Alfredo Alexander-Katz

List of Publications by Year
in descending order

62 papers	1,987 citations	257357 24 h-index	254106 43 g-index
64 all docs	64 docs citations	64 times ranked	2500 citing authors

#	Article	IF	Citations
1	Morphology Control in Block Copolymer Films Using Mixed Solvent Vapors. ACS Nano, 2012, 6, 8052-8059.	7.3	198
2	Lipid tail protrusions mediate the insertion of nanoparticles into model cell membranes. Nature Communications, 2014, 5, 4482.	5.8	183
3	Graft-through Synthesis and Assembly of Janus Bottlebrush Polymers from A-Branch-B Diblock Macromonomers. Journal of the American Chemical Society, 2016, 138, 11501-11504.	6.6	146
4	STING agonist delivery by tumour-penetrating PEG-lipid nanodiscs primes robust anticancer immunity. Nature Materials, 2022, 21, 710-720.	13.3	114
5	Multilayer block copolymer meshes by orthogonal self-assembly. Nature Communications, 2016, 7, 10518.	5.8	85
6	Design rules for self-assembled block copolymer patterns using tiled templates. Nature Communications, 2014, 5, 3305.	5.8	78
7	Optimizing Topographical Templates for Directed Self-Assembly of Block Copolymers via Inverse Design Simulations. Nano Letters, 2014, 14, 318-325.	4.5	63
8	Thin Film Morphologies of Bulk-Gyroid Polystyrene-block-polydimethylsiloxane under Solvent Vapor Annealing. Macromolecules, 2014, 47, 6000-6008.	2.2	62
9	Understanding the synergistic effect of physicochemical properties of nanoparticles and their cellular entry pathways. Communications Biology, 2020, 3, 205.	2.0	57
10	Diblock Copolymer Thin Films:Â A Field-Theoretic Simulation Study. Macromolecules, 2007, 40, 4075-4087.	2.2	55
11	Unraveling the complexity of amyloid polymorphism using gold nanoparticles and cryo-EM. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 6866-6874.	3.3	54
12	Inverse Design of Topographical Templates for Directed Self-Assembly of Block Copolymers. ACS Macro Letters, 2013, 2, 251-255.	2.3	49
13	Internal Friction and Nonequilibrium Unfolding of Polymeric Globules. Physical Review Letters, 2009, 103, 028102.	2.9	42
14	Globuleâ^'Stretch Transitions of Collapsed Polymers in Elongational Flow Fields. Macromolecules, 2010, 43, 3532-3541.	2.2	41
15	Enhancing the Potential of Block Copolymer Lithography with Polymer Self-Consistent Field Theory Simulations. Macromolecules, 2010, 43, 8290-8295.	2.2	38
16	Calcium-triggered fusion of lipid membranes is enabled by amphiphilic nanoparticles. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18470-18476.	3.3	38
17	Hematocrit and flow rate regulate the adhesion of platelets to von Willebrand factor. Biomicrofluidics, 2013, 7, 64113.	1.2	35
18	Dictating Nanoparticle Assembly via Systems-Level Control of Molecular Multivalency. Journal of the American Chemical Society, 2019, 141, 14624-14632.	6.6	34

#	Article	IF	Citations
19	Machine Learning Predictions of Block Copolymer Selfâ€Assembly. Advanced Materials, 2020, 32, e2005713.	11.1	34
20	Energy landscape for the insertion of amphiphilic nanoparticles into lipid membranes: A computational study. PLoS ONE, 2019, 14, e0209492.	1.1	31
21	Field-theoretic simulations of polymer solutions: Finite-size and discretization effects. Journal of Chemical Physics, 2005, 122, 014904.	1.2	30
22	Emergent ultraâ€“long-range interactions between active particles in hybrid activeâ€“inactive systems. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4652-4657.	3.3	26
23	Nanoscale spirals by directed self-assembly. Nano Futures, 2017, 1, 015001.	1.0	26
24	Imparting Superhydrophobicity with a Hierarchical Block Copolymer Coating. Small, 2020, 16, e1905509.	5.2	25
25	Perpendicular Block Copolymer Microdomains in High Aspect Ratio Templates. Nano Letters, 2015, 15, 6901-6908.	4.5	24
26	Behavior of Protein-Inspired Synthetic Random Heteropolymers. Macromolecules, 2020, 53, 9187-9199.	2.2	24
27	Solvent-exposed lipid tail protrusions depend on lipid membrane composition and curvature. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 1207-1215.	1.4	23
28	Double-Layer Morphologies from a Silicon-Containing ABA Triblock Copolymer. ACS Nano, 2018, 12, 6193-6202.	7.3	23
29	3D TEM Tomography of Templated Bilayer Films of Block Copolymers. Advanced Functional Materials, 2014, 24, 7689-7697.	7.8	22
30	Computational Insights into the Binding of Monolayer-Capped Gold Nanoparticles onto Amyloid-Î² Fibrils. ACS Chemical Neuroscience, 2020, 11, 3153-3160.	1.7	22
31	Dissipative particle dynamics for directed self-assembly of block copolymers. Journal of Chemical Physics, 2019, 151, 154905.	1.2	21
32	Inverting the design path for self-assembled block copolymers. Molecular Systems Design and Engineering, 2017, 2, 539-548.	1.7	20
33	Emergent symmetries in block copolymer epitaxy. Nature Communications, 2019, 10, 2974.	5.8	19
34	Structure and dynamics of blood-clotting-inspired polymer-colloid composites. Soft Matter, 2013, 9, 10381.	1.2	16
35	Grafting Charged Species to Membrane-Embedded Scaffolds Dramatically Increases the Rate of Bilayer Flipping. ACS Central Science, 2017, 3, 186-195.	5.3	16
36	Computational Insights into Avidity of Polymeric Multivalent Binders. Biophysical Journal, 2019, 117, 892-902.	0.2	16

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37	Theory of Tethered Polymers in Shear Flow: The Strong Stretching Limit. Macromolecules, 2011, 44, 9020-9028.	2.2	15
38	Artificial Tribotactic Microscopic Walkers: Walking Based on Friction Gradients. Physical Review Letters, 2014, 113, 178101.	2.9	15
39	Single-Nanometer Changes in Nanopore Geometry Influence Curvature, Local Properties, and Protein Localization in Membrane Simulations. Nano Letters, 2019, 19, 4770-4778.	4.5	14
40	Self-Directed Self-Assembly of 3D Tailored Block Copolymer Nanostructures. ACS Nano, 2020, 14, 15182-15192.	7.3	14
41	Effect of Molecular Architecture on the Self-Assembly of Bottlebrush Copolymers. Journal of Physical Chemistry B, 2020, 124, 11519-11529.	1.2	14
42	Controlling polyelectrolyte equilibria and structure via counterionâ€“solvent interactions. Soft Matter, 2009, 5, 2198.	1.2	11
43	Influence of Binding Site Affinity Patterns on Binding of Multivalent Polymers. ACS Omega, 2020, 5, 10774-10781.	1.6	10
44	Forced Unfolding of Protein-Inspired Single-Chain Random Heteropolymers. Macromolecules, 2022, 55, 1295-1309.	2.2	10
45	Phase Behavior of Diskâ€“Coil Macromolecules. Macromolecules, 2011, 44, 7016-7025.	2.2	9
46	Coarse-Grained Simulations Suggest the Epsin N-Terminal Homology Domain Can Sense Membrane Curvature without Its Terminal Amphipathic Helix. ACS Nano, 2020, 14, 16919-16928.	7.3	9
47	Diversifying Composition Leads to Hierarchical Composites with Design Flexibility and Structural Fidelity. ACS Nano, 2021, 15, 14095-14104.	7.3	9
48	Metallic Nanomeshes Fabricated by Multimechanism Directed Self-Assembly. ACS Nano, 2021, 15, 16266-16276.	7.3	9
49	Directed self-assembly of a two-state block copolymer system. Nano Convergence, 2018, 5, 25.	6.3	7
50	Polymer Stiffness Regulates Multivalent Binding and Liquid-Liquid Phase Separation. Biophysical Journal, 2020, 119, 1849-1864.	0.2	7
51	Micromechanical model for isolated polymer-colloid clusters under tension. Physical Review E, 2016, 94, 042501.	0.8	6
52	Unfolding of collapsed polymers in shear flow: Effects of colloid banding structures in confining channels. Physical Review E, 2014, 89, 032602.	0.8	5
53	Platelet adhesion and aggregate formation controlled by immobilised and soluble VWF. BMC Molecular and Cell Biology, 2020, 21, 64.	1.0	5
54	Coarse-Grained Simulations Suggest Potential Competing Roles of Phosphoinositides and Amphipathic Helix Structures in Membrane Curvature Sensing of the AP180 N-Terminal Homology Domain. Journal of Physical Chemistry B, 2022, 126, 2789-2797.	1.2	5

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55	Symmetry-Breaking and Self-Sorting in Block Copolymer-Based Multicomponent Nanocomposites. ACS Nano, 2022, 16, 9368-9377.	7.3	5
56	Random copolymers that protect proteins. Science, 2018, 359, 1216-1217.	6.0	4
57	Solvent Remodeling in Singleâ€Chain Amphiphilic Heteropolymer Systems. Macromolecular Rapid Communications, 2022, 43, e2200142.	2.0	4
58	Simulations of Polymer Solutions: A Field-Theoretic Approach. ACS Symposium Series, 2003, , 279-289.	0.5	3
59	Controlled Water Uptake in Fuel Cell Membranes with Dual Chemistry Confinement. Chemistry of Materials, 2021, 33, 6662-6670.	3.2	3
60	Multivalent polymers can control phase boundary, dynamics, and organization of liquid-liquid phase separation. PLoS ONE, 2021, 16, e0245405.	1.1	3
61	Topographic Templating: Rectangular Symmetry Morphologies in a Topographically Templated Block Copolymer (Adv. Mater. 31/2012). Advanced Materials, 2012, 24, 4343-4343.	11.1	1
62	Selfâ€Assembly: Sacrificialâ€Post Templating Method for Block Copolymer Selfâ€Assembly (Small 3/2014). Small, 2014, 10, 418-418.	5.2	0