

# Robin L B Selinger

## List of Publications by Year in descending order

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71  
papers

3,722  
citations

186209

28  
h-index

123376

61  
g-index

73  
all docs

73  
docs citations

73  
times ranked

3535  
citing authors

#	ARTICLE	IF	CITATIONS
1	Making waves in a photoactive polymer film. <i>Nature</i> , 2017, 546, 632-636.	13.7	738
2	The Macromolecular Route to Chiral Amplification. <i>Angewandte Chemie - International Edition</i> , 1999, 38, 3138-3154.	7.2	684
3	Shape selection of twist-nematic-elastomer ribbons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 6364-6368.	3.3	256
4	Accordion-like Actuators of Multiple 3D Patterned Liquid Crystal Polymer Films. <i>Advanced Functional Materials</i> , 2014, 24, 1251-1258.	7.8	206
5	Connectivity of hydrogen bonds in liquid water. <i>Journal of Chemical Physics</i> , 1984, 80, 5230-5241.	1.2	190
6	Random Multiplicative Processes and Transport in Structures with Correlated Spatial Disorder. <i>Physical Review Letters</i> , 1988, 61, 1438-1441.	2.9	116
7	Shape Selection in Chiral Self-Assembly. <i>Physical Review Letters</i> , 2004, 93, 158103.	2.9	99
8	Interpretation of the unusual behavior of H <sub>2</sub> O and D <sub>2</sub> O at low temperature: Are concepts of percolation relevant to the "puzzle of liquid water"? <i>Physica A: Statistical Mechanics and Its Applications</i> , 1981, 106, 260-277.	1.2	94
9	Statistical-thermodynamic approach to fracture. <i>Physical Review A</i> , 1991, 43, 4396-4400.	1.0	90
10	Theory of Chiral Order in Random Copolymers. <i>Physical Review Letters</i> , 1996, 76, 58-61.	2.9	74
11	Novel Superuniversal Behavior of a Random-Walk Model. <i>Physical Review Letters</i> , 1983, 51, 1223-1226.	2.9	66
12	Monte Carlo simulation of liquid-crystal alignment and chiral symmetry-breaking. <i>Journal of Chemical Physics</i> , 2001, 115, 4333-4338.	1.2	54
13	Monte Carlo Studies of the XY Model on Two-Dimensional Curved Surfaces. <i>Journal of Physical Chemistry B</i> , 2011, 115, 13989-13993.	1.2	54
14	Cholesteric liquid crystals in rectangular microchannels: skyrmions and stripes. <i>Soft Matter</i> , 2016, 12, 6312-6320.	1.2	47
15	Shape and chirality transitions in off-axis twist nematic elastomer ribbons. <i>Physical Review E</i> , 2013, 88, 022502.	0.8	44
16	Morphology transition in lipid vesicles due to in-plane order and topological defects. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 3242-3247.	3.3	43
17	Self-Consistent Treatment of Repulsive and Attractive Forces in Nonuniform Liquids. <i>Physical Review Letters</i> , 1995, 75, 2694-2697.	2.9	42
18	Cooperative chiral order in copolymers of chiral and achiral units. <i>Physical Review E</i> , 1997, 55, 1728-1731.	0.8	41

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19	Nematic order on a deformable vesicle: theory and simulation. <i>Soft Matter</i> , 2013, 9, 8314.	1.2	41
20	Molecular-dynamics study of elasticity and failure of ideal solids. <i>Physical Review B</i> , 1991, 44, 378-381.	1.1	37
21	Cooperative Chiral Order in Polyisocyanates: A New Statistical Problem. <i>Macromolecules</i> , 1998, 31, 2488-2492.	2.2	37
22	Gelation models of hydrogen bond networks in liquid water. <i>Physical Review B</i> , 1983, 28, 1626-1629.	1.1	36
23	Modeling elastic instabilities in nematic elastomers. <i>Physical Review E</i> , 2010, 82, 051701.	0.8	34
24	Monte Carlo tests of universality in a correlated-site percolation problem. <i>Journal of Physics A</i> , 1980, 13, L147-L152.	1.6	33
25	Universality classes for diffusion in the presence of correlated spatial disorder. <i>Physical Review A</i> , 1989, 40, 1717-1719.	1.0	32
26	Effect of temperature and small-scale defects on the strength of solids. <i>Journal of Chemical Physics</i> , 1991, 95, 9128-9141.	1.2	30
27	Monte Carlo simulation of smectic liquid crystals and the electroclinic effect: The role of molecular shape. <i>Physical Review E</i> , 1999, 60, 5584-5590.	0.8	30
28	Theory of chiral defects in Langmuir monolayers. <i>Physical Review E</i> , 1995, 51, R860-R863.	0.8	28
29	Diffusion in the presence of quenched random bias fields: A two-dimensional generalization of the Sinai model. <i>Physical Review A</i> , 1989, 40, 6755-6758.	1.0	25
30	Stress-induced failure and melting of ideal solids. <i>Journal of Chemical Physics</i> , 1993, 98, 9808-9818.	1.2	25
31	Atomistic Theory and Simulation of Fracture. <i>MRS Bulletin</i> , 2000, 25, 11-12.	1.7	25
32	Modeling Defects, Shape Evolution, and Programmed Auto-Origami in Liquid Crystal Elastomers. <i>Frontiers in Materials</i> , 2016, 3, .	1.2	24
33	Electrically Induced Twist in Smectic Liquid-Crystalline Elastomers. <i>Journal of Physical Chemistry B</i> , 2016, 120, 6368-6372.	1.2	24
34	Nanoparticle-based hollow microstructures formed by two-stage nematic nucleation and phase separation. <i>Nature Communications</i> , 2019, 10, 894.	5.8	23
35	Modeling out-of-plane actuation in thin-film nematic polymer networks: From chiral ribbons to auto-origami boxes via twist and topology. <i>Scientific Reports</i> , 2017, 7, 45370.	1.6	21
36	Geometry and mechanics of disclination lines in 3D nematic liquid crystals. <i>Soft Matter</i> , 2021, 17, 2265-2278.	1.2	21

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37	Photopatterned Designer Disclination Networks in Nematic Liquid Crystals. <i>Advanced Optical Materials</i> , 2021, 9, 2100181.	3.6	21
38	Visualising the crossover between 3D and 2D topological defects in nematic liquid crystals. <i>Liquid Crystals</i> , 2018, 45, 2022-2032.	0.9	18
39	History of Vision Correction: Contact and Intraocular Lenses. <i>MRS Bulletin</i> , 1997, 22, 65-65.	1.7	16
40	Spatiotemporal patterns in a Langmuir monolayer due to driven molecular precession. <i>Physical Review E</i> , 2008, 78, 041703.	0.8	16
41	Representing molecular shape and interactions: A reduced intermolecular potential for copper phthalocyanine. <i>Journal of Chemical Physics</i> , 1996, 105, 4751-4760.	1.2	15
42	Inhomogeneous diffusion-limited aggregation. <i>Physical Review A</i> , 1989, 40, 2590-2601.	1.0	13
43	Theory of chiral modulations and fluctuations in smectic-A liquid crystals under an electric field. <i>Physical Review E</i> , 2000, 62, 666-674.	0.8	13
44	Simulations of helix unwinding in ferroelectric liquid crystals. <i>Physical Review E</i> , 2003, 68, 041702.	0.8	13
45	Modeling liquid crystal elastomers: actuators, pumps, and robots. <i>Proceedings of SPIE</i> , 2008, , .	0.8	13
46	Spontaneous chiral symmetry breaking in collective active motion. <i>Physical Review E</i> , 2016, 93, 022410.	0.8	13
47	Diffusion in a smectic liquid crystal with screw dislocations. <i>Physical Review E</i> , 2002, 65, 051702.	0.8	12
48	Electric field-induced crossover from 3D to 2D topological defects in a nematic liquid crystal: experimental verification. <i>Soft Matter</i> , 2020, 16, 642-650.	1.2	9
49	Thermophoresis of colloids in nematic liquid crystal. <i>Soft Matter</i> , 2020, 16, 1989-1995.	1.2	9
50	Visualizing chiral self-assembly. <i>Chaos</i> , 2004, 14, S3-S3.	1.0	8
51	Size effects and dislocation patterning in two-dimensional bending. <i>Journal of the Mechanics and Physics of Solids</i> , 2007, 55, 1182-1195.	2.3	8
52	Percolation of interacting diffusing particles. <i>Physical Review A</i> , 1990, 42, 4845-4852.	1.0	6
53	Dynamic Fracture in Disordered Media. <i>MRS Bulletin</i> , 2000, 25, 46-50.	1.7	6
54	Cooperative Chiral Order in Random Copolymers. <i>Molecular Crystals and Liquid Crystals</i> , 1996, 288, 33-45.	0.3	5

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55	Molecular dynamics simulations of dislocation instability in a stress gradient. <i>Physical Review B</i> , 2003, 67, .	1.1	5
56	Dynamically morphing microchannels in liquid crystal elastomer coatings containing disclinations. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	5
57	Travelling colourful patterns in self-organized cellulose-based liquid crystalline structures. <i>Communications Materials</i> , 2021, 2, .	2.9	5
58	The Macromolecular Route to Chiral Amplification. , 1999, 38, 3138.		5
59	A chiral polymeric analogy to a one-dimensional paramagnetic material. <i>Chirality</i> , 1998, 10, 41-45.	1.3	3
60	Fingering Instability of Dislocations and Related Line Defects. <i>Physical Review Letters</i> , 1999, 82, 2306-2309.	2.9	3
61	Correction: Cholesteric liquid crystals in rectangular microchannels: skyrmions and stripes. <i>Soft Matter</i> , 2016, 12, 6496-6496.	1.2	3
62	Gradient-driven diffusion and pattern formation in crowded mixtures. <i>Physical Review E</i> , 2017, 95, 022107.	0.8	3
63	Photopatterned Designer Disclination Networks in Nematic Liquid Crystals (Advanced Optical) Tj ETQq1 1 0.784314 3.6gBT /Overlock 1	3.6	3
64	Dynamics and Patterning of Screw Dislocations in Two Dimensions. <i>Materials Research Society Symposia Proceedings</i> , 2000, 653, 1.	0.1	2
65	Toying with science. <i>MRS Bulletin</i> , 2013, 38, 759-760.	1.7	2
66	Cell Model and Computer Simulation Studies of Layered and Hexagonal States of Aligned, Hard Disks versus Rods. <i>The Journal of Physical Chemistry</i> , 1995, 99, 2907-2914.	2.9	1
67	Atomistics of Fracture. , 2005, , 839-853.		1
68	Atomistic simulation studies of size effects in plasticity: compression of single- and polydomain crystals in two dimensions. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2011, 19, 015006.	0.8	1
69	Morphology Transition in Lipid Vesicles: Interaction of In-Plane Order and Topological Defects. <i>Biophysical Journal</i> , 2013, 104, 83a.	0.2	1
70	Molecular Dynamics Studies of Interfacial Crack Propagation in Heterogeneous Media. <i>Materials Research Society Symposia Proceedings</i> , 1998, 539, 209.	0.1	0
71	Curvature-induced lipid segregation. <i>Chinese Physics B</i> , 2015, 24, 068701.	0.7	0