Ruoyu Zhang

List of Publications by Year
in descending order

75 papers	3,160 citations	117625 34 h-index	161849 54 g-index
75 all docs	75 docs citations	75 times ranked	2761 citing authors

#	Article	IF	Citations
1	A Selfâ€Healing and Ionic Liquid Affiliative Polyurethane toward a Piezo 2 Protein Inspired Ionic Skin. Advanced Functional Materials, 2022, 32, 2106341.	14.9	48
2	Design of 2,5-furandicarboxylic based polyesters degraded in different environmental conditions: Comprehensive experimental and theoretical study. Journal of Hazardous Materials, 2022, 425, 127752.	12.4	28
3	Acid-triggered, degradable and high strength-toughness copolyesters: Comprehensive experimental and theoretical study. Journal of Hazardous Materials, 2022, 430, 128392.	12.4	15
4	Enhanced degradation and gas barrier of PBAT through composition design of aliphatic units. Polymer Degradation and Stability, 2022, 195, 109795.	5.8	20
5	Water plasticization accelerates the underwater self-healing of hydrophobic polyurethanes. Polymer, 2022, 250, 124863.	3.8	12
6	Low-temperature activable, carbon dioxide based, highly adhesive and degradable oligo-urethane and its potential application as an auto-detachable dressing. Materials Chemistry Frontiers, 2022, 6, 1658-1671.	5.9	4
7	An antifatigue and self-healable ionic polyurethane/ionic liquid composite as the channel layer for a low energy cost synaptic transistor. European Polymer Journal, 2022, 174, 111292.	5.4	2
8	Enhanced seawater degradation through copolymerization with diglycolic acid: Synthesis, microstructure, degradation mechanism and modification for antibacterial packaging. Chemical Engineering Journal, 2022, 447, 137535.	12.7	10
9	An anti-stress relaxation, anti-fatigue, mildew proof and self-healing poly(thiourethane-urethane) for durably stretchable electronics. Chemical Engineering Journal, 2021, 420, 127691.	12.7	21
10	A Biologically Muscleâ€Inspired Polyurethane with Superâ€Tough, Thermal Reparable and Selfâ€Healing Capabilities for Stretchable Electronics. Advanced Functional Materials, 2021, 31, 2009869.	14.9	104
11	Comprehensive review on plant fiber-reinforced polymeric biocomposites. Journal of Materials Science, 2021, 56, 7231-7264.	3.7	122
12	Experimental and Theoretical Study on Glycolic Acid Provided Fast Bio/Seawater-Degradable Poly(Butylene Succinate-<i>co</i>-Glycolate). ACS Sustainable Chemistry and Engineering, 2021, 9, 3850-3859.	6.7	42
13	A polyurethane integrating self-healing, anti-aging and controlled degradation for durable and eco-friendly E-skin. Chemical Engineering Journal, 2021, 410, 128363.	12.7	59
14	Design of High-Barrier and Environmentally Degradable FDCA-Based Copolyesters: Experimental and Theoretical Investigation. ACS Sustainable Chemistry and Engineering, 2021, 9, 13021-13032.	6.7	19
15	A High Performance Copolyester with â€œLockedâ€• Biodegradability: Solid Stability and Controlled Degradation Enabled by Acid-Labile Acetal. ACS Sustainable Chemistry and Engineering, 2021, 9, 2280-2290.	6.7	15
16	Toughening Polylactic Acid by a Biobased Poly(Butylene 2,5-Furandicarboxylate)-<i>b</i>-Poly(Ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Biomacromolecules, 2021, 22, 374-385.	5.4	17
17	Formation of crystal-like structure and effective hard domain in a thermoplastic polyurethane. Polymer, 2020, 210, 123012.	3.8	26
18	Fully Bio-based Micro-cellulose Incorporated Poly(butylene 2,5-furandicarboxylate) Transparent Composites: Preparation and Characterization. Fibers and Polymers, 2020, 21, 1550-1559.	2.1	10

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19	A Perspective on PEF Synthesis, Properties, and End-Life. Frontiers in Chemistry, 2020, 8, 585.	3.6	110
20	Nucleation and crystallization of poly(propylene 2,5-furan dicarboxylate) by direct blending of microcrystalline cellulose: improved tensile and barrier properties. Cellulose, 2020, 27, 9423-9436.	4.9	13
21	Poly(<scp>l</scp>-lactic acid) Microdomain as a Nanopolarization Rotator in a Flexible, Elastic, and Transparent Polyurethane. ACS Applied Polymer Materials, 2020, 2, 3993-4003.	4.4	1
22	Nanoparticle Mobility within Permanently Cross-Linked Polymer Networks. Macromolecules, 2020, 53, 4172-4184.	4.8	29
23	Waterproof, Highly Tough, and Fast Self-Healing Polyurethane for Durable Electronic Skin. ACS Applied Materials & Interfaces, 2020, 12, 11072-11083.	8.0	149
24	Waste Cellulose Fibers Reinforced Polylactide Toughened by Direct Blending of Epoxidized Soybean Oil. Fibers and Polymers, 2020, 21, 2949-2961.	2.1	11
25	Toughening polylactide by direct blending of cellulose nanocrystals and epoxidized soybean oil. Journal of Applied Polymer Science, 2019, 136, 48221.	2.6	30
26	Synthesis of poly[2-(3-butenyl)-2-oxazoline] with abundant carboxylic acid functional groups as a fiber-based solâ€"gel reaction supporter for catalytic applications. Journal of Industrial and Engineering Chemistry, 2019, 80, 112-121.	5.8	2
27	Biodegradable Elastomer from 2,5-Furandicarboxylic Acid and Îµ-Caprolactone: Effect of Crystallization on Elasticity. ACS Sustainable Chemistry and Engineering, 2019, 7, 17778-17788.	6.7	34
28	Bio-based poly(butylene furandicarboxylate)-b-poly(ethylene glycol) copolymers: The effect of poly(ethylene glycol) molecular weight on thermal properties and hydrolysis degradation behavior. Advanced Industrial and Engineering Polymer Research, 2019, 2, 167-177.	4.7	6
29	Reexamination of the microphase separation in MDI and PTMG based polyurethane: Fast and continuous association/dissociation processes of hydrogen bonding. Polymer, 2019, 185, 121943.	3.8	52
30	Toward Biobased, Biodegradable, and Smart Barrier Packaging Material: Modification of Poly(Neopentyl Glycol 2,5-Furandicarboxylate) with Succinic Acid. ACS Sustainable Chemistry and Engineering, 2019, 7, 4255-4265.	6.7	37
31	A mild method to prepare high molecular weight poly(butylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 267 Td (furandicarboxyla mechanical, and barrier properties and biodegradability. Green Chemistry, 2019, 21, 3013-3022.	9.0	76
32	A Convenient Dual-Side Anionic Initiator Based on 2,6-Luditine/s-Butyl Lithium. Macromolecular Research, 2019, 27, 601-605.	2.4	2
33	Sustainable and rapidly degradable poly(butylene carbonate-<i>co</i>-cyclohexanedicarboxylate): influence of composition on its crystallization, mechanical and barrier properties. Polymer Chemistry, 2019, 10, 1812-1822.	3.9	29
34	The Consequence of Epoxidized Soybean Oil in the Toughening of Polylactide and Micro-Fibrillated Cellulose Blend. Polymer Science - Series A, 2019, 61, 832-846.	1.0	11
35	Asynchronous fracture of hierarchical microstructures in hard domain of thermoplastic polyurethane elastomer: Effect of chain extender. Polymer, 2018, 138, 242-254.	3.8	56
36	Synthesis and Structureâ€"Property Relationship of Biobased Biodegradable Poly(butylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 67 Td 7488-7498.	6.7	52

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37	Fully bio-based poly(propylene succinate-co-propylene furandicarboxylate) copolyesters with proper mechanical, degradation and barrier properties for green packaging applications. European Polymer Journal, 2018, 102, 101-110.	5.4	72
38	Epoxy resins toughened with <i>in situ</i> azideâ€"alkyne polymerized polysulfones. Journal of Applied Polymer Science, 2018, 135, 45790.	2.6	26
39	Modification of Poly(butylene 2,5-furandicarboxylate) with Lactic Acid for Biodegradable Copolyesters with Good Mechanical and Barrier Properties. Industrial & Engineering Chemistry Research, 2018, 57, 11020-11030.	3.7	58
40	Bio-based poly(butylene 2,5-furandicarboxylate)-b-poly(ethylene glycol) copolymers with adjustable degradation rate and mechanical properties: Synthesis and characterization. European Polymer Journal, 2018, 106, 42-52.	5.4	57
41	The interplay between gelation and phase separation in PAN/DMSO/H 2 O blends and the resulted critical gels. European Polymer Journal, 2017, 92, 40-50.	5.4	5
42	Designing bio-based plasticizers: Effect of alkyl chain length on plasticization properties of isosorbide diesters in PVC blends. Materials and Design, 2017, 126, 29-36.	7.0	77
43	Tensile Property Balanced and Gas Barrier Improved Poly(lactic acid) by Blending with Biobased Poly(butylene 2,5-furan dicarboxylate). ACS Sustainable Chemistry and Engineering, 2017, 5, 9244-9253.	6.7	65
44	Retroreflection in binary bio-based PLA/PBF blends. Polymer, 2017, 125, 138-143.	3.8	20
45	Synthesis of Multifunctionalized Graftâ€Type Polyolefinâ€Based Elastomers with a High Utility Temperature. Macromolecular Chemistry and Physics, 2017, 218, 1700298.	2.2	2
46	Design and structural study of a triple-shape memory PCL/PVC blend. Polymer, 2016, 104, 115-122.	3.8	40
47	A Multiscale Investigation on the Mechanism of Shape Recovery for IPDI to PPDI Hard Segment Substitution in Polyurethane. Macromolecules, 2016, 49, 5931-5944.	4.8	92
48	Research progress in the heat resistance, toughening and filling modification of PLA. Science China Chemistry, 2016, 59, 1355-1368.	8.2	79
49	Synthesis and shape memory property of segmented poly(ester urethane) with poly(butylene) Tj ETQq1 1 0.784314 rgBT /Overlock 1[illegible]	3.6	7
50	Non-planar ring contained polyester modifying polylactide to pursue high toughness. Composites Science and Technology, 2016, 128, 41-48.	7.8	27
51	Initiating Highly Effective Hydrolysis of Regenerated Cellulose by Controlling Transition of Crystal Form with Sulfolane under Microwave Radiation. ACS Sustainable Chemistry and Engineering, 2016, 4, 1507-1511.	6.7	21
52	Rheological and optical investigation of the gelation with and without phase separation in PAN/DMSO/H2O ternary blends. Polymer, 2016, 84, 243-253.	3.8	15
53	Isosorbide dioctoate as a â€œgreenâ€• plasticizer for poly(lactic acid). Materials and Design, 2016, 91, 262-268.	7.0	80
54	Soft segment free thermoplastic polyester elastomers with high performance. Journal of Materials Chemistry A, 2015, 3, 13637-13641.	10.3	36

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55	Effect of aliphatic diacyl adipic dihydrazides on the crystallization of poly(lactic acid). Journal of Applied Polymer Science, 2015, 132, .	2.6	5
56	Rheological manifestation of the second self-similar structure in gelation process of PAN/DMSO/H2O system. Polymer, 2015, 73, 149-155.	3.8	14
57	Free radical competitions in polylactide/bio-based thermoplastic polyurethane/ free radical initiator ternary blends and their final properties. Polymer, 2015, 64, 69-75.	3.8	32
58	Graphene synthesis: a Review. Materials Science-Poland, 2015, 33, 566-578.	1.0	105
59	Synthesis of graphene from biomass: A green chemistry approach. Materials Letters, 2015, 161, 476-479.	2.6	137
60	A toughened PLA/Nanosilica composite obtained in the presence of epoxidized soybean oil. Journal of Applied Polymer Science, 2015, 132, .	2.6	25
61	Surface hydrophobic modification of starch with bio-based epoxy resins to fabricate high-performance polylactide composite materials. Composites Science and Technology, 2014, 94, 16-22.	7.8	68
62	Diisocyanate free and melt polycondensation preparation of bio-based unsaturated poly(ester-urethane)s and their properties as UV curable coating materials. RSC Advances, 2014, 4, 49471-49477.	3.6	30
63	Bio-based shape memory polyurethanes (Bio-SMPUs) with short side chains in the soft segment. Journal of Materials Chemistry A, 2014, 2, 11490.	10.3	65
64	Origin of highly recoverable shape memory polyurethanes (SMPUs) with non-planar ring structures: a single molecule force spectroscopy investigation. Journal of Materials Chemistry A, 2014, 2, 20010-20016.	10.3	36
65	Improvement in toughness of polylactide by melt blending with bio-based poly(ester)urethane. Chinese Journal of Polymer Science (English Edition), 2014, 32, 1099-1110.	3.8	44
66	Preparation of Biobased Monofunctional Compatibilizer from Cardanol To Fabricate Polylactide/Starch Blends with Superior Tensile Properties. Industrial & Engineering Chemistry Research, 2014, 53, 10653-10659.	3.7	32
67	Highly recoverable rosin-based shape memory polyurethanes. Journal of Materials Chemistry A, 2013, 1, 3263.	10.3	87
68	Synthesis and properties of full bio-based thermosetting resins from rosin acid and soybean oil: the role of rosin acid derivatives. Green Chemistry, 2013, 15, 1300.	9.0	139
69	The properties of poly(lactic acid)/starch blends with a functionalized plant oil: Tung oil anhydride. Carbohydrate Polymers, 2013, 95, 77-84.	10.2	105
70	Thickness Dependence of Liquidâ˜'Liquid Phase Separation in Thin Films of a Polyolefin Blend. Macromolecules, 2009, 42, 4349-4351.	4.8	4
71	Nucleation/Growth in the Metastable and Unstable Phase Separation Regions under Oscillatory Shear Flow for an Off-critical Polymer Blend. Macromolecules, 2009, 42, 2873-2876.	4.8	18
72	Phase Separation Mechanism of Polybutadiene/Polyisoprene Blends under Oscillatory Shear Flow. Macromolecules, 2008, 41, 6818-6829.	4.8	59

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73	Liquidâ€"Liquid Phase Separation and Crystallization in Thin Films of a Polyolefin Blend. Macromolecules, 2008, 41, 2311-2314.	4.8	21
74	Effect of Liquidâ˘'Liquid Phase Separation on the Lamellar Crystal Morphology in PEH/PEB Blend. Macromolecules, 2006, 39, 9285-9290.	4.8	36
75	Effect of shear flow on multi-component polymer mixtures. Polymer, 2006, 47, 3271-3286.	3.8	45