Jia-Zhuang Xu

List of Publications by Citations

114 papers	3,023 citations	29 h-index	51 g-index
120 ext. papers	3,732 ext. citations	6.3 avg, IF	5.35 L-index

#	Paper	IF	Citations
114	Isothermal Crystallization of Poly(l-lactide) Induced by Graphene Nanosheets and Carbon Nanotubes: A Comparative Study. *Macromolecules*, **2010**, 43, 5000-5008	5.5	283
113	Graphene Nanosheets and Shear Flow Induced Crystallization in Isotactic Polypropylene Nanocomposites. *Macromolecules*, **2011**, 44, 2808-2818	5.5	143
112	Improved barrier properties of poly(lactic acid) with randomly dispersed graphene oxide nanosheets. *Journal of Membrane Science*, **2014**, 464, 110-118	9.6	141
111	Low-dimensional carbonaceous nanofiller induced polymer crystallization. *Progress in Polymer Science*, **2014**, 39, 555-593	29.6	124
110	A high heat-resistance bioplastic foam with efficient electromagnetic interference shielding. *Chemical Engineering Journal*, **2017**, 323, 29-36	14.7	110
109	Synergetic enhancement of thermal conductivity by constructing hybrid conductive network in the segregated polymer composites. *Composites Science and Technology*, **2018**, 162, 7-13	8.6	105
108	Shear flow and carbon nanotubes synergistically induced nonisothermal crystallization of poly(lactic acid) and its application in injection molding. *Biomacromolecules*, **2012**, 13, 3858-67	6.9	80
107	Highly Enhanced Crystallization Kinetics of Poly(l-lactic acid) by Poly(ethylene glycol) Grafted Graphene Oxide Simultaneously as Heterogeneous Nucleation Agent and Chain Mobility Promoter. *Macromolecules*, **2015**, 48, 4891-4900	5.5	79
106	Selective electromagnetic interference shielding performance and superior mechanical strength of conductive polymer composites with oriented segregated conductive networks. *Chemical Engineering Journal*, **2019**, 373, 556-564	14.7	74
105	Strong Shear Flow-Driven Simultaneous Formation of Classic Shish-Kebab, Hybrid Shish-Kebab, and Transcrystallinity in Poly(lactic acid)/Natural Fiber Biocomposites. *ACS Sustainable Chemistry and Engineering*, **2013**, 1, 1619-1629	8.3	73
104	Highly thermal conductive, anisotropically heat-transferred, mechanically flexible composite film by assembly of boron nitride nanosheets for thermal management. *Composites Part B: Engineering*, **2020**, 180, 107569	10	69
103	Constructing highly oriented segregated structure towards high-strength carbon nanotube/ultrahigh-molecular-weight polyethylene composites for electromagnetic interference shielding. *Composites Part A: Applied Science and Manufacturing*, **2018**, 110, 237-245	8.4	66
102	Tuning the superstructure of ultrahigh-molecular-weight polyethylene/low-molecular-weight polyethylene blend for artificial joint application. *ACS Applied Materials & Interfaces*, **2012**, 4, 1521-9	9.5	56
101	Mechanical properties and biocompatibility of melt processed, self-reinforced ultrahigh molecular weight polyethylene. *Biomaterials*, **2014**, 35, 6687-97	15.6	53
100	Role of surface chemical groups on carbon nanotubes in nucleation for polymer crystallization: Interfacial interaction and steric effect. *Polymer*, **2013**, 54, 6479-6488	3.9	50
99	Role of ion-dipole interactions in nucleation of gamma poly(vinylidene fluoride) in the presence of graphene oxide during melt crystallization. *Journal of Physical Chemistry B*, **2012**, 116, 14951-60	3.4	49
98	Nacre-like composite films with high thermal conductivity, flexibility, and solvent stability for thermal management applications. *Journal of Materials Chemistry C*, **2019**, 7, 9018-9024	7.1	48

97	Largely enhanced mechanical property of segregated carbon nanotube/poly(vinylidene fluoride) composites with high electromagnetic interference shielding performance. *Composites Science and Technology*, **2018**, 167, 260-267	8.6	48
96	Graphene Oxide Nanosheet Induced Intrachain Conformational Ordering in a Semicrystalline Polymer. *Journal of Physical Chemistry Letters*, **2012**, 3, 530-5	6.4	47
95	Enhanced Thermal Conductivity of Segregated Poly(vinylidene fluoride) Composites via Forming Hybrid Conductive Network of Boron Nitride and Carbon Nanotubes. *Industrial & Engineering Chemistry Research*, **2018**, 57, 10391-10397	3.9	47
94	Poly(L-lactic acid) crystallization in a confined space containing graphene oxide nanosheets. *Journal of Physical Chemistry B*, **2013**, 117, 10641-51	3.4	45
93	Wearable Polyethylene/Polyamide Composite Fabric for Passive Human Body Cooling. *ACS Applied Materials & Interfaces*, **2018**, 10, 41637-41644	9.5	45
92	Isothermal and nonisothermal crystallization of isotactic polypropylene/graphene oxide nanosheet nanocomposites. *Journal of Polymer Research*, **2012**, 19, 1	2.7	39
91	Engineering Porous Poly(lactic acid) Scaffolds with High Mechanical Performance via a Solid State Extrusion/Porogen Leaching Approach. *Polymers*, **2016**, 8,	4.5	39
90	Superior and highly absorbed electromagnetic interference shielding performance achieved by designing the reflection-absorption-integrated shielding compartment with conductive wall and lossy core. *Chemical Engineering Journal*, **2020**, 393, 124644	14.7	38
89	Highly Anisotropic, Thermally Conductive, and Mechanically Strong Polymer Composites with Nacre-like Structure for Thermal Management Applications. *ACS Applied Nano Materials*, **2018**, 1, 3312-3320	5.6	35
88	Extensional Stress-Induced Orientation and Crystallization can Regulate the Balance of Toughness and Stiffness of Polylactide Films: Interplay of Oriented Amorphous Chains and Crystallites. *Macromolecules*, **2019**, 52, 5278-5288	5.5	33
87	Improved performance balance of polyethylene by simultaneously forming oriented crystals and blending ultrahigh-molecular-weight polyethylene. *RSC Advances*, **2014**, 4, 1512-1520	3.7	31
86	Self-reinforced polyethylene blend for artificial joint application. *Journal of Materials Chemistry B*, **2014**, 2, 971-980	7.3	30
85	Molecular weight-modulated electrospun poly(□caprolactone) membranes for postoperative adhesion prevention. *RSC Advances*, **2014**, 4, 41696-41704	3.7	29
84	Achieving excellent thermally conductive and electromagnetic shielding performance by nondestructive functionalization and oriented arrangement of carbon nanotubes in composite films. *Composites Science and Technology*, **2020**, 194, 108190	8.6	28
83	Multiple stage crystallization of gamma phase poly(vinylidene fluoride) induced by ion-dipole interaction as revealed by time-resolved FTIR and two-dimensional correlation analysis. *Polymer*, **2014**, 55, 4765-4775	3.9	27
82	Highly crystallized poly (lactic acid) under high pressure. *AIP Advances*, **2012**, 2, 042159	1.5	27
81	Enhanced piezoelectricity from highly polarizable oriented amorphous fractions in biaxially oriented poly(vinylidene fluoride) with pure □crystals. *Nature Communications*, **2021**, 12, 675	17.4	27
80	Melt processing and structural manipulation of highly linear disentangled ultrahigh molecular weight polyethylene. *Chemical Engineering Journal*, **2017**, 315, 132-141	14.7	26

79	Efficient electromagnetic interference shielding of lightweight carbon nanotube/polyethylene composites compression molding plus salt-leaching.. *RSC Advances*, **2018**, 8, 8849-8855	3.7	24
78	Preferential formation of stereocomplex in high-molecular-weight polylactic acid racemic blend induced by carbon nanotubes. *Polymer*, **2016**, 105, 167-171	3.9	24
77	Can Relaxor Ferroelectric Behavior Be Realized for Poly(vinylidene fluoride-co-chlorotrifluoroethylene) [P(VDF□CTFE)] Random Copolymers by Inclusion of CTFE Units in PVDF Crystals?. *Macromolecules*, **2018**, 51, 5460-5472	5.5	24
76	Simultaneous reinforcement and toughening of polymer/hydroxyapatite composites by constructing bone-like structure. *Composites Science and Technology*, **2017**, 151, 234-242	8.6	24
75	Layer structure by shear-induced crystallization and thermal mechanical properties of injection-molded poly(l-lactide) with nucleating agents. *Polymer*, **2017**, 110, 196-210	3.9	22
74	Highly thermally conductive and mechanically robust composite of linear ultrahigh molecular weight polyethylene and boron nitride via constructing nacre-like structure. *Composites Science and Technology*, **2019**, 184, 107858	8.6	22
73	New insights into thermal conductivity of uniaxially stretched high density polyethylene films. *Polymer*, **2018**, 154, 42-47	3.9	22
72	Shear-induced stereocomplex cylindrites in polylactic acid racemic blends: Morphology control and interfacial performance. *Polymer*, **2018**, 140, 179-187	3.9	20
71	Shear induced crystallization of poly(L-lactide) and poly(ethylene glycol) (PLLA-PEG-PLLA) copolymers with different block length. *Journal of Polymer Research*, **2011**, 18, 675-680	2.7	20
70	Inducing Stereocomplex Crystals by Template Effect of Residual Stereocomplex Crystals during Thermal Annealing of Injection-Molded Polylactide. *Industrial & Engineering Chemistry Research* , **2016**, 55, 10896-10905	3.9	20
69	Core-shell nanoparticles toughened polylactide with excellent transparency and stiffness-toughness balance. *Composites Science and Technology*, **2018**, 164, 168-177	8.6	20
68	Hydrophobic Graphene Oxide as a Promising Barrier of Water Vapor for Regenerated Cellulose Nanocomposite Films. *ACS Omega*, **2019**, 4, 509-517	3.9	19
67	Polydopamine-Assisted Anchor of Chitosan onto Porous Composite Scaffolds for Accelerating Bone Regeneration. *ACS Biomaterials Science and Engineering*, **2019**, 5, 2998-3006	5.5	17
66	Nucleation ability of thermally reduced graphene oxide for polylactide: role of size and structural integrity. *Journal of Physical Chemistry B*, **2015**, 119, 4777-87	3.4	17
65	The Role of Melt Memory and Template Effect in Complete Stereocomplex Crystallization and Phase Morphology of Polylactides. *Crystal Growth and Design*, **2018**, 18, 1613-1621	3.5	17
64	Suppressing of □crystal formation in metallocene-based isotactic polypropylene during isothermal crystallization under shear flow. *Journal of Physical Chemistry B*, **2012**, 116, 5056-63	3.4	16
63	Crystalline structure changes in preoriented metallocene-based isotactic polypropylene upon annealing. *Journal of Physical Chemistry B*, **2013**, 117, 7113-22	3.4	16
62	Nonlinear current-voltage characteristics of conductive polyethylene composites with carbon black filled pet microfibrils. *Chinese Journal of Polymer Science (English Edition)*, **2013**, 31, 211-217	3.5	16

61	Enhanced oxidation stability of highly cross-linked ultrahigh molecular weight polyethylene by tea polyphenols for total joint implants. *Materials Science and Engineering C*, **2019**, 94, 211-219	8.3	16
60	Highly aligned and interconnected porous poly(caprolactone) scaffolds derived from co-continuous polymer blends. *Materials and Design*, **2017**, 128, 112-118	8.1	15
59	An efficient, food contact accelerator for stereocomplexation of high-molecular-weight poly(l-lactide)/ poly(d-lactide) blend under nonisothermal crystallization. *Polymer*, **2019**, 170, 54-64	3.9	15
58	Toward biomimetic porous poly(caprolactone) scaffolds: Structural evolution and morphological control during solid phase extrusion. *Composites Science and Technology*, **2018**, 156, 192-202	8.6	15
57	Promoting Interfacial Transcrystallization in Polylactide/Ramie Fiber Composites by Utilizing Stereocomplex Crystals. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 7128-7136	8.3	15
56	Graphene oxide induced isotactic polypropylene crystallization: role of structural reduction. *RSC Advances*, **2016**, 6, 23930-23941	3.7	15
55	The crystallization behavior of biodegradable poly(butylene succinate) in the presence of organically modified clay with a wide range of loadings. *Chinese Journal of Polymer Science (English Edition)*, **2015**, 33, 576-586	3.5	14
54	Simultaneously improving wear resistance and mechanical performance of ultrahigh molecular weight polyethylene via cross-linking and structural manipulation. *Polymer*, **2016**, 90, 222-231	3.9	14
53	Highly Thermally Conductive Graphene-Based Thermal Interface Materials with a Bilayer Structure for Central Processing Unit Cooling. *ACS Applied Materials & Interfaces*, **2021**, 13, 25325-25333	9.5	14
52	Achieving high thermal conductivity and mechanical reinforcement in ultrahigh molecular weight polyethylene bulk material. *Polymer*, **2019**, 180, 121760	3.9	13
51	Non-isothermal crystallization of ethylene-vinyl acetate copolymer containing a high weight fraction of graphene nanosheets and carbon nanotubes. *Chinese Journal of Polymer Science (English Edition)*, **2012**, 30, 879-892	3.5	13
50	Robust Interfacial Cylindrites of Polylactic Acid Modulated by an Intense Shear Flow Field. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 3558-3566	8.3	12
49	Injection-molded hydroxyapatite/polyethylene bone-analogue biocomposites via structure manipulation. *Journal of Materials Chemistry B*, **2015**, 3, 7585-7593	7.3	11
48	Increased oxidative protection by high active vitamin E content and partial radiation crosslinking of UHMWPE. *Journal of Orthopaedic Research*, **2018**, 36, 1860-1867	3.8	11
47	Non-isothermal crystallization kinetics of alkyl-functionalized graphene oxide/high-density polyethylene nanocomposites. *Composite Interfaces*, **2014**, 21, 203-215	2.3	11
46	Largely enhanced mechanical performance of poly(butylene succinate) multiple system via shear stress-induced orientation of the hierarchical structure. *Journal of Materials Chemistry A*, **2018**, 6, 13373-13385	13	10
45	High Oxidation Stability of Tea Polyphenol-stabilized Highly Crosslinked UHMWPE Under an in Vitro Aggressive Oxidative Condition. *Clinical Orthopaedics and Related Research*, **2019**, 477, 1947-1955	2.2	10
44	Promoting osteoblast proliferation on polymer bone substitutes with bone-like structure by combining hydroxyapatite and bioactive glass. *Materials Science and Engineering C*, **2019**, 96, 1-9	8.3	10

43	Nanotopographical polymeric surface with mussel-inspired decoration to enhance osteoblast differentiation. *Applied Surface Science*, **2019**, 481, 987-993	6.7	9
42	An unusual promotion of β crystals in metallocene-made isotactic polypropylene from orientational relaxation and favorable temperature window induced by shear. *Polymer*, **2018**, 134, 196-203	3.9	9
41	Highly Efficient Composite Barrier Walls Consisting of Concentrated Graphene Oxide Nanosheets and Impermeable Crystalline Structure for Poly(lactic acid) Nanocomposite Films. *Industrial & Engineering Chemistry Research*, **2016**, 55, 9544-9554	3.9	9
40	Temperature dependence of molecular conformation in uniaxially deformed isotactic polypropylene investigated by combination of polarized FTIR spectroscopy and 2D correlation analysis. *Journal of Polymer Science, Part B: Polymer Physics*, **2015**, 53, 673-684	2.6	9
39	Ultraporous poly(lactic acid) scaffolds with improved mechanical performance using high-pressure molding and salt leaching. *Journal of Applied Polymer Science*, **2013**, 130, 3509-3520	2.9	9
38	Simultaneously constructing nanotopographical and chemical cues in 3D-printed polylactic acid scaffolds to promote bone regeneration. *Materials Science and Engineering C*, **2021**, 118, 111457	8.3	9
37	Effects of extrusion draw ratio on the morphology, structure and mechanical properties of poly(L-lactic acid) fabricated using solid state ram extrusion. *RSC Advances*, **2015**, 5, 69016-69023	3.7	8
36	Topographic Cues Guiding Cell Polarization via Distinct Cellular Mechanosensing Pathways. *Small*, **2021**, e2104328	11	8
35	In-situ synchrotron x-ray scattering study on isothermal crystallization of ethylene-vinyl acetate copolymers containing a high weight fraction of carbon nanotubes and graphene nanosheets. *Journal of Polymer Research*, **2012**, 19, 1	2.7	7
34	Non-isothermal crystalliztion kinetics of poly(phenylene sulfide) with low crosslinking levels. *Chinese Journal of Polymer Science (English Edition)*, **2013**, 31, 462-470	3.5	7
33	Accelerating Bone Healing by Decorating BMP-2 on Porous Composite Scaffolds.. *ACS Applied Bio Materials*, **2019**, 2, 5717-5726	4.1	7
32	Role of HA and BG in engineering poly(ε-caprolactone) porous scaffolds for accelerating cranial bone regeneration. *Journal of Biomedical Materials Research - Part A*, **2019**, 107, 654-662	5.4	7
31	Flow-induced crystallization of polylactide stereocomplex under pressure. *Journal of Applied Polymer Science*, **2018**, 135, 46378	2.9	6
30	Surface Epitaxial Crystallization-Directed Nanotopography for Accelerating Preosteoblast Proliferation and Osteogenic Differentiation. *ACS Applied Materials & Interfaces*, **2019**, 11, 42956-42963	9.5	6
29	Polylactide porous biocomposites with high heat resistance by utilizing cellulose template-directed construction. *Cellulose*, **2020**, 27, 3805-3819	5.5	5
28	Improved oxidation and wear resistance of ultrahigh molecular weight polyethylene using cross-linked powder reinforcement. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2019**, 107, 716-723	3.5	5
27	Highly improved aqueous lubrication of polymer surface by noncovalently bonding hyaluronic acid-based hydration layer for endotracheal intubation. *Biomaterials*, **2020**, 262, 120336	15.6	5
26	Antibacterial and anti-inflammatory ultrahigh molecular weight polyethylene/tea polyphenol blends for artificial joint applications. *Journal of Materials Chemistry B*, **2020**, 8, 10428-10438	7.3	5

25	Bone-like Polymeric Composites with a Combination of Bioactive Glass and Hydroxyapatite: Simultaneous Enhancement of Mechanical Performance and Bioactivity. *ACS Biomaterials Science and Engineering*, **2018**, 4, 4434-4442	5.5	5
24	Green Production of Covalently Functionalized Boron Nitride Nanosheets via Saccharide-Assisted Mechanochemical Exfoliation. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 11155-11162	8.3	5
23	Role of lamellar thickening in thick lamellae formation in isotactic polypropylene when crystallizing under flow and pressure. *Polymer*, **2019**, 179, 121641	3.9	4
22	Mucosa-Like Conformal Hydrogel Coating for Aqueous Lubrication.. *Advanced Materials*, **2022**, e2108848	24	4
21	How the Aggregates Determine Bound Rubber Models in Silicone Rubber? A Contrast Matching Neutron Scattering Study. *Chinese Journal of Polymer Science (English Edition)*, **2021**, 39, 365-376	3.5	4
20	Rapid Melt Crystallization of Bisphenol-A Polycarbonate Jointly Induced by Pressure and Flow. *Macromolecules*, **2021**, 54, 2383-2393	5.5	4
19	Flow-Induced Precursor Formation of Poly(l-lactic acid) under Pressure. *ACS Omega*, **2018**, 3, 15471-15481	3.9	4
18	Advances in Enhancing Mechanical Performance of Ultrahigh Molecular Weight Polyethylene Used for Total Joint Replacement. *ACS Symposium Series*, **2017**, 273-294	0.4	3
17	Surface-Directed Self-Epitaxial Crystallization of Poly(ε-caprolactone) from Isotropic to Highly Orientated Lamellae. *Macromolecules*, **2020**, 53, 1736-1744	5.5	3
16	Insights into Oxidation of the Ultrahigh Molecular Weight Polyethylene Artificial Joint Related to Lipid Peroxidation.. *ACS Applied Bio Materials*, **2020**, 3, 547-553	4.1	3
15	Imparting Gradient and Oriented Characters to Cocontinuous Structure for Improving Integrated Performance. *Macromolecular Chemistry and Physics*, **2021**, 222, 2100012	2.6	3
14	Polyphenol-Assisted Chemical Crosslinking: A New Strategy to Achieve Highly Crosslinked, Antioxidative, and Antibacterial Ultrahigh-Molecular-Weight Polyethylene for Total Joint Replacement. *ACS Biomaterials Science and Engineering*, **2021**, 7, 373-381	5.5	3
13	Promoted Bone Regeneration by 3D-Printed Porous Scaffolds with the Synergy of a Nanotopological Morphology and Amino Modification.. *ACS Applied Bio Materials*, **2020**, 3, 8627-8639	4.1	2
12	Controlled bacteriostasis of tea polyphenol loaded ultrahigh molecular weight polyethylene with high crosslink density and oxidation resistance for total joint replacement. *Materials Science and Engineering C*, **2021**, 124, 112040	8.3	2
11	Unique Banded Cylindrites of Polyoxymethylene/Poly(butylene succinate) Blends Induced by Interfacial Shear. *ACS Applied Polymer Materials*, **2019**, 1, 2741-2750	4.3	1
10	Combination of nanolamellae and PDA coating on promoting the long-term adhesion, proliferation, and differentiation of osteoblasts. *Polymer*, **2020**, 196, 122462	3.9	1
9	Effects of Solvents on Stereocomplex Crystallization of High-Molecular-Weight Polylactic Acid Racemic Blends in the Presence of Carbon Nanotubes. *Macromolecular Chemistry and Physics*, **2017**, 218, 1700292	2.6	1
8	Synergy between vitamin E and D-sorbitol in enhancing oxidation stability of highly crosslinked ultrahigh molecular weight polyethylene. *Acta Biomaterialia*, **2021**, 134, 302-312	10.8	1

7	Ultra-slippery, nonirritating, and anti-inflammatory hyaluronic acid-based coating to mitigate intubation injury. *Chemical Engineering Journal*, **2022**, 427, 130911	14.7	1
6	Ultrahigh molecular weight polyethylene with improved crosslink density, oxidation stability, and microbial inhibition by chemical crosslinking and tea polyphenols for total joint replacements. *Journal of Applied Polymer Science*, **2021**, 138, 51261	2.9	0
5	Surface Epitaxial Nano-Topography Facilitates Biomineralization to Promote Osteogenic Differentiation and Osteogenesis. *ACS Omega*, **2021**, 6, 21792-21800	3.9	0
4	Interfacial Banded Transcrystallization of Polyoxymethylene/Poly(butylene succinate) Blends Induced by the Polyamide 6 Fiber. *Chinese Journal of Polymer Science (English Edition)*, **2022**, 40, 394-402	3.5	0
3	Converting of Bulk Polymers into Nanofibrils via Hot Stretching of Polymer Blends **2016**, 225-249		
2	Oriented co-continuous 3D porous scaffolds with inhibited activating functionality: An effective strategy to inhibit the hyperactivation of astrocytes. *Materials and Design*, **2022**, 213, 110352	8.1	
1	Fabrication of Highly Anisotropic and Interconnected Porous Scaffolds to Promote Preosteoblast Proliferation for Bone Tissue Engineering. *Chinese Journal of Polymer Science (English Edition)*, **2021**, 39, 1191-1199	3.5	