3747.	7.8	225
144	Universality in glassy systems. Journal of Physics Condensed Matter, 1999, 11, A167-A174.	1.8	21

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145	INTERNAL AVALANCHES IN MODELS OF GRANULAR MEDIA. Fractals, 1999, 07, 51-58.	3.7	4
146	Logarithmic relaxations in a random-field lattice gas subject to gravity. Physical Review E, 1999, 59, 3858-3863.	2.1	4
147	Dynamical Response Functions in Models of Vibrated Granular Media. Physical Review Letters, 1999, 82, 3734-3737.	7.8	77
148	Density fluctuations in a model for vibrated granular media. Physical Review E, 1999, 59, 6830-6837.	2.1	18
149	Aging in Out-of-Equilibrium Dynamics of Models for Granular Media. Physical Review Letters, 1999, 82, 916-919.	7.8	77
150	Scaling properties in off-equilibrium dynamical processes. Physical Review E, 1999, 59, 2812-2816.	2.1	13
151	Off-Equilibrium Dynamics in a Singular Diffusion Model. Physical Review Letters, 1999, 83, 5054-5057.	7.8	7
152	Cooperative length approach for granular media. Physica A: Statistical Mechanics and Its Applications, 1999, 265, 311-318.	2.6	10
153	Geometrical frustration: a dynamical motor for dry granular media. Physica A: Statistical Mechanics and Its Applications, 1998, 257, 419-423.	2.6	3
154	A phenomenological theory of dynamic processes in granular media. Physica A: Statistical Mechanics and Its Applications, 1998, 257, 448-453.	2.6	5
155	Stress Correlations and Weight Distributions in Granular Packs. , 1998, , 137-142.		0
156	Segregation of granular mixtures in the presence of compaction. Europhysics Letters, 1998, 43, 591-597.	2.0	45
157	Force Correlations and Arch Formation in Granular Assemblies. Physical Review Letters, 1998, 80, 1340-1343.	7.8	37
158	Macroscopic glassy relaxations and microscopic motions in a frustrated lattice gas. Physical Review E, 1998, 57, R39-R42.	2.1	33
159	The glassy transition of the frustrated Ising lattice gas. Journal of Physics A, 1997, 30, L187-L194.	1.6	39
160	Frustration and slow dynamics of granular packings. Physical Review E, 1997, 55, 3962-3969.	2.1	117
161	A â€œTetris-Likeâ€•Model for the Compaction of Dry Granular Media. Physical Review Letters, 1997, 79, 1575-1578.	7.8	141
162	The compaction in granular media and frustrated Ising models. Journal of Physics A, 1997, 30, L379-L385.	1.6	41

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163	Percolation and cluster formalism in continuous spin systems. Physica A: Statistical Mechanics and Its Applications, 1997, 238, 9-22.	2.6	7
164	Compaction and force propagation in granular packings. Physica A: Statistical Mechanics and Its Applications, 1997, 240, 405-418.	2.6	19
165	Logarithmic Compaction in a 3D Model for Granular Media. Journal De Physique, I, 1997, 7, 1535-1540.	1.2	3
166	Efficient cluster dynamics for the fully frustrated XY model. Physica A: Statistical Mechanics and Its Applications, 1996, 233, 293-306.	2.6	11
167	Percolation and cluster Monte Carlo dynamics for spin models. Physical Review E, 1996, 54, 175-189.	2.1	25
168	Mapping of frustrated spin systems into percolation models and Monte Carlo cluster dynamics. Journal of Physics A, 1996, 29, 1961-1971.	1.6	1
169	Equilibrium Properties of the Ising Frustrated Lattice Gas. Journal De Physique, I, 1996, 6, 1143-1152.	1.2	38
170	Generalized percolation models for frustrated spin systems. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1259-1264.	0.4	6
171	Critical clusters and efficient dynamics for frustrated spin models. Physical Review Letters, 1994, 72, 1541-1544.	7.8	34
172	Self-organisations and emergence. , 0, , 1-47.		0