Andrei V Zvelindovsky

List of Publications by Year
in descending order

98 papers	3,811 citations	109137 35 h-index	133063 59 g-index
100 all docs	100 docs citations	100 times ranked	2349 citing authors

#	Article	IF	Citations
1	Nematic Ordering of Anisotropic Nanoparticles in Block Copolymers. Advanced Theory and Simulations, 2022, 5, .	1.3	4
2	Nanoparticle anisotropy induces sphere-to-cylinder phase transition in block copolymer melts. Soft Matter, 2022, 18, 3638-3643.	1.2	4
3	Hybrid Time-Dependent Ginzburgâ€“Landau Simulations of Block Copolymer Nanocomposites: Nanoparticle Anisotropy. Polymers, 2022, 14, 1910.	2.0	2
4	Parallel Hybrid Simulations of Block Copolymer Nanocomposites using Coarray Fortran. Macromolecular Theory and Simulations, 2021, 30, 2100007.	0.6	2
5	Block Copolymerâ€“Nanorod Co-assembly in Thin Films: Effects of Rodâ€“Rod Interaction and Confinement. Macromolecules, 2020, 53, 3234-3249.	2.2	8
6	Co-assembly of Janus nanoparticles in block copolymer systems. Soft Matter, 2019, 15, 6400-6410.	1.2	5
7	Nonspherical Nanoparticles in Block Copolymer Composites: Nanosquares, Nanorods, and Diamonds. Macromolecules, 2019, 52, 8285-8294.	2.2	12
8	Large scale three dimensional simulations of hybrid block copolymer/nanoparticle systems. Soft Matter, 2019, 15, 9325-9335.	1.2	5
9	Phase Behavior of Block Copolymer Nanocomposite Systems. Advanced Theory and Simulations, 2018, 1, 1800066.	1.3	13
10	Cell Dynamic Simulations of Diblock Copolymer/Colloid Systems. Macromolecular Theory and Simulations, 2017, 26, 1600050.	0.6	8
11	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
12	The effect of amidation on the behaviour of antimicrobial peptides. European Biophysics Journal, 2016, 45, 195-207.	1.2	72
13	Cell Dynamics Simulations of Sphere-Forming Diblock Copolymers in Thin Films on Chemically Patterned Substrates. Macromolecules, 2016, 49, 1079-1092.	2.2	11
14	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
15	The cooperative behaviour of antimicrobial peptides in model membranes. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2870-2881.	1.4	19
16	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
17	Aurein 2.3 functionality is supported by oblique orientated Î±-helical formation. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 586-594.	1.4	21
18	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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19	Large scale simulation of block copolymers with cell dynamics. European Physical Journal B, 2012, 85, 1.	0.6	39
20	Diblock copolymer sphere morphology in ultra thin films under shear. Soft Matter, 2011, 7, 6991.	1.2	12
21	Selective disordering of lamella-forming diblock copolymers under an electric field. Soft Matter, 2011, 7, 5161.	1.2	26
22	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
23	Modeling of Block Copolymer/Colloid Hybrid Composite Materials. Macromolecular Theory and Simulations, 2011, 20, 769-779.	0.6	14
24	Macromol. Theory Simul. 8/2011. Macromolecular Theory and Simulations, 2011, 20, n/a-n/a.	0.6	0
25	Block Copolymer Nanocontainers. ACS Nano, 2010, 4, 2845-2855.	7.3	52
26	Diblock copolymers in a cylindrical pore. Journal of Chemical Physics, 2009, 131, 214902.	1.2	33
27	Confined Sphere-Forming Block Copolymers: Phase Behavior and the Role of Chain Architecture. Macromolecules, 2009, 42, 8500-8512.	2.2	25
28	Parallel Algorithm for Cell Dynamics Simulation of Soft Nano-Structured Matter. Springer Optimization and Its Applications, 2009, , 253-262.	0.6	0
29	Electric field-induced transitions in perforated lamella of ABA triblock copolymer thin film. Soft Matter, 2009, 5, 4814.	1.2	16
30	Mechanisms of electric-field-induced alignment of block copolymer lamellae. Soft Matter, 2009, 5, 970.	1.2	44
31	Block copolymer nanoshells. Polymer, 2008, 49, 2797-2800.	1.8	34
32	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
33	Hexagonally Perforated Lamella-to-Cylinder Transition in a Diblock Copolymer Thin Film under an Electric Field. Macromolecules, 2008, 41, 4501-4505.	2.2	32
34	Specific Features of Defect Structure and Dynamics in the Cylinder Phase of Block Copolymers. ACS Nano, 2008, 2, 1143-1152.	7.3	55
35	Block copolymers confined in a nanopore: Pathfinding in a curving and frustrating flatland. Journal of Chemical Physics, 2008, 128, 084901.	1.2	65
36	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

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37	Time Evolution of Surface Relief Structures in Thin Block Copolymer Films. Macromolecules, 2007, 40, 6930-6939.	2.2	50
38	Scaling behavior of the reorientation kinetics of block copolymers exposed to electric fields. Soft Matter, 2007, 3, 448-453.	1.2	41
39	Mesoscopic dynamics of complex vesicle formation: kinetic versus thermodynamic factors. Molecular Simulation, 2007, 33, 405-415.	0.9	11
40	Kinetic Pathway of Gyroid-to-Cylinder Transition in Diblock Copolymer Melt under an Electric Field. Macromolecules, 2007, 40, 2928-2935.	2.2	40
41	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
42	Parallel Algorithm for Cell Dynamics Simulation of Block Copolymers. Macromolecular Theory and Simulations, 2007, 16, 779-784.	0.6	20
43	Nanostructured Soft Matter. Nanoscience and Technology, 2007, , .	1.5	50
44	Dynamics of Terrace Formation in a Nanostructured Thin Block Copolymer Film. Langmuir, 2006, 22, 5848-5855.	1.6	44
45	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
46	Kinetic Pathways of Order-to-Order Phase Transitions in Block Copolymer Films under an Electric Field. Macromolecules, 2006, 39, 3024-3037.	2.2	52
47	Defect Evolution in Block Copolymer Thin Films via Temporal Phase Transitions. Langmuir, 2006, 22, 8089-8095.	1.6	47
48	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
49	Hydrodynamic model for a system of self-propelling particles with conservative kinematic constraints. Europhysics Letters, 2005, 71, 207-213.	0.7	15
50	Orthogonal fields: A path to long-range three-dimensional order in block copolymers. Journal of Chemical Physics, 2005, 123, 074903.	1.2	15
51	Design of chimaeric polymersomes. Faraday Discussions, 2005, 128, 355.	1.6	12
52	Phase Behavior of ABC Triblock Terpolymers in Thin Films:Â Mesoscale Simulations. Macromolecules, 2005, 38, 1859-1867.	2.2	46
53	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
54	Electric Field Alignment of Asymmetric Diblock Copolymer Thin Films. Macromolecules, 2005, 38, 10788-10798.	2.2	151

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55	Self-Assembly of Complex Vesicles. Macromolecules, 2005, 38, 7502-7513.	2.2	109
56	Rearrangement dynamics in lamellar forming block copolymers under an electric field. AIP Conference Proceedings, 2004, , .	0.3	2
57	Nematic-amorphous polymer interfaces in the presence of a compatibilizer. Journal of Chemical Physics, 2004, 121, 4430-4440.	1.2	5
58	Phase behavior in thin films of cylinder-forming ABA block copolymers: Mesoscale modeling. Journal of Chemical Physics, 2004, 120, 1117-1126.	1.2	147
59	Role of dissimilar interfaces in thin films of cylinder-forming block copolymers. Journal of Chemical Physics, 2004, 120, 1127-1137.	1.2	73
60	Computational Soft Nanotechnology with Mesodyn. Molecular Simulation, 2004, 30, 225-238.	0.9	24
61	Direct imaging and mesoscale modelling of phase transitions in a nanostructured fluid. Nature Materials, 2004, 3, 886-891.	13.3	111
62	Dynamic Density Functional Theory for Sheared Polymeric Systems. Macromolecular Theory and Simulations, 2004, 13, 140-151.	0.6	6
63	Kinetic pathways of sheared block copolymer systems derived from Minkowski functionals. Journal of Chemical Physics, 2004, 121, 3864-3873.	1.2	23
64	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
65	Electric Field Induced Sphere-to-Cylinder Transition in Diblock Copolymer Thin Films. Macromolecules, 2004, 37, 6980-6984.	2.2	105
66	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
67	Electric Field Induced Alignment of Concentrated Block Copolymer Solutions. Macromolecules, 2003, 36, 8078-8087.	2.2	108
68	Microstructure of nematic amorphous block copolymers: Dependence on the nematic volume fraction. Journal of Chemical Physics, 2003, 118, 9401-9419.	1.2	18
69	Sphere morphology of block copolymer systems under shear. Europhysics Letters, 2003, 62, 370-376.	0.7	33
70	Inverse mapping of block copolymer morphologies. Journal of Chemical Physics, 2003, 118, 8456-8459.	1.2	17
71	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
72	Structure formation in liquid crystalline polymers. Journal of Chemical Physics, 2002, 116, 3152-3161.	1.2	14

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73	Phase Behavior in Thin Films of Cylinder-Forming Block Copolymers. Physical Review Letters, 2002, 89, 035501.	2.9	475
74	Lamellar Alignment of Diblock Copolymers in an Electric Field. Macromolecules, 2002, 35, 1473-1476.	2.2	73
75	Mesoscopic Simulations of Lamellar Orientation in Block Copolymers. Macromolecular Theory and Simulations, 2002, 11, 123-127.	0.6	24
76	Dynamic Mean-Field Model for the Mesoscale Morphologies of Liquid Crystalline Polymers. Macromolecules, 2001, 34, 8378-8379.	2.2	5
77	Thermal fluctuations of a liquid helium inside a spherical volume. Journal of Molecular Liquids, 2001, 93, 91-94.	2.3	0
78	On the theory of light and neutron scattering from droplet microemulsions. Journal of Molecular Liquids, 2001, 93, 113-118.	2.3	4
79	Hydrodynamic fluctuations of a liquid with anisotropic molecules. Physica A: Statistical Mechanics and Its Applications, 2001, 298, 237-254.	1.2	0
80	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
81	Morphology of symmetric block copolymer in a cylindrical pore. Journal of Chemical Physics, 2001, 115, 8226-8230.	1.2	149
82	Modulated Self-Organization in Complex Amphiphilic Systems. Molecular Simulation, 2000, 25, 131-144.	0.9	15
83	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
84	Modulated Self-Organization in Complex Amphiphilic Systems. Progress of Theoretical Physics Supplement, 2000, 138, 320-329.	0.2	1
85	Shear-induced transitions in a ternary polymeric system. Physical Review E, 2000, 62, R3063-R3066.	0.8	32
86	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 2 Theory. Macromolecules, 1999, 32, 646-656.	2.2	161
87	Dynamics of surface directed mesophase formation in block copolymer melts. Journal of Chemical Physics, 1999, 110, 2250-2256.	1.2	102
88	Pathway Controlled Morphology Formation in Polymer Systems:Â Reactions, Shear, and Microphase Separation. Macromolecules, 1999, 32, 7674-7681.	2.2	20
89	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
90	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

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91	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
92	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
93	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
94	Dynamics of multi-lamellar vesicles. Physica A: Statistical Mechanics and Its Applications, 1995, 218, 319-334.	1.2	7
95	Thermal hydrodynamic fluctuations of polymer globules. Physica A: Statistical Mechanics and Its Applications, 1995, 222, 87-104.	1.2	3
96	Mossbauer absorption by globules in an acoustic field. Journal Physics D: Applied Physics, 1994, 27, 839-844.	1.3	2
97	Thermal hydrodynamic fluctuations in microemulsions. Physical Review E, 1994, 50, 3755-3765.	0.8	8
98	Hydrodynamic fluctuations of spherical micelles and vesicles. Physica A: Statistical Mechanics and Its Applications, 1992, 183, 262-278.	1.2	5