Ruoyu Zhang

List of Publications by Year in Descending Order

73 papers	1,897 citations	28 h-index	41 g-index
75 ext. papers	2,468 ext. citations	6.6 avg, IF	5.1 L-index

#	Paper	IF	Citations
73	Acid-triggered, degradable and high strength-toughness copolyesters: Comprehensive experimental and theoretical study.. *Journal of Hazardous Materials*, **2022**, 430, 128392	12.8	3
72	Enhanced degradation and gas barrier of PBAT through composition design of aliphatic units. *Polymer Degradation and Stability*, **2022**, 195, 109795	4.7	3
71	Water plasticization accelerates the underwater self-healing of hydrophobic polyurethanes. *Polymer*, **2022**, 124863	3.9	3
70	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**, 111292	5.2	
69	Design of 2,5-furandicarboxylic based polyesters degraded in different environmental conditions: Comprehensive experimental and theoretical study.. *Journal of Hazardous Materials*, **2021**, 425, 127752	12.8	4
68	Toughening Polylactic Acid by a Biobased Poly(Butylene 2,5-Furandicarboxylate)--Poly(Ethylene Glycol) Copolymer: Balanced Mechanical Properties and Potential Biodegradability. *Biomacromolecules*, **2021**, 22, 374-385	6.9	4
67	Experimental and Theoretical Study on Glycolic Acid Provided Fast Bio/Seawater-Degradable Poly(Butylene Succinate-co-Glycolate). *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 3850-3859	8.3	12
66	A polyurethane integrating self-healing, anti-aging and controlled degradation for durable and eco-friendly E-skin. *Chemical Engineering Journal*, **2021**, 410, 128363	14.7	20
65	An anti-stress relaxation, anti-fatigue, mildew proof and self-healing poly(thiourethane-urethane) for durably stretchable electronics. *Chemical Engineering Journal*, **2021**, 420, 127691	14.7	10
64	A Biologically Muscle-Inspired Polyurethane with Super-Tough, Thermal Reparable and Self-Healing Capabilities for Stretchable Electronics. *Advanced Functional Materials*, **2021**, 31, 2009869	15.6	27
63	Comprehensive review on plant fiber-reinforced polymeric biocomposites. *Journal of Materials Science*, **2021**, 56, 7231-7264	4.3	46
62	Design of High-Barrier and Environmentally Degradable FDCA-Based Copolyesters: Experimental and Theoretical Investigation. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 13021-13032	8.3	4
61	A High Performance Copolyester with Locked Biodegradability: Solid Stability and Controlled Degradation Enabled by Acid-Labile Acetal. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 2280-2290	8.3	7
60	Nanoparticle Mobility within Permanently Cross-Linked Polymer Networks. *Macromolecules*, **2020**, 53, 4172-4184	5.5	8
59	Waterproof, Highly Tough, and Fast Self-Healing Polyurethane for Durable Electronic Skin. *ACS Applied Materials & Interfaces*, **2020**, 12, 11072-11083	9.5	68
58	Waste Cellulose Fibers Reinforced Polylactide Toughened by Direct Blending of Epoxidized Soybean Oil. *Fibers and Polymers*, **2020**, 21, 2949-2961	2	2
57	Formation of crystal-like structure and effective hard domain in a thermoplastic polyurethane. *Polymer*, **2020**, 210, 123012	3.9	8

56	Fully Bio-based Micro-cellulose Incorporated Poly(butylene 2,5-furandicarboxylate) Transparent Composites: Preparation and Characterization. *Fibers and Polymers*, **2020**, 21, 1550-1559	2	5
55	A Perspective on PEF Synthesis, Properties, and End-Life. *Frontiers in Chemistry*, **2020**, 8, 585	5	48
54	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	5.5	5
53	Poly(l-lactic acid) Microdomain as a Nanopolarization Rotator in a Flexible, Elastic, and Transparent Polyurethane. *ACS Applied Polymer Materials*, **2020**, 2, 3993-4003	4.3	0
52	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	8.3	21
51	A mild method to prepare high molecular weight poly(butylene furandicarboxylate-co-glycolate) copolyesters: effects of the glycolate content on thermal, mechanical, and barrier properties and biodegradability. *Green Chemistry*, **2019**, 21, 3013-3022	10	45
50	A Convenient Dual-Side Anionic Initiator Based on 2,6-Luditine/s-Butyl Lithium. *Macromolecular Research*, **2019**, 27, 601-605	1.9	2
49	Toughening polylactide by direct blending of cellulose nanocrystals and epoxidized soybean oil. *Journal of Applied Polymer Science*, **2019**, 136, 48221	2.9	16
48	Synthesis of poly[2-(3-butenyl)-2-oxazoline] with abundant carboxylic acid functional groups as a fiber-based sol□gel reaction supporter for catalytic applications. *Journal of Industrial and Engineering Chemistry*, **2019**, 80, 112-121	6.3	1
47	Biodegradable Elastomer from 2,5-Furandicarboxylic Acid and □Caprolactone: Effect of Crystallization on Elasticity. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 17778-17788	8.3	16
46	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	7.3	4
45	Reexamination of the microphase separation in MDI and PTMG based polyurethane: Fast and continuous association/dissociation processes of hydrogen bonding. *Polymer*, **2019**, 185, 121943	3.9	18
44	Sustainable and rapidly degradable poly(butylene carbonate-co-cyclohexanedicarboxylate): influence of composition on its crystallization, mechanical and barrier properties. *Polymer Chemistry*, **2019**, 10, 1812-1822	4.9	13
43	The Consequence of Epoxidized Soybean Oil in the Toughening of Polylactide and Micro-Fibrillated Cellulose Blend. *Polymer Science - Series A*, **2019**, 61, 832-846	1.2	4
42	Asynchronous fracture of hierarchical microstructures in hard domain of thermoplastic polyurethane elastomer: Effect of chain extender. *Polymer*, **2018**, 138, 242-254	3.9	36
41	Synthesis and Structure□Property Relationship of Biobased Biodegradable Poly(butylene carbonate-co-furandicarboxylate). *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 7488-7498	8.3	35
40	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	5.2	42
39	Epoxy resins toughened with in situ azide□alkyne polymerized polysulfones. *Journal of Applied Polymer Science*, **2018**, 135, 45790	2.9	18

38	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	3.9	33
37	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	5.2	34
36	The interplay between gelation and phase separation in PAN/DMSO/H2O blends and the resulted critical gels. *European Polymer Journal*, **2017**, 92, 40-50	5.2	4
35	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	8.1	46
34	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	8.3	45
33	Retroreflection in binary bio-based PLA/PBF blends. *Polymer*, **2017**, 125, 138-143	3.9	14
32	Synthesis of Multifunctionalized Graft-Type Polyolefin-Based Elastomers with a High Utility Temperature. *Macromolecular Chemistry and Physics*, **2017**, 218, 1700298	2.6	2
31	Research progress in the heat resistance, toughening and filling modification of PLA. *Science China Chemistry*, **2016**, 59, 1355-1368	7.9	47
30	Synthesis and shape memory property of segmented poly(ester urethane) with poly(butylene 1,4-cyclohexanedicarboxylate) as the soft segment. *RSC Advances*, **2016**, 6, 95527-95534	3.7	5
29	Non-planar ring contained polyester modifying polylactide to pursue high toughness. *Composites Science and Technology*, **2016**, 128, 41-48	8.6	20
28	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	8.3	15
27	Rheological and optical investigation of the gelation with and without phase separation in PAN/DMSO/H2O ternary blends. *Polymer*, **2016**, 84, 243-253	3.9	11
26	Isosorbide dioctoate as a □green□plasticizer for poly(lactic acid). *Materials and Design*, **2016**, 91, 262-268	8.1	43
25	Design and structural study of a triple-shape memory PCL/PVC blend. *Polymer*, **2016**, 104, 115-122	3.9	29
24	A Multiscale Investigation on the Mechanism of Shape Recovery for IPDI to PPDI Hard Segment Substitution in Polyurethane. *Macromolecules*, **2016**, 49, 5931-5944	5.5	54
23	Free radical competitions in polylactide/bio-based thermoplastic polyurethane/ free radical initiator ternary blends and their final properties. *Polymer*, **2015**, 64, 69-75	3.9	28
22	Graphene synthesis: a Review. *Materials Science-Poland*, **2015**, 33, 566-578	0.6	60
21	Synthesis of graphene from biomass: A green chemistry approach. *Materials Letters*, **2015**, 161, 476-479	3.3	104

20	A toughened PLA/Nanosilica composite obtained in the presence of epoxidized soybean oil. *Journal of Applied Polymer Science*, **2015**, 132,	2.9	20
19	Soft segment free thermoplastic polyester elastomers with high performance. *Journal of Materials Chemistry A*, **2015**, 3, 13637-13641	13	31
18	Effect of aliphatic diacyl adipic dihydrazides on the crystallization of poly(lactic acid). *Journal of Applied Polymer Science*, **2015**, 132, n/a-n/a	2.9	4
17	Rheological manifestation of the second self-similar structure in gelation process of PAN/DMSO/H2O system. *Polymer*, **2015**, 73, 149-155	3.9	11
16	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	8.6	60
15	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	3.7	27
14	Bio-based shape memory polyurethanes (Bio-SMPUs) with short side chains in the soft segment. *Journal of Materials Chemistry A*, **2014**, 2, 11490	13	55
13	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	13	29
12	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	3.5	37
11	Preparation of Biobased Monofunctional Compatibilizer from Cardanol To Fabricate Polylactide/Starch Blends with Superior Tensile Properties. *Industrial & Engineering Chemistry Research*, **2014**, 53, 10653-10659	3.9	26
10	Highly recoverable rosin-based shape memory polyurethanes. *Journal of Materials Chemistry A*, **2013**, 1, 3263	13	67
9	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	10	114
8	The properties of poly(lactic acid)/starch blends with a functionalized plant oil: tung oil anhydride. *Carbohydrate Polymers*, **2013**, 95, 77-84	10.3	89
7	Thickness Dependence of Liquid–Liquid Phase Separation in Thin Films of a Polyolefin Blend. *Macromolecules*, **2009**, 42, 4349-4351	5.5	3
6	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	5.5	18
5	Phase Separation Mechanism of Polybutadiene/Polyisoprene Blends under Oscillatory Shear Flow. *Macromolecules*, **2008**, 41, 6818-6829	5.5	53
4	Liquid–Liquid Phase Separation and Crystallization in Thin Films of a Polyolefin Blend. *Macromolecules*, **2008**, 41, 2311-2314	5.5	20
3	Effect of Liquid–Liquid Phase Separation on the Lamellar Crystal Morphology in PEH/PEB Blend. *Macromolecules*, **2006**, 39, 9285-9290	5.5	33

2	Effect of shear flow on multi-component polymer mixtures. *Polymer*, **2006**, 47, 3271-3286	3.9	42
1	A Self-Healing and Ionic Liquid Affiliative Polyurethane toward a Piezo 2 Protein Inspired Ionic Skin. *Advanced Functional Materials*,2106341	15.6	5