Andrei V Zvelindovsky

List of Publications by Year
in descending order

98	3,811	109137	133063
papers	citations	35 h-index	59 g-index

100	100	100	2349
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Phase Behavior in Thin Films of Cylinder-Forming Block Copolymers. Physical Review Letters, 2002, 89, 035501.	2.9	475
2	Simulation of 3D Mesoscale Structure Formation in Concentrated Aqueous Solution of the Triblock Polymer Surfactants (Ethylene Oxide)13(Propylene Oxide)30(Ethylene Oxide)13and (Propylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7 Theory. Macromolecules, 1999, 32, 646-656.	2.2	161
3	Electric Field Alignment of Asymmetric Diblock Copolymer Thin Films. Macromolecules, 2005, 38, 10788-10798.	2.2	151
4	Morphology of symmetric block copolymer in a cylindrical pore. Journal of Chemical Physics, 2001, 115, 8226-8230.	1.2	149
5	Phase behavior in thin films of cylinder-forming ABA block copolymers: Mesoscale modeling. Journal of Chemical Physics, 2004, 120, 1117-1126.	1.2	147
6	Direct imaging and mesoscale modelling of phase transitions in a nanostructured fluid. Nature Materials, 2004, 3, 886-891.	13.3	111
7	Self-Assembly of Complex Vesicles. Macromolecules, 2005, 38, 7502-7513.	2.2	109
8	Electric Field Induced Alignment of Concentrated Block Copolymer Solutions. Macromolecules, 2003, 36, 8078-8087.	2.2	108
9	Electric Field Induced Sphere-to-Cylinder Transition in Diblock Copolymer Thin Films. Macromolecules, 2004, 37, 6980-6984.	2.2	105
10	Dynamics of surface directed mesophase formation in block copolymer melts. Journal of Chemical Physics, 1999, 110, 2250-2256.	1.2	102
11	Three-dimensional mesoscale dynamics of block copolymers under shear:â€ƒ The dynamic density-functional approach. Physical Review E, 1998, 57, R4879-R4882.	0.8	89
12	Lamellar Alignment of Diblock Copolymers in an Electric Field. Macromolecules, 2002, 35, 1473-1476.	2.2	73
13	Role of dissimilar interfaces in thin films of cylinder-forming block copolymers. Journal of Chemical Physics, 2004, 120, 1127-1137.	1.2	73
14	The effect of amidation on the behaviour of antimicrobial peptides. European Biophysics Journal, 2016, 45, 195-207.	1.2	72
15	Influence of Initial Order on the Microscopic Mechanism of Electric Field Induced Alignment of Block Copolymer Microdomains. Langmuir, 2005, 21, 11974-11980.	1.6	69
16	Block copolymers confined in a nanopore: Pathfinding in a curving and frustrating flatland. Journal of Chemical Physics, 2008, 128, 084901.	1.2	65
17	Hydrodynamic effects in three-dimensional microphase separation of block copolymers: Dynamic mean-field density functional approach. Journal of Chemical Physics, 1998, 108, 9150-9154.	1.2	56
18	Mechanism of the Transition between Lamellar and Gyroid Phases Formed by a Diblock Copolymer in Aqueous Solution. Langmuir, 2004, 20, 10785-10790.	1.6	55

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19	Specific Features of Defect Structure and Dynamics in the Cylinder Phase of Block Copolymers. ACS Nano, 2008, 2, 1143-1152.	7.3	55
20	Kinetic Pathways of Order-to-Order Phase Transitions in Block Copolymer Films under an Electric Field. Macromolecules, 2006, 39, 3024-3037.	2.2	52
21	Block Copolymer Nanocontainers. ACS Nano, 2010, 4, 2845-2855.	7.3	52
22	Time Evolution of Surface Relief Structures in Thin Block Copolymer Films. Macromolecules, 2007, 40, 6930-6939.	2.2	50
23	Kinetic pathways of gyroid-to-cylinder transitions in diblock copolymers under external fields: cell dynamics simulation. Soft Matter, 2008, 4, 316-327.	1.2	50
24	Nanostructured Soft Matter. Nanoscience and Technology, 2007, , .	1.5	50
25	The role of C-terminal amidation in the membrane interactions of the anionic antimicrobial peptide, maximin H5. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 1111-1118.	1.4	49
26	Defect Evolution in Block Copolymer Thin Films via Temporal Phase Transitions. Langmuir, 2006, 22, 8089-8095.	1.6	47
27	Phase Behavior of ABC Triblock Terpolymers in Thin Films:Â Mesoscale Simulations. Macromolecules, 2005, 38, 1859-1867.	2.2	46
28	Cubic phases of block copolymers under shear and electric fields by cell dynamics simulation. I. Spherical phase. Journal of Chemical Physics, 2006, 125, 154905.	1.2	45
29	Dynamics of Terrace Formation in a Nanostructured Thin Block Copolymer Film. Langmuir, 2006, 22, 5848-5855.	1.6	44
30	Mechanisms of electric-field-induced alignment of block copolymer lamellae. Soft Matter, 2009, 5, 970.	1.2	44
31	Comment on â€œMicroscopic Mechanisms of Electric-Field-Induced Alignment of Block Copolymer Microdomainsâ€• Physical Review Letters, 2003, 90, 049601; author reply 049602.	2.9	43
32	Scaling behavior of the reorientation kinetics of block copolymers exposed to electric fields. Soft Matter, 2007, 3, 448-453.	1.2	41
33	Three-dimensional simulation of hexagonal phase of a specific polymer system under shear: The dynamic density functional approach. Journal of Chemical Physics, 1998, 109, 8751-8754.	1.2	40
34	Kinetic Pathway of Gyroid-to-Cylinder Transition in Diblock Copolymer Melt under an Electric Field. Macromolecules, 2007, 40, 2928-2935.	2.2	40
35	Large scale simulation of block copolymers with cell dynamics. European Physical Journal B, 2012, 85, 1.	0.6	39
36	Block copolymer nanoshells. Polymer, 2008, 49, 2797-2800.	1.8	34

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37	Sphere morphology of block copolymer systems under shear. Europhysics Letters, 2003, 62, 370-376.	0.7	33
38	Diblock copolymers in a cylindrical pore. Journal of Chemical Physics, 2009, 131, 214902.	1.2	33
39	Shear-induced transitions in a ternary polymeric system. Physical Review E, 2000, 62, R3063-R3066.	0.8	32
40	Hexagonally Perforated Lamella-to-Cylinder Transition in a Diblock Copolymer Thin Film under an Electric Field. Macromolecules, 2008, 41, 4501-4505.	2.2	32
41	Selective disordering of lamella-forming diblock copolymers under an electric field. Soft Matter, 2011, 7, 5161.	1.2	26
42	Orientational phase transitions in the hexagonal phase of a diblock copolymer melt under shear flow. Physical Review E, 2000, 61, 4125-4132.	0.8	25
43	Confined Sphere-Forming Block Copolymers: Phase Behavior and the Role of Chain Architecture. Macromolecules, 2009, 42, 8500-8512.	2.2	25
44	Mesoscopic Simulations of Lamellar Orientation in Block Copolymers. Macromolecular Theory and Simulations, 2002, 11, 123-127.	0.6	24
45	Computational Soft Nanotechnology with Mesodyn. Molecular Simulation, 2004, 30, 225-238.	0.9	24
46	Simulations of Electric Field Induced Lamellar Alignment in Block Copolymers in the Presence of Selective Electrodes. Macromolecular Theory and Simulations, 2003, 12, 508-511.	0.6	23
47	Kinetic pathways of sheared block copolymer systems derived from Minkowski functionals. Journal of Chemical Physics, 2004, 121, 3864-3873.	1.2	23
48	Aurein 2.3 functionality is supported by oblique orientated Î±-helical formation. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 586-594.	1.4	21
49	Equation of state and stress tensor in inhomogeneous compressible copolymer melts: Dynamic mean-field density functional approach. Journal of Chemical Physics, 1998, 108, 2638-2650.	1.2	20
50	Pathway Controlled Morphology Formation in Polymer Systems:Â Reactions, Shear, and Microphase Separation. Macromolecules, 1999, 32, 7674-7681.	2.2	20
51	Collective behavior of self-propelling particles with kinematic constraints: The relation between the discrete and the continuous description. Physica A: Statistical Mechanics and Its Applications, 2007, 381, 39-46.	1.2	20
52	Parallel Algorithm for Cell Dynamics Simulation of Block Copolymers. Macromolecular Theory and Simulations, 2007, 16, 779-784.	0.6	20
53	Cell Dynamics Simulations of Cylinder-Forming Diblock Copolymers in Thin Films on Topographical and Chemically Patterned Substrates. Macromolecules, 2013, 46, 1923-1931.	2.2	20
54	A Novel Form of Bacterial Resistance to the Action of Eukaryotic Host Defense Peptides, the Use of a Lipid Receptor. Biochemistry, 2013, 52, 6021-6029.	1.2	19

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55	The cooperative behaviour of antimicrobial peptides in model membranes. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2870-2881.	1.4	19
56	Microstructure of nematic amorphous block copolymers: Dependence on the nematic volume fraction. Journal of Chemical Physics, 2003, 118, 9401-9419.	1.2	18
57	The Phases in a Non-Ionic Surfactant (C₁₂E₆)â^'Water Ternary System: A Coarse-Grained Computer Simulation. Journal of Physical Chemistry B, 2011, 115, 1385-1393.	1.2	18
58	Influence of confinement on the orientational phase transitions in the lamellar phase of a block-copolymer melt under shear flow. Physical Review E, 2001, 64, 051803.	0.8	17
59	Inverse mapping of block copolymer morphologies. Journal of Chemical Physics, 2003, 118, 8456-8459.	1.2	17
60	Electric field-induced transitions in perforated lamella of ABA triblock copolymer thin film. Soft Matter, 2009, 5, 4814.	1.2	16
61	Viscoelastic effects in three-dimensional microphase separation of block copolymers: Dynamic mean-field density functional approach. Journal of Chemical Physics, 1998, 109, 11032-11042.	1.2	15
62	Modulated Self-Organization in Complex Amphiphilic Systems. Molecular Simulation, 2000, 25, 131-144.	0.9	15
63	Hydrodynamic model for a system of self-propelling particles with conservative kinematic constraints. Europhysics Letters, 2005, 71, 207-213.	0.7	15
64	Orthogonal fields: A path to long-range three-dimensional order in block copolymers. Journal of Chemical Physics, 2005, 123, 074903.	1.2	15
65	Hydrodynamic model for the system of self propelling particles with conservative kinematic constraints; two dimensional stationary solutions. Physica A: Statistical Mechanics and Its Applications, 2006, 366, 107-114.	1.2	15
66	Structure formation in liquid crystalline polymers. Journal of Chemical Physics, 2002, 116, 3152-3161.	1.2	14
67	Modeling of Block Copolymer/Colloid Hybrid Composite Materials. Macromolecular Theory and Simulations, 2011, 20, 769-779.	0.6	14
68	Multipod structures of lamellaeâ€forming diblock copolymers in threeâ€dimensional confinement spaces: Experimental observation and computer simulation. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 1702-1709.	2.4	13
69	Phase Behavior of Block Copolymer Nanocomposite Systems. Advanced Theory and Simulations, 2018, 1, 1800066.	1.3	13
70	Design of chimaeric polymersomes. Faraday Discussions, 2005, 128, 355.	1.6	12
71	Diblock copolymer sphere morphology in ultra thin films under shear. Soft Matter, 2011, 7, 6991.	1.2	12
72	Nonspherical Nanoparticles in Block Copolymer Composites: Nanosquares, Nanorods, and Diamonds. Macromolecules, 2019, 52, 8285-8294.	2.2	12

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73	Mesoscopic dynamics of complex vesicle formation: kinetic versus thermodynamic factors. Molecular Simulation, 2007, 33, 405-415.	0.9	11
74	Cell Dynamics Simulations of Sphere-Forming Diblock Copolymers in Thin Films on Chemically Patterned Substrates. Macromolecules, 2016, 49, 1079-1092.	2.2	11
75	Thermal hydrodynamic fluctuations in microemulsions. Physical Review E, 1994, 50, 3755-3765.	0.8	8
76	Cell Dynamic Simulations of Diblock Copolymer/Colloid Systems. Macromolecular Theory and Simulations, 2017, 26, 1600050.	0.6	8
77	Block Copolymerâ€“Nanorod Co-assembly in Thin Films: Effects of Rodâ€“Rod Interaction and Confinement. Macromolecules, 2020, 53, 3234-3249.	2.2	8
78	Dynamics of multi-lamellar vesicles. Physica A: Statistical Mechanics and Its Applications, 1995, 218, 319-334.	1.2	7
79	Dynamic Density Functional Theory for Sheared Polymeric Systems. Macromolecular Theory and Simulations, 2004, 13, 140-151.	0.6	6
80	Hydrodynamic fluctuations of spherical micelles and vesicles. Physica A: Statistical Mechanics and Its Applications, 1992, 183, 262-278.	1.2	5
81	Dynamic Mean-Field Model for the Mesoscale Morphologies of Liquid Crystalline Polymers. Macromolecules, 2001, 34, 8378-8379.	2.2	5
82	Nematic-amorphous polymer interfaces in the presence of a compatibilizer. Journal of Chemical Physics, 2004, 121, 4430-4440.	1.2	5
83	Co-assembly of Janus nanoparticles in block copolymer systems. Soft Matter, 2019, 15, 6400-6410.	1.2	5
84	Large scale three dimensional simulations of hybrid block copolymer/nanoparticle systems. Soft Matter, 2019, 15, 9325-9335.	1.2	5
85	On the theory of light and neutron scattering from droplet microemulsions. Journal of Molecular Liquids, 2001, 93, 113-118.	2.3	4
86	Nematic Ordering of Anisotropic Nanoparticles in Block Copolymers. Advanced Theory and Simulations, 2022, 5, .	1.3	4
87	Nanoparticle anisotropy induces sphere-to-cylinder phase transition in block copolymer melts. Soft Matter, 2022, 18, 3638-3643.	1.2	4
88	Thermal hydrodynamic fluctuations of polymer globules. Physica A: Statistical Mechanics and Its Applications, 1995, 222, 87-104.	1.2	3
89	Mossbauer absorption by globules in an acoustic field. Journal Physics D: Applied Physics, 1994, 27, 839-844.	1.3	2
90	Rearrangement dynamics in lamellar forming block copolymers under an electric field. AIP Conference Proceedings, 2004, , .	0.3	2

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91	Parallel Hybrid Simulations of Block Copolymer Nanocomposites using Coarray Fortran. Macromolecular Theory and Simulations, 2021, 30, 2100007.	0.6	2
92	Hybrid Time-Dependent Ginzburgâ€“Landau Simulations of Block Copolymer Nanocomposites: Nanoparticle Anisotropy. Polymers, 2022, 14, 1910.	2.0	2
93	Modulated Self-Organization in Complex Amphiphilic Systems. Progress of Theoretical Physics Supplement, 2000, 138, 320-329.	0.2	1
94	Stability properties of the collective stationary motion of self-propelling particles with conservative kinematic constraints. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 2573-2581.	0.7	1
95	Thermal fluctuations of a liquid helium inside a spherical volume. Journal of Molecular Liquids, 2001, 93, 91-94.	2.3	0
96	Hydrodynamic fluctuations of a liquid with anisotropic molecules. Physica A: Statistical Mechanics and Its Applications, 2001, 298, 237-254.	1.2	0
97	Parallel Algorithm for Cell Dynamics Simulation of Soft Nano-Structured Matter. Springer Optimization and Its Applications, 2009, , 253-262.	0.6	0
98	Macromol. Theory Simul. 8/2011. Macromolecular Theory and Simulations, 2011, 20, n/a-n/a.	0.6	0