

# Rastko Sknepnek

## List of Publications by Year in descending order

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47  
papers

1,905  
citations

218677

26  
h-index

265206

42  
g-index

48  
all docs

48  
docs citations

48  
times ranked

2335  
citing authors

#	ARTICLE	IF	CITATIONS
1	Active Vertex Model for cell-resolution description of epithelial tissue mechanics. PLoS Computational Biology, 2017, 13, e1005569.	3.2	180
2	Defect dynamics in active nematics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130365.	3.4	170
3	Modeling the Crystallization of Spherical Nucleic Acid Nanoparticle Conjugates with Molecular Dynamics Simulations. Nano Letters, 2012, 12, 2509-2514.	9.1	129
4	Mechanical model of blebbing in nuclear lamin meshworks. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3248-3253.	7.1	89
5	Dense active matter model of motion patterns in confluent cell monolayers. Nature Communications, 2020, 11, 1405.	12.8	86
6	Platonic and Archimedean geometries in multicomponent elastic membranes. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 4292-4296.	7.1	80
7	Thermally Active Hybridization Drives the Crystallization of DNA-Functionalized Nanoparticles. Journal of the American Chemical Society, 2013, 135, 8535-8541.	13.7	70
8	A Quantitative Description of the Binding Equilibria of para-Substituted Aniline Ligands and CdSe Quantum Dots. Journal of Physical Chemistry C, 2010, 114, 22526-22534.	3.1	69
9	Orbital coupling and superconductivity in the iron pnictides. Physical Review B, 2009, 79, .	3.2	63
10	Active swarms on a sphere. Physical Review E, 2015, 91, 022306.	2.1	61
11	Molecular Crystallization Controlled by pH Regulates Mesoscopic Membrane Morphology. ACS Nano, 2012, 6, 10901-10909.	14.6	56
12	Non-Hookean statistical mechanics of clamped graphene ribbons. Physical Review B, 2017, 95, .	3.2	55
13	Cell division and death inhibit glassy behaviour of confluent tissues. Soft Matter, 2017, 13, 3205-3212.	2.7	51
14	Dynamically generated patterns in dense suspensions of active filaments. Physical Review E, 2018, 97, 022606.	2.1	46
15	Confinement-Induced Transition between Wavelike Collective Cell Migration Modes. Physical Review Letters, 2019, 122, 168101.	7.8	46
16	Nanoparticle Ordering <i>via</i> Functionalized Block Copolymers in Solution. ACS Nano, 2008, 2, 1259-1265.	14.6	44
17	Anisotropy of the pairing gap of FeAs-based superconductors induced by spin fluctuations. Physical Review B, 2009, 79, .	3.2	44
18	Exotic Versus Conventional Scaling and Universality in a Disordered Bilayer Quantum Heisenberg Antiferromagnet. Physical Review Letters, 2004, 93, 097201.	7.8	40

#	ARTICLE	IF	CITATIONS
19	Universality of Liquid-Gas Mott Transitions at Finite Temperatures. <i>Physical Review Letters</i> , 2008, 100, 026408.	7.8	40
20	Dynamical patterns in nematic active matter on a sphere. <i>Physical Review E</i> , 2018, 97, 042605.	2.1	40
21	A Graphics Processing Unit Implementation of Coulomb Interaction in Molecular Dynamics. <i>Journal of Chemical Theory and Computation</i> , 2010, 6, 3058-3065.	5.3	38
22	Buckling of multicomponent elastic shells with line tension. <i>Soft Matter</i> , 2012, 8, 636-644.	2.7	38
23	Smearred phase transition in a three-dimensional Ising model with planar defects: Monte Carlo simulations. <i>Physical Review B</i> , 2004, 69, .	3.2	33
24	Spin structure factor of the frustrated quantum magnet Cs <sub>2</sub> CuCl <sub>4</sub> . <i>Physical Review B</i> , 2006, 73, .	3.2	32
25	Electrostatic-Driven Ridge Formation on Nanoparticles Coated with Charged End-Group Ligands. <i>Journal of Physical Chemistry C</i> , 2011, 115, 6484-6490.	3.1	32
26	Pathways to faceting of vesicles. <i>Soft Matter</i> , 2013, 9, 8088.	2.7	28
27	Spectral analysis for the iron-based superconductors: Anisotropic spin fluctuations and fully gapped $\chi(\mathbf{q})$ superconductivity. <i>Physical Review B</i> , 2010, 82, .	3.2	26
28	Quantum phase transitions of the diluted O(3) rotor model. <i>Physical Review B</i> , 2006, 74, .	3.2	25
29	On the Modeling of Endocytosis in Yeast. <i>Biophysical Journal</i> , 2015, 108, 508-519.	0.5	24
30	Topological defects in the buckling of elastic membranes. <i>Soft Matter</i> , 2013, 9, 60-68.	2.7	20
31	Nonlinear elastic model for faceting of vesicles with soft grain boundaries. <i>Physical Review E</i> , 2012, 85, 050501.	2.1	15
32	Critical points and quenched disorder: From Harris criterion to rare regions and smearing. <i>Physica Status Solidi (B): Basic Research</i> , 2004, 241, 2118-2127.	1.5	14
33	Stratification relieves constraints from steric hindrance in the generation of compact actomyosin asters at the membrane cortex. <i>Science Advances</i> , 2020, 6, eaay6093.	10.3	14
34	Optimal shapes and stresses of adherent cells on patterned substrates. <i>Soft Matter</i> , 2014, 10, 2424.	2.7	12
35	Wrinkle patterns in active viscoelastic thin sheets. <i>Physical Review Research</i> , 2020, 2, .	3.6	12
36	Linear viscoelastic properties of the vertex model for epithelial tissues. <i>PLoS Computational Biology</i> , 2022, 18, e1010135.	3.2	12

#	ARTICLE	IF	CITATIONS
37	Coordinated tractions increase the size of a collectively moving pack in a cell monolayer. <i>Extreme Mechanics Letters</i> , 2021, 48, 101438.	4.1	11
38	Shapes of pored membranes. <i>Soft Matter</i> , 2012, 8, 11613.	2.7	10
39	Shape Change of Nanocontainers via a Reversible Ionic Buckling. <i>Physical Review Letters</i> , 2011, 106, 215504.	7.8	9
40	Planar sheets meet negative-curvature liquid interfaces. <i>Europhysics Letters</i> , 2013, 101, 44007.	2.0	8
41	Effects of scars on icosahedral crystalline shell stability under external pressure. <i>Physical Review E</i> , 2015, 91, 033205.	2.1	8
42	Curvature-driven effective attraction in multicomponent membranes. <i>Physical Review E</i> , 2012, 86, 021504.	2.1	6
43	Order-parameter symmetry and mode-coupling effects at dirty superconducting quantum phase transitions. <i>Physical Review B</i> , 2004, 70, .	3.2	5
44	Pattern recognition in damaged neural networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 295, 526-536.	2.6	4
45	Stiffening thermal membranes by cutting. <i>Physical Review E</i> , 2017, 96, 013002.	2.1	4
46	Dynamics at a smeared phase transition. <i>Journal of Physics A</i> , 2005, 38, 2349-2358.	1.6	3
47	Charge renormalization of bilayer elastic properties. <i>Journal of Chemical Physics</i> , 2012, 137, 104905.	3.0	2