Wenbing Hu

List of Publications by Year
in descending order

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117 papers	3,602 citations	136950 32 h-index	175258 52 g-index
119 all docs	119 docs citations	119 times ranked	1966 citing authors

#	Article	IF	Citations
1	Cloning polymer single crystals through self-seeding. Nature Materials, 2009, 8, 348-353.	27.5	238
2	Polymer Crystallization Driven by Anisotropic Interactions. , 0, , 1-35.		149
3	Strong Memory Effect of Crystallization above the Equilibrium Melting Point of Random Copolymers. Macromolecules, 2013, 46, 6485-6497.	4.8	146
4	Simulation of Shish-Kebab Crystallite Induced by a Single Prealigned Macromolecule. Macromolecules, 2002, 35, 7172-7174.	4.8	130
5	Structural transformation in the collapse transition of the single flexible homopolymer model. Journal of Chemical Physics, 1998, 109, 3686-3690.	3.0	127
6	The physics of polymer chain-folding. Physics Reports, 2018, 747, 1-50.	25.6	126
7	Intramolecular Nucleation Model for Polymer Crystallization. Macromolecules, 2003, 36, 8178-8183.	4.8	113
8	Competition of crystal nucleation to fabricate the oriented semi-crystalline polymers. Polymer, 2013, 54, 3402-3407.	3.8	100
9	Reversible Surface Melting of PE and PEO Crystallites Indicated by TMDSC. Macromolecules, 1999, 32, 7548-7554.	4.8	90
10	Polymer Physics. , 2013, , .		81
11	Monte Carlo Simulations of Strong Memory Effect of Crystallization in Random Copolymers. Macromolecules, 2013, 46, 6498-6506.	4.8	80
12	Chain folding in polymer melt crystallization studied by dynamic Monte Carlo simulations. Journal of Chemical Physics, 2001, 115, 4395-4401.	3.0	65
13	Shish-Kebab Crystallites Initiated by Shear Fracture in Bulk Polymers. Macromolecules, 2018, 51, 480-487.	4.8	65
14	Block copolymer crystalsomes withÂan ultrathin shell to extend blood circulation time. Nature Communications, 2018, 9, 3005.	12.8	61
15	Orientational Relaxation Together with Polydispersity Decides Precursor Formation in Polymer Melt Crystallization. Macromolecules, 2005, 38, 2806-2812.	4.8	60
16	The melting point of chain polymers. Journal of Chemical Physics, 2000, 113, 3901-3908.	3.0	56
17	Variable trends of chain-folding in separate stages of strain-induced crystallization of bulk polymers. Polymer, 2014, 55, 1267-1272.	3.8	56
18	Understanding crystal orientation in quasi-one-dimensional polymer systems. Soft Matter, 2008, 4, 540.	2.7	53

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19	Regime Transitions of Polymer Crystal Growth Rates:â€‰ Molecular Simulations and Interpretation beyond Lauritzen-Hoffman Model. Macromolecules, 2008, 41, 2049-2061.	4.8	47
20	Phase Transitions of Bulk Statistical Copolymers Studied by Dynamic Monte Carlo Simulations. Macromolecules, 2003, 36, 2165-2175.	4.8	46
21	Thermodynamics of strain-induced crystallization of random copolymers. Soft Matter, 2014, 10, 343-347.	2.7	46
22	Molecular Segregation in Polymer Melt Crystallization:Â Simulation Evidence and Unified-Scheme Interpretation. Macromolecules, 2005, 38, 8712-8718.	4.8	45
23	Comparing crystallization rates between linear and cyclic poly(epsilon-caprolactones) via fast-scan chip-calorimeter measurements. Polymer, 2015, 63, 34-40.	3.8	45
24	Combining fast-scan chip-calorimeter with molecular simulations to investigate superheating behaviors of lamellar polymer crystals. Polymer, 2014, 55, 4307-4312.	3.8	41
25	Lattice-model study of the thermodynamic interplay of polymer crystallization and liquidâ€“liquid demixing. Journal of Chemical Physics, 2003, 118, 10343-10348.	3.0	40
26	Molecular simulations of confined crystallization in the microdomains of diblock copolymers. Progress in Polymer Science, 2016, 54-55, 232-258.	24.7	39
27	Mobility Gradient of Poly(ethylene terephthalate) Chains near a Substrate Scaled by the Thickness of the Adsorbed Layer. Macromolecules, 2017, 50, 6804-6812.	4.8	39
28	Confined crystallization of cylindrical diblock copolymers studied by dynamic Monte Carlo simulations. Journal of Chemical Physics, 2006, 124, 244901.	3.0	37
29	How Chain-Folding Crystal Growth Determines the Thermodynamic Stability of Polymer Crystals. Journal of Physical Chemistry B, 2016, 120, 566-571.	2.6	36
30	Sectorization of a Lamellar Polymer Crystal Studied by Dynamic Monte Carlo Simulations. Macromolecules, 2003, 36, 549-552.	4.8	35
31	Low-temperature crystallization of P(VDF-TrFE-CFE) studied by Flash DSC. Polymer, 2016, 84, 319-327.	3.8	35
32	Effect of Metastable Liquidâ^'Liquid Demixing on the Morphology of Nucleated Polymer Crystals. Macromolecules, 2004, 37, 4336-4338.	4.8	34
33	Crystal nucleation enhanced at the diffuse interface of immiscible polymer blends. Physical Review E, 2008, 77, 061801.	2.1	33
34	Slowing Down of Accelerated Structural Relaxation in Ultrathin Polymer Films. Physical Review Letters, 2014, 112, 148306.	7.8	33
35	Free energy barrier to melting of single-chain polymer crystallite. Journal of Chemical Physics, 2003, 118, 3455-3457.	3.0	32
36	Polymer Crystallization Confined in Hard Spherical Microdomains of Diblock Copolymers. Macromolecules, 2009, 42, 3381-3385.	4.8	32

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37	Effects of hydrogen-bonding density on polyamide crystallization kinetics. Polymer, 2020, 189, 122165.	3.8	32
38	Liquidâ€“liquid demixing in a binary polymer blend driven solely by the component-selective crystallizability. Journal of Chemical Physics, 2003, 119, 10953-10957.	3.0	28
39	Oriented primary crystal nucleation in lamellar diblock copolymer systems. Faraday Discussions, 2005, 128, 253.	3.2	28
40	Nonâ€monotonic molecular weight dependence of crystallization rates of linear and cyclic poly(epsilonâ€caprolactone)s in a wide temperature range. Polymer International, 2016, 65, 1074-1079.	3.1	28
41	Polymer crystallization under nano-confinement of droplets studied by molecular simulations. Faraday Discussions, 2009, 143, 129.	3.2	26
42	Interplay between Free Surface and Solid Interface Nucleation on Two-Step Crystallization of Poly(ethylene terephthalate) Thin Films Studied by Fast Scanning Calorimetry. Macromolecules, 2018, 51, 5209-5218.	4.8	26
43	Crystallization-Induced Microdomain Coalescence in Lamellar Diblock Copolymers Studied by Dynamic Monte Carlo Simulations. Macromolecules, 2005, 38, 3977-3983.	4.8	23
44	Crosslinked P(VDF-CTFE)/PS-COOH nanocomposites for high-energy-density capacitor application. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 1160-1169.	2.1	23
45	Effect of solvent selectivity on crystallization-driven fibril growth kinetics of diblock copolymers. Polymer, 2018, 138, 359-362.	3.8	23
46	Tammann Analysis of the Molecular Weight Selection of Polymorphic Crystal Nucleation in Symmetric Racemic Poly(lactic acid) Blends. Macromolecules, 2022, 55, 3661-3670.	4.8	23
47	Homogeneous Crystal Nucleation Triggered by Spinodal Decomposition in Polymer Solutions. Journal of Physical Chemistry B, 2007, 111, 11373-11378.	2.6	22
48	Intramolecular Crystal Nucleation. , 2007, , 47-63.		22
49	Understanding Self-poisoning Phenomenon in Crystal Growth of Short-Chain Polymers. Journal of Physical Chemistry B, 2009, 113, 13485-13490.	2.6	22
50	Systematic Kinetic Analysis on Monolayer Lamellar Crystal Thickening via Chain-Sliding Diffusion of Polymers. Macromolecules, 2013, 46, 164-171.	4.8	22
51	Effect of Stereochemistry on Directed Self-Assembly of Poly(styrene-b-lactide) Films on Chemical Patterns. ACS Macro Letters, 2016, 5, 396-401.	4.8	22
52	Effect of comonomer sizes on the strain-induced crystal nucleation of random copolymers. European Polymer Journal, 2016, 81, 34-42.	5.4	22
53	Monte Carlo Simulation of Strain-Enhanced Stereocomplex Polymer Crystallization. Journal of Physical Chemistry B, 2018, 122, 10928-10933.	2.6	22
54	Epitaxial polymer crystal growth influenced by partial melting of the fiber in the single-polymer composites. Polymer, 2007, 48, 4264-4270.	3.8	21

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55	Multicomponent Thermodynamics of Strain-Induced Polymer Crystallization. Journal of Physical Chemistry B, 2016, 120, 6890-6896.	2.6	21
56	Strong memory of strain-induced copolymer crystallization as revealed by Monte Carlo simulations. Polymer, 2016, 98, 282-286.	3.8	21
57	Breakout and Breakdown Induced by Crystallization in Cylinder-Forming Diblock Copolymers. Macromolecules, 2008, 41, 7625-7629.	4.8	20
58	Combining TMDSC measurements between chip-calorimeter and molecular simulation to study reversible melting of polymer crystals. Thermochimica Acta, 2015, 603, 79-84.	2.7	20
59	Sequence-Length Segregation during Crystallization and Melting of a Model Homogeneous Copolymer. Macromolecules, 2004, 37, 673-675.	4.8	18
60	Fibril Crystal Growth in Diblock Copolymer Solutions Studied by Dynamic Monte Carlo Simulations. Journal of Physical Chemistry B, 2015, 119, 5926-5932.	2.6	18
61	Intramolecular Crystal Nucleation Favored by Polymer Crystallization: Monte Carlo Simulation Evidence. Journal of Physical Chemistry B, 2016, 120, 6754-6760.	2.6	18
62	Comparing Crystallization Kinetics between Polyamide 6 and Polyketone via Chipâ€€alorimeter Measurement. Macromolecular Chemistry and Physics, 2018, 219, 1700385.	2.2	18
63	Anomalous Ostwald Ripening Enables 2D Polymer Crystals via Fast Evaporation. Physical Review Letters, 2019, 123, 207801.	7.8	18
64	Multiamorphous Phases in Diketopyrrolopyrrole-Based Conjugated Polymers: From Bulk to Ultrathin Films. Macromolecules, 2020, 53, 4480-4489.	4.8	18
65	Primary and secondary crystallization of fast-cooled poly(vinylidene fluoride) studied by Flash DSC, wide-angle X-ray diffraction and Fourier transform infrared spectroscopy. Polymer International, 2016, 65, 387-392.	3.1	17
66	Entropy-Driven Segregation and Its Competition with Crystal Nucleation in the Binary Blends of Stretched and Free Guest Polymers. Journal of Physical Chemistry B, 2016, 120, 12988-12992.	2.6	17
67	Small- and wide-angle X-ray scattering study on Î±â€²-to-Î± transition of Poly(L-lactide acid) crystals. Polymer, 2019, 167, 122-129.	3.8	17
68	Observation of Stepwise Ultrafast Crystallization Kinetics of Donorâ€“Acceptor Conjugated Polymers and Correlation with Field Effect Mobility. Chemistry of Materials, 2021, 33, 1637-1647.	6.7	17
69	How the restriction of sliding diffusion of comonomers affects crystallization and melting of homogeneous copolymers. Polymer, 2006, 47, 5582-5587.	3.8	16
70	Role of stress relaxation in stress-induced polymer crystallization. Polymer, 2021, 235, 124306.	3.8	16
71	Understanding the Growth Rates of Polymer Cocrystallization in the Binary Mixtures of Different Chain Lengths. Journal of Physical Chemistry B, 2008, 112, 7370-7376.	2.6	15
72	Reversibleâ€“Irreversible Transition of Strain-Induced Crystallization in Segmented Copolymers: The Critical Strain and Chain Conformation. ACS Applied Polymer Materials, 2021, 3, 3576-3585.	4.4	15

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73	Polymer immiscibility enhanced by thermal fluctuations toward crystalline order. Physical Review E, 2007, 76, 031801.	2.1	14
74	Understanding crystal nucleation in solution-segregated polymers. Polymer, 2009, 50, 3828-3834.	3.8	14
75	Flash DSC study on the annealing behaviors of poly(l-lactide acid) crystallized in the low temperature region. Polymer, 2019, 174, 123-129.	3.8	14
76	Effects of shortâ€chain branches on strainâ€induced polymer crystallization. Polymer International, 2019, 68, 225-230.	3.1	14
77	Elastic Aerogel with Tunable Wettability for Self-Cleaning Electronic Skin. , 2020, 2, 1575-1582.		14
78	Kinetic Analysis of Quasi-One-Dimensional Growth of Polymer Lamellar Crystals in Dilute Solutions. Journal of Physical Chemistry B, 2013, 117, 3047-3053.	2.6	13
79	Crystallization kinetics of ethylene-co-propylene rubber/isotactic polypropylene blend investigated via chip-calorimeter measurement. European Polymer Journal, 2017, 96, 79-86.	5.4	13
80	Comparing crystallization kinetics among two G-resin samples and iPP via Flash DSC measurement. Journal of Thermal Analysis and Calorimetry, 2017, 128, 1859-1866.	3.6	13
81	Role of Block Junctions in the Interplay of Phase Transitions of Two-Component Polymeric Systems. Journal of Physical Chemistry B, 2011, 115, 8853-8857.	2.6	12
82	Dynamic Monte Carlo simulations of double crystallization accelerated in microdomains of diblock copolymers. Journal of Chemical Physics, 2012, 136, 104906.	3.0	12
83	Tuning bio-inspired skinâ€“core structure of nascent fiber via interplay of polymer phase transitions. Physical Chemistry Chemical Physics, 2014, 16, 15152-15157.	2.8	12
84	Understanding the Growth Rates of Polymer Cocrystallization in the Binary Mixtures of Different Chain Lengths: Revisited. Journal of Physical Chemistry B, 2015, 119, 9975-9981.	2.6	12
85	Crystallization of Statistical Copolymers. Advances in Polymer Science, 2016, , 1-43.	0.8	12
86	Dynamic Monte Carlo simulation of non-equilibrium Brownian diffusion of single-chain macromolecules. Molecular Simulation, 2016, 42, 321-327.	2.0	12
87	Silk-silk blend materials. Journal of Thermal Analysis and Calorimetry, 2017, 127, 915-921.	3.6	12
88	Effects of amide comonomers on polyamide 6 crystallization kinetics. Thermochimica Acta, 2020, 690, 178667.	2.7	10
89	Block copolymerization of ethylene oxide and acrylonitrile and the influence of block length of polyacrylonitrile on the thermal behavior and morphology of block copolymer. Journal of Polymer Science Part A, 1996, 34, 1317-1324.	2.3	9
90	Polymer semicrystalline texture made by interplay of crystal growth. Polymer, 2009, 50, 5871-5875.	3.8	9

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91	Polymer Crystallization. , 2013, , 187-221.		9
92	Fast-scan chip-calorimeter measurement on the melting behaviors of melt-crystallized syndiotactic polystyrene. Journal of Thermal Analysis and Calorimetry, 2014, 118, 1531-1536.	3.6	9
93	Cross-plane thermal conductivity of thin films characterized by Flash DSC measurement. Thermochimica Acta, 2019, 677, 21-25.	2.7	9
94	Thermal conductivity of Nylon 46, Nylon 66 and Nylon 610 characterized by Flash DSC measurement. Thermochimica Acta, 2020, 683, 178445.	2.7	9
95	Growth Rates of Edge-on Lamellar Crystals Confined in Polymer Thin Films. Journal of Macromolecular Science - Physics, 2012, 51, 2341-2351.	1.0	8
96	Monte Carlo simulations of crystallization in heterogeneous copolymers: The role of copolymer fractions with intermediate comonomer content. Journal of Materials Research, 2012, 27, 1383-1388.	2.6	7
97	Fast-Scanning Chip-Calorimetry Measurement of Crystallization Kinetics of Poly(Glycolic Acid). Polymers, 2021, 13, 891.	4.5	7
98	Optical Imaging of the Molecular Mobility of Single Polystyrene Nanospheres. Journal of the American Chemical Society, 2022, 144, 1267-1273.	13.7	7
99	Dynamic Monte Carlo simulations of strain-induced crystallization in multiblock copolymers: 1. Dilution effects. Soft Matter, 2022, , .	2.7	7
100	Crystallization Kinetics of Lamellar Crystals Confined in Polymer Thin Films. Journal of Macromolecular Science - Physics, 2012, 51, 1548-1557.	1.0	6
101	Biased diffusion induces coil deformation via aÂâ€˜cracking-the-whipâ€™ effect of acceleration generated by dynamic heterogeneity along a polymer chain. Polymer International, 2015, 64, 49-53.	3.1	6
102	Free energy change of crystallisation in single copolymers. Molecular Physics, 2018, 116, 3020-3026.	1.7	6
103	Roles of repeating-unit interactions in the stress relaxation process of bulk amorphous polymers. Polymer, 2021, 224, 123740.	3.8	6
104	Nascent structure memory erased in polymer stretching. Journal of Chemical Physics, 2022, 156, 144904.	3.0	6
105	Glassy Alfa-Relaxation Promotes Surprising Homo-Crystal Nucleation in the Low-Molar-Mass Enantiomeric Poly(lactic acid) Blend. Macromolecules, 2022, 55, 4614-4623.	4.8	6
106	Crystal morphology of polyurea on rapid quenching. Polymer, 2021, 213, 123201.	3.8	5
107	Statistical thermodynamics of polymer crystallization. Frontiers of Chemistry in China: Selected Publications From Chinese Universities, 2010, 5, 29-32.	0.4	4
108	Crystallization rates of moderate and ultrahigh molecular weight polyethylene characterized by Flash DSC measurement. Polymer International, 2020, 69, 18-23.	3.1	4

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109	Growth rate equations of lamellar polymer crystals. Polymer Crystallization, 2018, 1, e25838.	0.8	3
110	Scientists summit at Shanghai in the field of polymer crystallization. Frontiers of Chemistry in China: Selected Publications From Chinese Universities, 2009, 4, 402-402.	0.4	2
111	Theoretical Aspects of Polymer Crystallization. , 2016, , 101-143.		2
112	Role of chain ends in coil deformation of driven single polymer. Materials Chemistry Frontiers, 2017, 1, 1349-1353.	5.9	2
113	Interplay of Liquid-Liquid Demixing and Polymer Crystallization. Series in Sof Condensed Matter, 2010, , 179-206.	0.1	2
114	Role of long-chain backbone in side-chain crystallization of densely grafted comb-like polymers. Polymer, 2022, , 124922.	3.8	1
115	Interplay Between Phase Separation and Polymer Crystallization. , 2013, , 223-239.		0
116	Combining Fast-Scan Chip Calorimetry with Molecular Simulations to Investigate Polymer Crystal Melting. , 2016, , 379-399.		0
117	Special issue session dedicated to the retirement of Prof. Vincent Mathot: polymer thermal analysis and crystallization. Polymer International, 2019, 68, 177-178.	3.1	0