Jia-Zhuang Xu

List of Publications by Year
in descending order

119 papers	4,396 citations	109321 35 h-index	123424 61 g-index
120 all docs	120 docs citations	120 times ranked	3884 citing authors

#	Article	IF	Citations
1	Isothermal Crystallization of Poly(<scp>l</scp>-lactide) Induced by Graphene Nanosheets and Carbon Nanotubes: A Comparative Study. Macromolecules, 2010, 43, 5000-5008.	4.8	308
2	Improved barrier properties of poly(lactic acid) with randomly dispersed graphene oxide nanosheets. Journal of Membrane Science, 2014, 464, 110-118.	8.2	170
3	Graphene Nanosheets and Shear Flow Induced Crystallization in Isotactic Polypropylene Nanocomposites. Macromolecules, 2011, 44, 2808-2818.	4.8	160
4	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.	12.7	147
5	Synergetic enhancement of thermal conductivity by constructing hybrid conductive network in the segregated polymer composites. Composites Science and Technology, 2018, 162, 7-13.	7.8	141
6	Low-dimensional carbonaceous nanofiller induced polymer crystallization. Progress in Polymer Science, 2014, 39, 555-593.	24.7	140
7	A high heat-resistance bioplastic foam with efficient electromagnetic interference shielding. Chemical Engineering Journal, 2017, 323, 29-36.	12.7	136
8	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.	12.0	114
9	Shear Flow and Carbon Nanotubes Synergistically Induced Nonisothermal Crystallization of Poly(lactic acid) and Its Application in Injection Molding. Biomacromolecules, 2012, 13, 3858-3867.	5.4	95
10	Highly Enhanced Crystallization Kinetics of Poly(<scp>l</scp>-lactic acid) by Poly(ethylene glycol) Grafted Graphene Oxide Simultaneously as Heterogeneous Nucleation Agent and Chain Mobility Promoter. Macromolecules, 2015, 48, 4891-4900.	4.8	93
11	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.	7.6	93
12	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.	6.7	89
13	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.	12.7	87
14	Enhanced piezoelectricity from highly polarizable oriented amorphous fractions in biaxially oriented poly(vinylidene fluoride) with pure Î² crystals. Nature Communications, 2021, 12, 675.	12.8	85
15	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.	4.8	79
16	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.	5.5	79
17	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.	7.8	74
18	Mechanical properties and biocompatibility of melt processed, self-reinforced ultrahigh molecular weight polyethylene. Biomaterials, 2014, 35, 6687-6697.	11.4	69

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19	Tuning the Superstructure of Ultrahigh-Molecular-Weight Polyethylene/Low-Molecular-Weight Polyethylene Blend for Artificial Joint Application. ACS Applied Materials & Interfaces, 2012, 4, 1521-1529.	8.0	66
20	Wearable Polyethylene/Polyamide Composite Fabric for Passive Human Body Cooling. ACS Applied Materials & Interfaces, 2018, 10, 41637-41644.	8.0	65
21	Role of Ionâ€“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, 14951-14960.	2.6	64
22	Role of surface chemical groups on carbon nanotubes in nucleation forÂpolymer crystallization: Interfacial interaction and steric effect. Polymer, 2013, 54, 6479-6488.	3.8	61
23	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.	7.8	59
24	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.	3.7	58
25	Graphene Oxide Nanosheet Induced Intrachain Conformational Ordering in a Semicrystalline Polymer. Journal of Physical Chemistry Letters, 2012, 3, 530-535.	4.6	53
26	Poly(<scp>l</scp>-lactic acid) Crystallization in a Confined Space Containing Graphene Oxide Nanosheets. Journal of Physical Chemistry B, 2013, 117, 10641-10651.	2.6	52
27	Engineering Porous Poly(lactic acid) Scaffolds with High Mechanical Performance via a Solid State Extrusion/Porogen Leaching Approach. Polymers, 2016, 8, 213.	4.5	49
28	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.	5.0	48
29	Hydrophobic Graphene Oxide as a Promising Barrier of Water Vapor for Regenerated Cellulose Nanocomposite Films. ACS Omega, 2019, 4, 509-517.	3.5	46
30	Isothermal and nonisothermal crystallization of isotactic polypropylene/graphene oxide nanosheet nanocomposites. Journal of Polymer Research, 2012, 19, 1.	2.4	44
31	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.	7.8	42
32	Topographic Cues Guiding Cell Polarization via Distinct Cellular Mechanosensing Pathways. Small, 2022, 18, e2104328.	10.0	40
33	Preferential formation of stereocomplex in high-molecular-weight polylactic acid racemic blend induced by carbon nanotubes. Polymer, 2016, 105, 167-171.	3.8	39
34	Core-shell nanoparticles toughened polylactide with excellent transparency and stiffness-toughness balance. Composites Science and Technology, 2018, 164, 168-177.	7.8	39
35	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.	8.0	39
36	Highly crystallized poly (lactic acid) under high pressure. AIP Advances, 2012, 2, .	1.3	38

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37	Can Relaxor Ferroelectric Behavior Be Realized for Poly(vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 747 Td (fluoride-<i>co Units in PVDF Crystals?. Macromolecules, 2018, 51, 5460-5472.	4.8	38
38	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.	3.8	37
39	Melt processing and structural manipulation of highly linear disentangled ultrahigh molecular weight polyethylene. Chemical Engineering Journal, 2017, 315, 132-141.	12.7	37
40	Mucosaâ€Like Conformal Hydrogel Coating for Aqueous Lubrication. Advanced Materials, 2022, 34, e2108848.	21.0	37
41	Self-reinforced polyethylene blend for artificial joint application. Journal of Materials Chemistry B, 2014, 2, 971.	5.8	35
42	Improved performance balance of polyethylene by simultaneously forming oriented crystals and blending ultrahigh-molecular-weight polyethylene. RSC Advances, 2014, 4, 1512-1520.	3.6	35
43	Molecular weight-modulated electrospun poly(Îµ-caprolactone) membranes for postoperative adhesion prevention. RSC Advances, 2014, 4, 41696-41704.	3.6	33
44	Efficient electromagnetic interference shielding of lightweight carbon nanotube/polyethylene composites<i>via</i>compression molding plus salt-leaching. RSC Advances, 2018, 8, 8849-8855.	3.6	33
45	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.	3.0	32
46	New insights into thermal conductivity of uniaxially stretched high density polyethylene films. Polymer, 2018, 154, 42-47.	3.8	32
47	Polydopamine-Assisted Anchor of Chitosan onto Porous Composite Scaffolds for Accelerating Bone Regeneration. ACS Biomaterials Science and Engineering, 2019, 5, 2998-3006.	5.2	32
48	Simultaneous reinforcement and toughening of polymer/hydroxyapatite composites by constructing bone-like structure. Composites Science and Technology, 2017, 151, 234-242.	7.8	31
49	Layer structure by shear-induced crystallization and thermal mechanical properties of injection-molded poly(l-lactide) with nucleating agents. Polymer, 2017, 110, 196-210.	3.8	30
50	Shear-induced stereocomplex cylindrites in polylactic acid racemic blends: Morphology control and interfacial performance. Polymer, 2018, 140, 179-187.	3.8	30
51	An efficient, food contact accelerator for stereocomplexation of high-molecular-weight poly() Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	3.8	29
52	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.	3.7	28
53	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.	7.3	27
54	Dual-functional thermal management materials for highly thermal conduction and effectively heat generation. Composites Part B: Engineering, 2022, 242, 110084.	12.0	27

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55	Achieving high thermal conductivity and mechanical reinforcement in ultrahigh molecular weight polyethylene bulk material. Polymer, 2019, 180, 121760.	3.8	25
56	Simultaneously improving wear resistance and mechanical performance of ultrahigh molecular weight polyethylene via cross-linking and structural manipulation. Polymer, 2016, 90, 222-231.	3.8	24
57	Green Production of Covalently Functionalized Boron Nitride Nanosheets via Saccharide-Assisted Mechanochemical Exfoliation. ACS Sustainable Chemistry and Engineering, 2021, 9, 11155-11162.	6.7	23
58	Antibacterial and anti-inflammatory ultrahigh molecular weight polyethylene/tea polyphenol blends for artificial joint applications. Journal of Materials Chemistry B, 2020, 8, 10428-10438.	5.8	21
59	Simultaneously constructing nanotopographical and chemical cues in 3D-printed polylactic acid scaffolds to promote bone regeneration. Materials Science and Engineering C, 2021, 118, 111457.	7.3	21
60	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.	2.4	20
61	Graphene oxide induced isotactic polypropylene crystallization: role of structural reduction. RSC Advances, 2016, 6, 23930-23941.	3.6	20
62	Promoting Interfacial Transcrystallization in Polylactide/Ramie Fiber Composites by Utilizing Stereocomplex Crystals. ACS Sustainable Chemistry and Engineering, 2017, 5, 7128-7136.	6.7	20
63	Toward biomimetic porous poly(Îµ-caprolactone) scaffolds: Structural evolution and morphological control during solid phase extrusion. Composites Science and Technology, 2018, 156, 192-202.	7.8	19
64	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.	7.3	19
65	Highly improved aqueous lubrication of polymer surface by noncovalently bonding hyaluronic acid-based hydration layer for endotracheal intubation. Biomaterials, 2020, 262, 120336.	11.4	19
66	Nucleation Ability of Thermally Reduced Graphene Oxide for Polylactide: Role of Size and Structural Integrity. Journal of Physical Chemistry B, 2015, 119, 4777-4787.	2.6	18
67	Largely enhanced mechanical performance of poly(butylene succinate) multiple system <i>via</i> shear stress-induced orientation of the hierarchical structure. Journal of Materials Chemistry A, 2018, 6, 13373-13385.	10.3	18
68	Suppressing of Î³-Crystal Formation in Metallocene-Based Isotactic Polypropylene during Isothermal Crystallization under Shear Flow. Journal of Physical Chemistry B, 2012, 116, 5056-5063.	2.6	17
69	Crystalline Structure Changes in Preoriented Metallocene-Based Isotactic Polypropylene upon Annealing. Journal of Physical Chemistry B, 2013, 117, 7113-7122.	2.6	17
70	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.	3.8	17
71	Robust Interfacial Cylindrites of Polylactic Acid Modulated by an Intense Shear Flow Field. ACS Sustainable Chemistry and Engineering, 2016, 4, 3558-3566.	6.7	17
72	Rapid Melt Crystallization of Bisphenol-A Polycarbonate Jointly Induced by Pressure and Flow. Macromolecules, 2021, 54, 2383-2393.	4.8	17

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73	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.	3.8	16
74	Highly aligned and interconnected porous poly(Îµ -caprolactone) scaffolds derived from co-continuous polymer blends. Materials and Design, 2017, 128, 112-118.	7.0	16
75	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.	3.8	15
76	Highly Efficient â€œComposite Barrier Wallâ€• Consisting of Concentrated Graphene Oxide Nanosheets and Impermeable Crystalline Structure for Poly(lactic acid) Nanocomposite Films. Industrial & Engineering Chemistry Research, 2016, 55, 9544-9554.	3.7	15
77	Role of HA and BG in engineering poly(Îµ â€caprolactone) porous scaffolds for accelerating cranial bone regeneration. Journal of Biomedical Materials Research - Part A, 2018, 107, 654-662.	4.0	15
78	Nanotopographical polymeric surface with mussel-inspired decoration to enhance osteoblast differentiation. Applied Surface Science, 2019, 481, 987-993.	6.1	15
79	Increased oxidative protection by high active vitamin E content and partial radiation crosslinking of UHMWPE. Journal of Orthopaedic Research, 2018, 36, 1860-1867.	2.3	14
80	An unusual promotion of Î³-crystals in metallocene-made isotactic polypropylene from orientational relaxation and favorable temperature window induced by shear. Polymer, 2018, 134, 196-203.	3.8	14
81	Nanotopographical 3D-Printed Poly(Îµ-caprolactone) Scaffolds Enhance Proliferation and Osteogenic Differentiation of Urine-Derived Stem Cells for Bone Regeneration. Pharmaceutics, 2022, 14, 1437.	4.5	14
82	Non-isothermal crystallization kinetics of alkyl-functionalized graphene oxide/high-density polyethylene nanocomposites. Composite Interfaces, 2014, 21, 203-215.	2.3	12
83	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.	2.1	12
84	Surface Epitaxial Crystallization-Directed Nanotopography for Accelerating Preosteoblast Proliferation and Osteogenic Differentiation. ACS Applied Materials & Interfaces, 2019, 11, 42956-42963.	8.0	12
85	Accelerating Bone Healing by Decorating BMP-2 on Porous Composite Scaffolds. ACS Applied Bio Materials, 2019, 2, 5717-5726.	4.6	12
86	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.	1.5	12
87	Injection-molded hydroxyapatite/polyethylene bone-analogue biocomposites via structure manipulation. Journal of Materials Chemistry B, 2015, 3, 7585-7593.	5.8	11
88	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.	7.3	11
89	Ultra-slippery, nonirritating, and anti-inflammatory hyaluronic acid-based coating to mitigate intubation injury. Chemical Engineering Journal, 2022, 427, 130911.	12.7	11
90	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.	5.2	10

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91	Surface-Directed Self-Epitaxial Crystallization of Poly(Îµ-caprolactone) from Isotropic to Highly Orientated Lamellae. Macromolecules, 2020, 53, 1736-1744.	4.8	10
92	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.	3.8	10
93	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.	5.2	10
94	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.	2.4	9
95	Ultraporous poly(lactic acid) scaffolds with improved mechanical performance using highâ€pressure molding and salt leaching. Journal of Applied Polymer Science, 2013, 130, 3509-3520.	2.6	9
96	Effects of extrusion draw ratio on the morphology, structure and mechanical properties of poly(<scp>l</scp>-lactic acid) fabricated using solid state ram extrusion. RSC Advances, 2015, 5, 69016-69023.	3.6	9
97	Flowâ€induced crystallization of polylactide stereocomplex under pressure. Journal of Applied Polymer Science, 2018, 135, 46378.	2.6	9
98	Insights into Oxidation of the Ultrahigh Molecular Weight Polyethylene Artificial Joint Related to Lipid Peroxidation. ACS Applied Bio Materials, 2020, 3, 547-553.	4.6	9
99	Synergy between vitamin E and D-sorbitol in enhancing oxidation stability of highly crosslinked ultrahigh molecular weight polyethylene. Acta Biomaterialia, 2021, 134, 302-312.	8.3	9
100	Non-isothermal crystalliztion kinetics of poly(phenylene sulfide) with low crosslinking levels. Chinese Journal of Polymer Science (English Edition), 2013, 31, 462-470.	3.8	8
101	Improved oxidation and wear resistance of ultrahigh molecular weight polyethylene using crossâ€linked powder reinforcement. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 716-723.	3.4	8
102	Flow-Induced Precursor Formation of Poly(<scp>l</scp>-lactic acid) under Pressure. ACS Omega, 2018, 3, 15471-15481.	3.5	7
103	Role of lamellar thickening in thick lamellae formation in isotactic polypropylene when crystallizing under flow and pressure. Polymer, 2019, 179, 121641.	3.8	7
104	Polylactide porous biocomposites with high heat resistance by utilizing cellulose template-directed construction. Cellulose, 2020, 27, 3805-3819.	4.9	7
105	Combination of nanolamellae and PDA coating on promoting the long-term adhesion, proliferation, and differentiation of osteoblasts. Polymer, 2020, 196, 122462.	3.8	7
106	Imparting Gradient and Oriented Characters to Cocontinuous Structure for Improving Integrated Performance. Macromolecular Chemistry and Physics, 2021, 222, 2100012.	2.2	7
107	Unique Banded Cylindrites of Polyoxymethylene/Poly(butylene succinate) Blends Induced by Interfacial Shear. ACS Applied Polymer Materials, 2019, 1, 2741-2750.	4.4	4
108	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.	4.6	4

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109	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.	3.8	4
110	Surface Epitaxial Nano-Topography Facilitates Biomineralization to Promote Osteogenic Differentiation and Osteogenesis. ACS Omega, 2021, 6, 21792-21800.	3.5	4
111	Advances in Enhancing Mechanical Performance of Ultrahigh Molecular Weight Polyethylene Used for Total Joint Replacement. ACS Symposium Series, 2017, , 273-294.	0.5	3
112	Effects of Solvents on Stereocomplex Crystallization of Highâ€Molecularâ€Weight Polylactic Acid Racemic Blends in the Presence of Carbon Nanotubes. Macromolecular Chemistry and Physics, 2017, 218, 1700292.	2.2	3
113	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.	2.6	2
114	Promoted Formation of Î± Crystals in the Polymorph Selection of Syndiotatic Polystyrene under the Coupling of Pressure, Flow, and Temperature. Macromolecules, 2022, 55, 5094-5103.	4.8	2
115	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.	7.0	1
116	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.	3.8	1
117	Crystallization Properties of Isotactic Polypropyleneâ€"Graphene Nanocomposites. RSC Nanoscience and Nanotechnology, 2012, , 227-263.	0.2	0
118	Crystallization of isotactic polypropylene inside dense networks of carbon nanofillers. Journal of Applied Polymer Science, 2014, 131, .	2.6	0
119	Converting of Bulk Polymers into Nanofibrils via Hot Stretching of Polymer Blends. , 2016, , 225-249.		0