Zong-Bao Wang

List of Publications by Year
in descending order

83 papers	1,400 citations	331670 21 h-index	395702 33 g-index
83 all docs	83 docs citations	83 times ranked	1352 citing authors

#	Article	IF	Citations
1	Anisotropically Fatigueâ€Resistant Hydrogels. Advanced Materials, 2021, 33, e2102011.	21.0	114
2	Rhythmic Growth-Induced Ring-Banded Spherulites with Radial Periodic Variation of Thicknesses Grown from Poly(Îµ-caprolactone) Solution with Constant Concentration. Macromolecules, 2008, 41, 7584-7595.	4.8	81
3	Rhythmic Growth-Induced Concentric Ring-Banded Structures in Poly(Îµ-caprolactone) Solution-Casting Films Obtained at the Slow Solvent Evaporation Rate. Macromolecules, 2007, 40, 4381-4385.	4.8	68
4	Chitin nanocrystals grafted with poly(3-hydroxybutyrate-co-3-hydroxyvalerate) and their effects on thermal behavior of PHBV. Carbohydrate Polymers, 2012, 87, 784-789.	10.2	65
5	Electrostatic adsorption method for preparing electrically conducting ultrahigh molecular weight polyethylene/graphene nanosheets composites with a segregated network. Composites Science and Technology, 2013, 89, 180-185.	7.8	60
6	Twisting of Lamellar Crystals in Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) Ring-Banded Spherulites. Macromolecules, 2010, 43, 4441-4444.	4.8	58
7	Ultrastretchable, Highly Transparent, Self-Adhesive, and 3D-Printable Ionic Hydrogels for Multimode Tactical Sensing. Chemistry of Materials, 2021, 33, 6731-6742.	6.7	48
8	Tuning Radial Lamellar Packing and Orientation into Diverse Ring-Banded Spherulites: Effects of Structural Feature and Crystallization Condition. Macromolecules, 2014, 47, 1783-1792.	4.8	44
9	Reduced graphene oxide enhances the crystallization and orientation of poly(Îµ-caprolactone). Composites Science and Technology, 2014, 96, 63-70.	7.8	42
10	Structural evolution from shish-kebab to fibrillar crystals during hot-stretching process of gel spinning ultra-high molecular weight polyethylene fibers obtained from low concentration solution. Polymer, 2017, 120, 244-254.	3.8	42
11	Rhythmic Growth Combined with Lamellar Twisting Induces Poly(ethylene adipate) Nested Ring-Banded Structures. ACS Macro Letters, 2012, 1, 154-158.	4.8	39
12	Crystallization behavior, thermal and mechanical properties of PHBV/graphene nanosheet composites. Chinese Journal of Polymer Science (English Edition), 2013, 31, 670-678.	3.8	38
13	Morphological Control of Polymer Spherulites via Manipulating Radial Lamellar Organization upon Evaporative Crystallization: A Mini Review. Crystals, 2017, 7, 115.	2.2	32
14	An in situ small-angle X-ray scattering study of the structural effects of temperature and draw ratio of the hot-drawing process on ultra-high molecular weight polyethylene fibers. RSC Advances, 2016, 6, 51125-51134.	3.6	26
15	Band-to-Nonband Transition into Unique Poly(Îµ-caprolactone) Crystals by Modulating the Interplay of Diffusion and Growth. ACS Macro Letters, 2012, 1, 718-722.	4.8	24
16	Synthesis and characterization of triblock copolymer PLA-b-PBT-b-PLA and its effect on the crystallization of PLA. RSC Advances, 2013, 3, 18464.	3.6	23
17	The influence of epitaxial crystallization on the mechanical properties of a high density polyethylene/reduced graphene oxide nanocomposite injection bar. RSC Advances, 2017, 7, 21918-21925.	3.6	23
18	Facile fabrication of conductive ultrahigh molecular weight polyethylene fibers via musselâ€inspired deposition. Journal of Applied Polymer Science, 2013, 128, 1030-1035.	2.6	22

#	Article	IF	Citations
19	Noncovalent Method for Improving the Interaction between Reduced Graphene Oxide and Poly(Îµ-caprolactone). Industrial & Engineering Chemistry Research, 2013, 52, 15824-15828.	3.7	22
20	Effect of Gel Solution Concentration on the Structure and Properties of Gel-Spun Ultrahigh Molecular Weight Polyethylene Fibers. Industrial & Engineering Chemistry Research, 2016, 55, 8357-8363.	3.7	22
21	High-density polyethylene crystals with double melting peaks induced by ultra-high-molecular-weight polyethylene fibre. Royal Society Open Science, 2018, 5, 180394.	2.4	22
22	Effects of a semiâ€bioâ€based triazine derivative on intumescent flameâ€retardant polypropylene. Polymers for Advanced Technologies, 2019, 30, 1259-1268.	3.2	21
23	In-situ investigation of multiple endothermic peaks in isomorphous poly(3-hydroxybutyrate-co-3-hydroxyvalerate) with low HV content by synchrotron radiation. Polymer, 2019, 169, 1-10.	3.8	20
24	Ultra-strong gel-spun ultra-high molecular weight polyethylene fibers filled with chitin nanocrystals. RSC Advances, 2016, 6, 20629-20636.	3.6	19
25	Structural development of gel-spinning UHMWPE fibers through industrial hot-drawing process analyzed by small/wide-angle X-ray scattering. Polymer Bulletin, 2017, 74, 721-736.	3.3	19
26	Coupling between crystallization and evaporation dynamics: Periodically nonlinear growth into concentric ringed spherulites. Polymer, 2013, 54, 6628-6635.	3.8	16
27	Dramatic Toughness Enhancement of Polydicyclopentadiene Composites by Incorporating Low Amounts of Vinyl-Functionalized SiO₂. Industrial & Engineering Chemistry Research, 2017, 56, 4750-4757.	3.7	16
28	Structural transformation from shishâ€kebab crystals to microâ€fibrils through hot stretching process of gelâ€spun ultraâ€high molecular weight polyethylene fibers with high concentration solution. Journal of Polymer Science, Part B: Polymer Physics, 2018, 56, 225-238.	2.1	15
29	The Influence of Epitaxial Crystallization on the Mechanical Properties of Polyamide 66/Reduced Graphene Oxide Nanocomposite Injection Bar. Crystals, 2017, 7, 384.	2.2	14
30	The influence of short chain branch on formation of shear induced crystals in bimodal polyethylene at high shear temperatures. European Polymer Journal, 2018, 105, 359-369.	5.4	13
31	Foaming of Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) with Supercritical Carbon Dioxide: Foaming Performance and Crystallization Behavior. ACS Omega, 2020, 5, 9839-9845.	3.5	13
32	Melting behavior of polymorphic MDI/BD-block TPU investigated by using in-situ SAXS/WAXS and FTIR techniques. Hydrogen bonding formation causing the inhomogeneous melt. Polymer Testing, 2021, 96, 107065.	4.8	13
33	The influence of short chain branch on formation of shishâ€kebab crystals in bimodal polyethylene under shear at high temperatures. Journal of Polymer Science, Part B: Polymer Physics, 2018, 56, 786-794.	2.1	12
34	Effect of epitaxial crystallization on the structural evolution of PCL/RGO nanocomposites during stretching by in-situ synchrotron radiation. Polymer, 2018, 159, 106-115.	3.8	11
35	Interâ€spherulitic/innerâ€spherulitic localization of PBSU during crystallization of PVDF in PVDF / PBSU blend. Journal of Polymer Science, 2020, 58, 1699-1706.	3.8	11
36	Influence of Prereserved Shish Crystals on the Structural Evolution of Ultrahigh-Molecular Weight Polyethylene Films during the Hot Stretching Process. Macromolecules, 2022, 55, 4600-4613.	4.8	11

#	Article	IF	Citations
37	Enhance understanding of rhythmic crystallization in confined evaporating polymer solution films: from environment to solution film and then to one period. RSC Advances, 2016, 6, 45241-45249.	3.6	10
38	Structure and properties of gel-spun ultra-high molecular weight polyethylene fibers with high gel solution concentration. Chinese Journal of Polymer Science (English Edition), 2017, 35, 524-533.	3.8	10
39	Structural difference of gel-spun ultra-high molecular weight polyethylene fibers affected by cold drawing process. Fibers and Polymers, 2017, 18, 549-554.	2.1	10
40	Living lamellar crystal initiating polymerization and brittleness mechanism investigations based on crystallization during the ring-opening of cyclic butylene terephthalate oligomers. Polymer Chemistry, 2013, 4, 1648.	3.9	9
41	The influence of chitin nanocrystals on structural evolution of ultra-high molecular weight polyethylene/chitin nanocrystal fibers in hot-drawing process. Chinese Journal of Polymer Science (English Edition), 2016, 34, 1373-1385.	3.8	9
42	Multiple endothermic peaks resulted from different crystal structures in an isomorphous copolymer poly(3-hydroxybutyrate-co-3-hydroxyvalerate). Chinese Journal of Polymer Science (English Edition), 2016, 34, 1510-1522.	3.8	9
43	Structural Effects of Residual Groups of Graphene Oxide on Poly(Îµ-Caprolactone)/Graphene Oxide Nanocomposite. Crystals, 2018, 8, 270.	2.2	9
44	The influence of short chain branch on formation of shear-induced crystals in bimodal polyethylene at low shear temperatures. Polymer, 2019, 179, 121625.	3.8	9
45	Solution crystallization behavior of linear and star-shaped poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 427 Td (glycol 2013, 31, 1717-1724.	3.8	8
46	Synchronous architecture of ring-banded and non-ring-banded morphology within one spherulite based on in situ ring-opening polymerization of cyclic butylene terephthalate oligomers. RSC Advances, 2016, 6, 94524-94530.	3.6	8
47	Epitaxial crystallization of precisely bromine-substituted polyethylene induced by carbon nanotubes and graphene. RSC Advances, 2017, 7, 17640-17649.	3.6	8
48	Nonbirefringent bands in thin films of a copolymer melt: rapid rhythmic crystal growth with an unusual crystalâ€“melt interface. CrystEngComm, 2018, 20, 2221-2226.	2.6	8
49	Structural evolution of stretch deformed HDPE/RGO nanocomposites: An in-situ synchrotron SAXS and WAXD study. Composites Science and Technology, 2019, 183, 107798.	7.8	8
50	Uniaxial tensile deformation of microinjection molded PCL/SWCNTs nanocomposites: Effect of interfacial â€œsoft epitaxyâ€•on the structural evolution as studied by synchrotron SAXS and WAXD techniques. Polymer, 2020, 198, 122526.	3.8	8
51	In Situ SAXS and WAXD Investigations of Polyamide 66/Reduced Graphene Oxide Nanocomposites During Uniaxial Deformation. ACS Omega, 2021, 6, 11762-11771.	3.5	7
52	Superhydrophilic Sandwich Structure Aerogel Membrane for Emulsion Separation and Heavy Metal Ion Removal. ACS Applied Polymer Materials, 2021, 3, 5470-5480.	4.4	7
53	Nature-Inspired Polyethylenimine-Modified Calcium Alginate Blended Waterborne Polyurethane Graded Functional Materials for Multiple Water Purification. ACS Applied Materials & Interfaces, 2022, 14, 17826-17836.	8.0	7
54	Structural evolution of UHMWPE gel fibers as high degree plasticized system during stretching: An in-situ wide and small angle X-ray scattering study. Polymer, 2022, 255, 125149.	3.8	7

#	Article	IF	Citations
55	Crystallization and morphology of star-shaped polyethylenoxyde-b-polycaprolactone under high pressure carbon dioxide. Chinese Journal of Polymer Science (English Edition), 2012, 30, 623-631.	3.8	6
56	Strong enhancement of the twisting frequency of achiral orthorhombic lamellae in poly(Îµ-caprolactone) banded spherulites via evaporative crystallization. CrystEngComm, 2017, 19, 1210-1219.	2.6	6
57	Origin of the double melting peaks of poly(3â€hydroxybutyrateâ€co â€3â€hydroxyvalerate) with a high HV content as revealed by in situ synchrotron WAXD/SAXS analyses. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 1453-1461.	2.1	6
58	Structural Evolution of Polyglycolide and Poly(glycolide-co-lactide) Fibers during the Heat-Setting Process. Biomacromolecules, 2021, 22, 3342-3356.	5.4	6
59	Structural Evolution of Polyglycolide and Poly(glycolide-co-lactide) Fibers during In Vitro Degradation with Different Heat-Setting Temperatures. ACS Omega, 2021, 6, 29254-29266.	3.5	6
60	Synthetic Celluloses as Green Fillers for the Enhancement of the Crystallization and Mechanical Properties of Poly(3-hydroxybutyrate-co-3-hydroxyvalerate). ACS Sustainable Chemistry and Engineering, 2022, 10, 6325-6336.	6.7	6
61	Coupling effects of boron nitride and heat treatment on crystallization, mechanical properties of poly (3-hydroxybutyrate-co-3-hydroxyvalerate) (PHBV). Polymer, 2022, 252, 124967.	3.8	6
62	Morphology of Poly(Ethylene Oxide)- b-Poly(Îµ-Caprolactone) Spherulites Formed Under Compressed CO2. Journal of Macromolecular Science - Physics, 2014, 53, 1137-1144.	1.0	5
63	Characterization of structural knot distributions in UHMWPE fibers. Chinese Journal of Polymer Science (English Edition), 2016, 34, 606-615.	3.8	5
64	Effects of shear on epitaxial crystallization of poly(Îµ-caprolactone) on reduced graphene oxide. RSC Advances, 2018, 8, 6406-6413.	3.6	5
65	Formation and evolution of shishâ€kebab structure during hot stretching in gelâ€spun ultraâ€high molecular weight polyethylene fibers with high concentration gel solution. Polymer Crystallization, 2019, 2, e10060.	0.8	5
66	Formation of well-organized, concentric-ringed spherulites of four-arm star symmetric PEO-b-PCL via confined evaporative crystallization. CrystEngComm, 2020, 22, 7016-7024.	2.6	5
67	Correlation between polymerization of cyclic butylene terephthalate (CBT) and crystallization of polymerized CBT. Chinese Journal of Polymer Science (English Edition), 2015, 33, 1104-1113.	3.8	4
68	Effect of Chitin Nanocrystals on the Formation of Shish-Kebab Crystals in Bimodal Polyethylene Injection Bar. Polymer Science - Series A, 2019, 61, 627-634.	1.0	4
69	Eco-Friendly Strategy to Improve the Processiblity and Properties of Poly(vinyl alcohol) Foams Based on a 3D Hydrogen-Bond Network. Industrial & Engineering Chemistry Research, 2020, 59, 20011-20021.	3.7	4
70	A Synchrotron in situ X-ray Study on the Multiple Melting Behaviors of Isomorphous Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) (P(HB-co-HV)) with Middle HV Content. Chinese Journal of Polymer Science (English Edition), 2020, 38, 1015-1024.	3.8	4
71	The Influence of Ethyl Branch on Formation of Shish-Kebab Crystals in Bimodal Polyethylene under Shear at Low Temperature. Chinese Journal of Polymer Science (English Edition), 2021, 39, 1050-1058.	3.8	4
72	Polymorphic microstructure of MDI/BD-block polyurethane as determined by temperature-sensitive conformation variation. Soft Matter, 2021, 17, 9447-9456.	2.7	4

#	Article	IF	Citations
73	Microbeam two-dimensional small-angle X-ray scattering investigating the effects of reduced graphene oxide on local microstructures of high-density polyethylene/reduced graphene oxide nanocomposite bars. Royal Society Open Science, 2019, 6, 181866.	2.4	3
74	Role of the heat treatment of partial melt recrystallization method on microstructure change and toughness of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) [P(HB-co-HV)]. Polymer, 2021, 228, 123874.	3.8	3
75	Shear-induced crystallization of unimodal/bimodal polyethylene at high temperatures affected by C4 short-branching. Polymer, 2021, 233, 124203.	3.8	3
76	Epitaxial Crystallization of Poly(Îµ-caprolactone) on Reduced Graphene Oxide at a Low Shear Rate by In Situ SAXS/WAXD Methods. ACS Omega, 2020, 5, 31535-31542.	3.5	3
77	The Influence of Space Restriction on the Mechanical Properties of Isotactic Polypropylene/Reduced Graphene Oxide Nanocomposite Injection Bars. Polymer Science - Series A, 2018, 60, 663-670.	1.0	2
78	The Influence of Soft-Epitaxial Crystallization on Polyamide 66/Carbon Nanotubes Composite Injection Bar. Polymer Science - Series A, 2019, 61, 906-912.	1.0	2
79	Tremor dependant nonlinear interaction in deep brain local field potentials of Parkinson's disease. , 2014, , .		1
80	Epitaxial Crystallization of Precisely Methyl-Substituted Polyethylene Induced by Carbon Nanotubes and Graphene. Crystals, 2018, 8, 168.	2.2	1
81	Dramatic toughness improvement of poly(3â€hydroxybutyrateâ€coâ€3â€hydroxyvalerate) by supercritical carbon dioxideâ€“assisted annealing. Polymers for Advanced Technologies, 2021, 32, 3646-3654.	3.2	1
82	Understanding of Growth Mechanism and Structure of Multilayer Thin Films via Layer-by-Layer Hydrogen Bonded Assembly from Polymer Brushes-Grafted Surface. Nanoscience and Nanotechnology Letters, 2020, 12, 890-900.	0.4	0
83	Nano-Scale Pores are Formed between the Shish-Kebab Structures of Double-Mold Polyethylene by Supercritical Carbon Dioxide Foaming. Polymer Science - Series A, 2021, 63, 664-671.	1.0	0