Jun Xu

List of Publications by Year in descending order

130 papers	4,374 citations	136740 32 h-index	123241 61 g-index
132 all docs	132 docs citations	132 times ranked	4593 citing authors

#	Article	IF	Citations
1	Poly(butylene succinate) and its copolymers: Research, development and industrialization. Biotechnology Journal, 2010, 5, 1149-1163.	1.8	579
2	Encapsulation of Drug Reservoirs in Fibers by Emulsion Electrospinning:â€‰ Morphology Characterization and Preliminary Release Assessment. Biomacromolecules, 2006, 7, 2327-2330.	2.6	299
3	In situ FTIR study on melting and crystallization of polyhydroxyalkanoates. Polymer, 2002, 43, 6893-6899.	1.8	185
4	Direct AFM Observation of Crystal Twisting and Organization in Banded Spherulites of Chiral Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate). Macromolecules, 2004, 37, 4118-4123.	2.2	159
5	Observation of banded spherulites in pure poly(l-lactide) and its miscible blends with amorphous polymers. Polymer, 2005, 46, 9176-9185.	1.8	133
6	Isomorphism in Poly(butylene succinate-co-butylene fumarate) and Its Application as Polymeric Nucleating Agent for Poly(butylene succinate). Macromolecules, 2012, 45, 5667-5675.	2.2	129
7	A Review on Polymer Crystallization Theories. Crystals, 2017, 7, 4.	1.0	106
8	Processing Pathways Decide Polymer Properties at the Molecular Level. Macromolecules, 2019, 52, 7146-7156.	2.2	105
9	Design of a self-healing cross-linked polyurea with dynamic cross-links based on disulfide bonds and hydrogen bonding. European Polymer Journal, 2018, 107, 249-257.	2.6	97
10	Surface Stress Effects on the Bending Direction and Twisting Chirality of Lamellar Crystals of Chiral Polymer. Macromolecules, 2010, 43, 5762-5770.	2.2	94
11	Left- or Right-Handed Lamellar Twists in Poly[(R)-3-hydroxyvalerate] Banded Spherulite: Dependence on Growth Axis. Macromolecules, 2009, 42, 694-701.	2.2	87
12	Reprocessable Cross-Linked Polyurethane with Dynamic and Tunable Phenolâ€“Carbamate Network. ACS Sustainable Chemistry and Engineering, 2020, 8, 1207-1218.	3.2	86
13	Microbial Succinic Acid, Its Polymer Poly(butylene succinate), and Applications. Microbiology Monographs, 2010, , 347-388.	0.3	83
14	Janus-like polymer particles prepared via internal phase separation from emulsified polymer/oil droplets. Polymer, 2009, 50, 3361-3369.	1.8	76
15	Synthesis and characterization of biodegradable poly(butylene succinateâ€coâ€propylene) Tj ETQq1 1 0.784314 rgBT /Overlock	1.3	72
16	Formation of ring-banded spherulites of Î± and Î² modifications in Poly(butylene adipate). Polymer, 2011, 52, 4619-4630.	1.8	72
17	Preparation and Characterization of Poly(butylene succinate)/Polylactide Blends for Fused Deposition Modeling 3D Printing. ACS Omega, 2018, 3, 14309-14317.	1.6	65
18	Crystallization kinetics and morphology of biodegradable poly(butylene succinate-co-propylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62	2.4	60

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19	Effect of Al2O3/SiO2 composite ceramic layers on performance of polypropylene separator for lithium-ion batteries. Ceramics International, 2014, 40, 14105-14110.	2.3	60
20	A multi-scale investigation on effects of hydrogen bonding on micro-structure and macro-properties in a polyurea. Polymer, 2018, 145, 261-271.	1.8	58
21	Solvent-free thermo-reversible and self-healable crosslinked polyurethane with dynamic covalent networks based on phenol-carbamate bonds. Polymer, 2019, 181, 121788.	1.8	50
22	Role of Poly(butylene fumarate) on Crystallization Behavior of Poly(butylene succinate). Industrial & Engineering Chemistry Research, 2013, 52, 10682-10689.	1.8	47
23	Achieving high dielectric permittivity, high breakdown strength and high efficiency by cross-linking of poly(vinylidene fluoride)/BaTiO3 nanocomposites. Composites Science and Technology, 2019, 169, 142-150.	3.8	42
24	On the Circular Birefringence of Polycrystalline Polymers: Polylactide. Journal of the American Chemical Society, 2011, 133, 13848-13851.	6.6	39
25	Co-crystal formation between poly(ethylene glycol) and a small molecular drug griseofulvin. Chemical Communications, 2014, 50, 6375-6378.	2.2	38
26	Concepts of Nucleation in Polymer Crystallization. Crystals, 2021, 11, 304.	1.0	38
27	Improved the thermal and mechanical properties of poly(butylene succinate-co-butylene adipate) by forming nanocomposites with attapulgite. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 421, 109-117.	2.3	37
28	Preparation and performance of silica/polypropylene composite separator for lithium-ion batteries. Journal of Materials Science, 2014, 49, 6961-6966.	1.7	37
29	Rheology, crystallization behaviors, and thermal stabilities of poly(butylene succinate)/pristine multiwalled carbon nanotube composites obtained by melt compounding. Journal of Applied Polymer Science, 2011, 121, 59-67.	1.3	36
30	Correlating Polymer Crystals via Self-Induced Nucleation. Physical Review Letters, 2014, 112, 237801.	2.9	36
31	Poly(butylene succinate) (PBS)/ionic liquid plasticized starch blends: Preparation, characterization, and properties. Starch/Staerke, 2015, 67, 802-809.	1.1	36
32	Different thermal behaviors of microbial polyesters poly(3-hydroxybutyrate-co-3-hydroxyvalerate-co-3-hydroxyhexanoate) and poly(3-hydroxybutyrate-co-3-hydroxyhexanoate). Polymer, 2010, 51, 6037-6046.	1.8	34
33	Polymorphic Behavior and Enzymatic Degradation of Poly(butylene adipate) in the Presence of Hexagonal Boron Nitride Nanosheets. Industrial & Engineering Chemistry Research, 2015, 54, 1832-1841.	1.8	34
34	Synthesis and characterizations of attapulgite reinforced branched poly(butylene succinate) nanocomposites. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 436, 26-33.	2.3	33
35	Synthesis and Properties of Biobased Multiblock Polyesters Containing Poly(2,5-furandimethylene) Tj ETQq1 1 0.784314 rgBT /Overlo 56, 3937-3946.	1.8	33
36	Surface Properties of Poly(3-hydroxybutyrate-co-3- hydroxyvalerate) Banded Spherulites Studied by Atomic Force Microscopy and Time-of-Flight Secondary Ion Mass Spectrometry. Langmuir, 2003, 19, 7417-7422.	1.6	32

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37	Chain extension of PA1010 by reactive extrusion by diepoxide 711 and diepoxide TDE85 as chain extenders. Journal of Applied Polymer Science, 2004, 94, 2347-2355.	1.3	32
38	Effects of Diisocyanate Structure and Disulfide Chain Extender on Hard Segmental Packing and Self-Healing Property of Polyurea Elastomers. Polymers, 2019, 11, 838.	2.0	32
39	Stabilization of Nuclei of Lamellar Polymer Crystals: Insights from a Comparison of the Hoffmanâ€“Weeks Line with the Crystallization Line. Macromolecules, 2016, 49, 2206-2215.	2.2	31
40	Photodegradation behavior of poly(butylene succinate-co-butylene adipate)/ZnO nanocomposites. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 489, 173-181.	2.3	31
41	Conformation transition and molecular mobility of isolated poly(ethylene oxide) chains confined in urea nanochannels. Polymer, 2007, 48, 7364-7373.	1.8	30
42	Stretch-induced bidirectional polymorphic transformation of crystals in poly(butylene adipate). Polymer, 2014, 55, 3054-3061.	1.8	30
43	Reversibly Switchable Double-Responsive Block Copolymer Brushes. Macromolecular Rapid Communications, 2007, 28, 828-833.	2.0	29
44	Prominent Nucleating Effect of Finely Dispersed Hydroxyl-Functional Hexagonal Boron Nitride on Biodegradable Poly(butylene succinate). Industrial & Engineering Chemistry Research, 2014, 53, 4689-4696.	1.8	29
45	Organization of Twisting Lamellar Crystals in Birefringent Banded Polymer Spherulites: A Mini-Review. Crystals, 2017, 7, 241.	1.0	29
46	Anisotropic surface effects on the formation of chiral morphologies of nanomaterials. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 609-633.	1.0	28
47	Terraces on banded spherulites of polyhydroxyalkanoates. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 2128-2134.	2.4	27
48	Cross-linked polyurethane with dynamic phenol-carbamate bonds: properties affected by the chemical structure of isocyanate. Polymer Chemistry, 2021, 12, 2421-2432.	1.9	26
49	Effect of silica nanoparticles/poly(vinylidene fluoride-hexafluoropropylene) coated layers on the performance of polypropylene separator for lithium-ion batteries. Journal of Energy Chemistry, 2014, 23, 582-586.	7.1	25
50	A facile hydrothermal preparation for phase change materials microcapsules with a pliable self-recovering shell and study on its thermal energy storage properties. Powder Technology, 2017, 312, 144-151.	2.1	25
51	Preparation of Poly(butylene succinate) Crystals with Exceptionally High Melting Point and Crystallinity from Its Inclusion Complex. Macromolecules, 2017, 50, 5425-5433.	2.2	25
52	Reconstruction of complementary images in second harmonic generation microscopy. Optics Express, 2006, 14, 4727.	1.7	24
53	Insights from polymer crystallization: Chirality, recognition and competition. Chinese Chemical Letters, 2017, 28, 2092-2098.	4.8	24
54	Interplay between crystallization and the Dielsâ€“Alder reaction in biobased multiblock copolyesters possessing dynamic covalent bonds. Polymer Chemistry, 2017, 8, 4280-4289.	1.9	24

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55	Synthesis, Properties of Biodegradable Poly(Butylene Succinate-co-Butylene 2-Methylsuccinate) and Application for Sustainable Release. Materials, 2019, 12, 1507.	1.3	23
56	Increased dielectric permittivity of poly(vinylidene fluoride-co-chlorotrifluoroethylene) nanocomposites by coating BaTiO3 with functional groups owning high bond dipole moment. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 529, 560-570.	2.3	22
57	Copolymerization with Polyether Segments Improves the Mechanical Properties of Biodegradable Polyesters. ACS Omega, 2017, 2, 2639-2648.	1.6	22
58	Aliphatic copolyester with isomorphism in limited composition range. Polymer, 2014, 55, 5811-5820.	1.8	21
59	Improved dielectric and energy storage properties of poly(vinyl alcohol) nanocomposites by strengthening interfacial hydrogen-bonding interaction. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 548, 179-190.	2.3	21
60	A Well-defined Hierarchical Hydrogen Bonding Strategy to Polyureas with Simultaneously Improved Strength and Toughness. Chinese Journal of Polymer Science (English Edition), 2019, 37, 1257-1266.	2.0	18
61	Melting behavior of inclusion complex formed between polyethylene glycol oligomer and urea. Polymer, 2013, 54, 3385-3391.	1.8	17
62	Crystalline inclusion complexes formed between the drug diflunisal and block copolymers. Chinese Chemical Letters, 2017, 28, 1268-1275.	4.8	17
63	Drug Molecule Diflunisal Forms Crystalline Inclusion Complexes with Multiple Types of Linear Polymers. Crystal Growth and Design, 2016, 16, 1181-1186.	1.4	16
64	Thermo-sensitive micelles based on amphiphilic poly(butylene 2-methylsuccinate)-poly(ethylene glycol) multi-block copolyesters as the pesticide carriers. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 575, 84-93.	2.3	16
65	Growth and Strain Modulation of GeSn Alloys for Photonic and Electronic Applications. Nanomaterials, 2022, 12, 981.	1.9	16
66	Chirality Transfer from Molecular to Morphological Scales in Quasi-One-Dimensional Nanomaterials: A Continuum Model. Journal of Computational and Theoretical Nanoscience, 2011, 8, 1278-1287.	0.4	15
67	Dissolution Behavior of the Crystalline Inclusion Complex Formed by the Drug Diflunisal and Poly(Îµ-caprolactone). Crystal Growth and Design, 2017, 17, 355-362.	1.4	15
68	Determination of the Critical Size of Secondary Nuclei on the Lateral Growth Front of Lamellar Polymer Crystals. Macromolecules, 2019, 52, 7439-7447.	2.2	15
69	Estimation of the Size of Critical Secondary Nuclei of Melt-Grown Poly(<scp>l</scp>-lactide) Lamellar Crystals. Macromolecules, 2020, 53, 3482-3492.	2.2	15
70	High-Temperature Stability of Dewetting-Induced Thin Polyethylene Filaments. Macromolecules, 2015, 48, 1518-1523.	2.2	14
71	Development of dispersed phase size and its dependence on processing parameters. Journal of Applied Polymer Science, 2006, 102, 3201-3211.	1.3	13
72	Imaging of nonlinear optical response in biopolyesters via second harmonic generation microscopy and its dependence on the crystalline structures. Polymer, 2007, 48, 348-355.	1.8	13

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73	Synthesis and characterizations of branched poly(butylene succinate) copolymers with 1,2â€octanediol segments. Journal of Applied Polymer Science, 2010, 117, 2538-2544.	1.3	13
74	Simulation of secondary nucleation of polymer crystallization via a model of microscopic kinetics. Chinese Chemical Letters, 2015, 26, 1105-1108.	4.8	13
75	Thermo-oxidative degradation of Nylon 1010 films: Colorimetric evaluation and its correlation with material properties. Chinese Chemical Letters, 2017, 28, 949-954.	4.8	13
76	Secondary nucleation in polymer crystallization: A kinetic view. Polymer Crystallization, 2021, 4, e10173.	0.5	13
77	Synthesis, physical properties and photodegradation of functional poly(butylene succinate) covalently linking UV stabilizing moieties in molecular chains. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 524, 160-168.	2.3	12
78	Effects of Nonhydroxyl Oxygen Heteroatoms in Diethylene Glycols on the Properties of 2,5-Furandicarboxylic Acid-Based Polyesters. Biomacromolecules, 2021, 22, 4823-4832.	2.6	12
79	Study of the Crystal Growth Mechanism and Critical Secondary Nucleus Size of Poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock 1	1.4	11
80	Controlling the Growth of Stacks of Correlated Lamellar Crystals of a Block Copolymer. Macromolecules, 2019, 52, 9665-9671.	2.2	11
81	Drug-polymer inclusion complex as a new pharmaceutical solid form. Chinese Chemical Letters, 2017, 28, 2099-2104.	4.8	10
82	Study on melting and recrystallization of poly(butylene succinate) lamellar crystals via step heating differential scanning calorimetry. Chinese Journal of Polymer Science (English Edition), 2017, 35, 1552-1560.	2.0	10
83	Study on the Photodegradation Stability of Poly(butylene Succinate-co-butylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	0.9	10
84	A nucleation mechanism leading to stacking of lamellar crystals in polymer thin films. Polymer International, 2020, 69, 1058-1065.	1.6	10
85	Molecular Insight into the Toughness of Polyureas: A Hybrid All-Atom/Coarse-Grained Molecular Dynamics Study. Macromolecules, 2022, 55, 3020-3029.	2.2	10
86	Carboxyl Terminated Polymer Chain Extension Using a Bisoxazoline Coupling Agent: Monte Carlo Simulation. Macromolecular Theory and Simulations, 2005, 14, 586-595.	0.6	9
87	Study diffusion effects on chain extension reactions based on the reptation theory. Polymer, 2006, 47, 3696-3704.	1.8	9
88	Revealing formation process of microcapsules during in situ polymerization via confocal laser scanning fluorescence microscopy. Colloid and Polymer Science, 2011, 289, 1719-1728.	1.0	9
89	Morphology and crystalline structure of inclusion compounds formed between poly(ethylene glycol) and urea. Chinese Journal of Polymer Science (English Edition), 2014, 32, 1234-1242.	2.0	9
90	How to regulate the isothermal growth rate of polymer spherulite without changing its molecular composition?. CrystEngComm, 2015, 17, 6467-6470.	1.3	9

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91	How temperatures affect the number of dislocations in polymer single crystals. Chinese Journal of Polymer Science (English Edition), 2017, 35, 78-86.	2.0	9
92	Industrializable and sustainable approach for preparing extended-chain crystals of biodegradable poly(butylene succinate) and their applications. Polymer, 2019, 160, 93-98.	1.8	9
93	Revealing the role of hydrogen bonding in polyurea with multiscale simulations. Molecular Simulation, 2021, 47, 1258-1272.	0.9	9
94	A mathematical model for regulating monomer composition of the microbially synthesized polyhydroxyalkanoate copolymers. Biotechnology and Bioengineering, 2005, 90, 821-829.	1.7	8
95	Effect of SiO₂ content on performance of polypropylene separator for lithiumâ€ion batteries. Journal of Applied Polymer Science, 2014, 131, .	1.3	8
96	Detection of long-chain branches in polyethylene via rheological measurements. Chinese Chemical Letters, 2016, 27, 588-592.	4.8	8
97	Two new approaches based on dynamic carboxylâ€“hydroxyl or hydroxylâ€“carboxyl transformation for high molecular weight poly(butylene maleate). Polymer Chemistry, 2020, 11, 5884-5892.	1.9	8
98	SYNTHESIS AND CRYSTALLIZATION BEHAVIOR OF BIODEGRADABLE POLY(BUTYLENE) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 Td (SU	0.0	8
99	PREPARATION OF PHASE CHANGE MATERIAL WAX/P(MMA-<I>co</I>-AA) CORE-SHELL MICROCAPSULES. Acta Polymerica Sinica, 2009, 009, 1154-1156.	0.0	8
100	Monte Carlo simulation of chain extension using bisoxazolines as coupling agent. Polymer, 2005, 46, 11918-11926.	1.8	7
101	The effect of polymer-substrate interaction on the nucleation property: Comparing study of graphene and hexagonal boron nitride Nanosheets. Chinese Journal of Polymer Science (English Edition), 2016, 34, 1021-1031.	2.0	7
102	Primary Nucleation in Metastable Solutions of Poly(3-hexylthiophene). Macromolecules, 2022, 55, 3325-3334.	2.2	7
103	Isomorphism in ternary complex: Poly(ethylene oxide), urea and thiourea. Chinese Chemical Letters, 2017, 28, 888-892.	4.8	6
104	Atomic-scale simulation of hugoniot relations and energy dissipation of polyurea under high-speed shock. Engineering Computations, 2021, 38, 1209-1225.	0.7	6
105	New Growth Features of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) Banded Spherulites. Polymer Journal, 2003, 35, 460-464.	1.3	5
106	Solvent-polymer guest exchange in a carbamazepine inclusion complex: structure, kinetics and implication for guest selection. CrystEngComm, 2019, 21, 2164-2173.	1.3	5
107	MICROSCOPIC STRUCTURE AND MECHANICAL PROPERTIES OF POLYLACTIDE/ATTAPULGITE NANOCOMPOSITES. Acta Polymerica Sinica, 2012, 012, 83-88.	0.0	5
108	Polymer Crystallization with Configurable Birefringence in Double Emulsion Droplets. Macromolecules, 2022, 55, 3974-3985.	2.2	5

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109	Monte Carlo simulation of diffusion effects on chain-extension reactions. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 2902-2911.	2.4	4
110	Thermal and dynamic mechanical properties of attapulgite reinforced poly(butylene succinate-co -1,2-) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.3	4
111	A novel vacuum-assisted method for fabricating flexible polyimide foams from 3,3â€²,4,4â€²-oxydiphthalic anhydride/4,4â€²-oxydianiline. High Performance Polymers, 2017, 29, 272-278.	0.8	4
112	Orientation of polymer chains in spherulites of poly(ethylene oxide)-urea inclusion compounds. Polymer, 2017, 130, 209-217.	1.8	4
113	Organization process of the hierarchical structures in microbially synthesized polyhydroxyalkanoates. Current Applied Physics, 2007, 7, e41-e44.	1.1	2
114	Monodisperse erythrocyte-like and hollow erythrocyte-like silica nanoparticles prepared by a simple template-free and surfactant-free solâ€“gel route. Journal of Sol-Gel Science and Technology, 2017, 81, 367-371.	1.1	2
115	Critical Size of Secondary Nuclei Determined via Nucleation Theorem Reveals Selective Nucleation in Three-Component Co-Crystals. Entropy, 2019, 21, 1032.	1.1	2
116	Highly Filled Glycerol/Graphite Suspensions as Fluidic Soft Sensors and Their Responsive Mechanism to Shear. Advanced Materials Technologies, 2020, 5, 2000508.	3.0	2
117	Highly stretchable and strong poly(butylene maleate) elastomersviametalâ€“ligand interactions. Polymer Chemistry, 2021, 12, 893-902.	1.9	2
118	Melting and Annealing Peak Temperatures of Poly(butylene succinate) on the Same Hoffman-Weeks Plot Parallel to Tm=Tc Line. Chinese Journal of Polymer Science (English Edition), 2021, 39, 745.	2.0	2
119	Quantitative contribution of each component to secondary nucleation in the blends of homopolymer and its random copolymers. Polymer, 2022, 245, 124735.	1.8	2
120	In Situ Dissolution and Swelling of Confined Lamellar Polymer Crystals through Exposure to Humid Air. Macromolecules, 0, , .	2.2	2
121	Controlled Switching from the Growth of Monolamellar Polymer Crystals to the Formation of Stacks of Uniquely Oriented Lamellae. Macromolecules, 2021, 54, 8135-8142.	2.2	1
122	THE EFFECTS OF SHEAR HISTORY ON CRYSTALLIZATION OF POLYAMIDES. Acta Polymerica Sinica, 2006, 006, 484-488.	0.0	1
123	Two-step heat fusion kinetics and mechanical performance of thermoplastic interfaces. Scientific Reports, 2022, 12, 5701.	1.6	1
124	Deep Quenching: A Special Method to Study Stress-Induced Crystallization and Control the Lamellar Growth Direction. Macromolecular Rapid Communications, 2004, 25, 1549-1553.	2.0	0
125	Synthesis and Characterizations of Poly(Butylene Succinate) Copolyester. Advanced Materials Research, 0, 1015, 381-384.	0.3	0
126	Rheological behavior of branch modified poly(butylene succinate) by butyl glycidyl ether. AIP Conference Proceedings, 2016, , .	0.3	0

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127	PREPARATION OF ELASTIC POLY(R-3-HYDROXYBUTYRATE-<I>co</I>-R-3-HYDROXYHEXANOATE) FIBER WITH HIGH STRENGTH AND REGULATION OF ITS MECHANICAL PROPERTIES. Acta Polymerica Sinica, 2013, 012, 1465-1471.	0.0	0
128	PREPARATION OF MONODISPERSE CROSS-LINKED POLYSTYRENE MICROSPHERES BY COMBINING DISPERSION POLYMERIZATION WITH HYDROTHERMAL PROCESS. Acta Polymerica Sinica, 2013, 013, 81-87.	0.0	0
129	The Kinetics Of Melting And Recrystallization Using Normal Differential Scanning Calorimeter. , 2017, , .		0
130	Editorial on the Special Topic â€œPolymer Crystallizationâ€• Crystals, 2022, 12, 618.	1.0	0