Shui-Dong Zhang

List of Publications by Year
in descending order

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62 papers	1,876 citations	279798 23 h-index	276875 41 g-index
63 all docs	63 docs citations	63 times ranked	1876 citing authors

#	Article	IF	Citations
1	Superhydrophobic SiC/CNTs Coatings with Photothermal Deicing and Passive Anti-Icing Properties. ACS Applied Materials & Interfaces, 2018, 10, 36505-36511.	8.0	200
2	High Carbonyl Content Oxidized Starch Prepared by Hydrogen Peroxide and Its Thermoplastic Application. Starch/Staerke, 2009, 61, 646-655.	2.1	120
3	Effect of polyethylene glycol on the crystallization and impact properties of polylactideâ€based blends. Polymers for Advanced Technologies, 2015, 26, 465-475.	3.2	102
4	Modified Corn Starches with Improved Comprehensive Properties for Preparing Thermoplastics. Starch/Staerke, 2007, 59, 258-268.	2.1	92
5	Using cellulose nanocrystals as sustainable additive to enhance mechanical and shape memory properties of PLA/ENR thermoplastic vulcanizates. Carbohydrate Polymers, 2020, 230, 115618.	10.2	76
6	Nickel Metalâ€“Organic Framework Derived Hierarchically Mesoporous Nickel Phosphate toward Smoke Suppression and Mechanical Enhancement of Intumescent Flame Retardant Wood Fiber/Poly(lactic) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	7.8	73
7	Cobalt phosphide supported by two-dimensional molybdenum carbide (MXene) for the hydrogen evolution reaction, oxygen evolution reaction, and overall water splitting. Journal of Materials Chemistry A, 2021, 9, 21259-21269.	10.3	66
8	Fabrication of innovative thermoplastic starch bio-elastomer to achieve high toughness poly(butylene succinate) composites. Carbohydrate Polymers, 2019, 206, 827-836.	10.2	59
9	Morphology, rheological and crystallization behavior in non-covalently functionalized carbon nanotube reinforced poly(butylene succinate) nanocomposites with low percolation threshold. Polymer Testing, 2016, 50, 182-190.	4.8	56
10	Effect of oxidized wood flour as functional filler on the mechanical, thermal and flame-retardant properties of polylactide biocomposites. Industrial Crops and Products, 2019, 130, 301-309.	5.2	54
11	Fabrication of bimodal open-porous poly (butylene succinate)/cellulose nanocrystals composite scaffolds for tissue engineering application. International Journal of Biological Macromolecules, 2020, 147, 1164-1173.	7.5	52
12	Fabrication and mechanism of poly(butylene succinate) urethane ionomer microcellular foams with high thermal insulation and compressive feature. European Polymer Journal, 2018, 99, 250-258.	5.4	47
13	A facile structural manipulation strategy to prepare ultra-strong, super-tough, and thermally stable polylactide/nucleating agent composites. Advanced Composites and Hybrid Materials, 2022, 5, 948-959.	21.1	46
14	High Oxygen Barrier Property of Poly(propylene carbonate)/Polyethylene Glycol Nanocomposites with Low Loading of Cellulose Nanocrytals. ACS Sustainable Chemistry and Engineering, 2017, 5, 11246-11254.	6.7	45
15	Preparation of a new dialdehyde starch derivative and investigation of its thermoplastic properties. Journal of Polymer Research, 2010, 17, 439-446.	2.4	44
16	Effects of tartaric acid contents on phase homogeneity, morphology and properties of poly (butyleneadipate-co-terephthalate)/thermoplastic starch bio-composities. Polymer Testing, 2019, 76, 385-395.	4.8	41
17	Construction of chelation structure between Ca2+ and starch via reactive extrusion for improving the performances of thermoplastic starch. Composites Science and Technology, 2018, 159, 59-69.	7.8	37
18	Preparation of Novel c-6 Position Carboxyl Corn Starch by a Green Method and Its Application in Flame Retardance of Epoxy Resin. Industrial & Engineering Chemistry Research, 2015, 54, 11944-11952.	3.7	36

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19	A self-powered and arch-structured triboelectric nanogenerator for portable electronics and human-machine communication. Journal of Materials Chemistry A, 2020, 8, 8997-9005.	10.3	36
20	Tensile Properties of Polylactide/Poly(ethylene glycol) Blends. Journal of Polymers and the Environment, 2015, 23, 407-415.	5.0	34
21	Preparing thermoplastic polyurethane/thermoplastic starch with high mechanical and biodegradable properties. RSC Advances, 2015, 5, 80884-80892.	3.6	31
22	Fabrication of Poly(butylene succinate) phosphorus-containing ionomers microcellular foams with significantly improved thermal conductivity and compressive strength. Polymer, 2019, 185, 121967.	3.8	28
23	Ultrasound-activable piezoelectric membranes for accelerating wound healing. Biomaterials Science, 2022, 10, 692-701.	5.4	25
24	Ultrathin Beta-Nickel hydroxide nanosheets grown along multi-walled carbon nanotubes: A novel nanohybrid for enhancing flame retardancy and smoke toxicity suppression of unsaturated polyester resin. Journal of Colloid and Interface Science, 2018, 509, 285-297.	9.4	23
25	Improved antibacterial and mechanical performances of carboxylated nitrile butadiene rubber via interface reaction of oxidized starch. Carbohydrate Polymers, 2021, 259, 117739.	10.2	23
26	Biodegradable-Renewable Vitrimer Fabrication by Epoxidized Natural Rubber and Oxidized Starch with Robust Ductility and Elastic Recovery. ACS Sustainable Chemistry and Engineering, 2022, 10, 7942-7953.	6.7	23
27	Largely toughening biodegradable poly(lactic acid)/thermoplastic polyurethane blends by adding <scp>MDI</scp>. Journal of Applied Polymer Science, 2015, 132, .	2.6	22
28	Compatibility, steady and dynamic rheological behaviors of polylactide/poly(ethylene glycol) blends. Journal of Applied Polymer Science, 2016, 133, .	2.6	22
29	Using H2O2 to selectively oxidize recyclable cellulose yarn with high carboxyl content. Cellulose, 2019, 26, 2699-2713.	4.9	22
30	Structure and improved properties of PPC/PBAT blends via controlling phase morphology based on melt viscosity. Journal of Applied Polymer Science, 2020, 137, 48924.	2.6	22
31	Oxidized cellulose nanocrystal as sustainable crosslinker to fabricate carboxylated nitrile rubber composites with antibiosis, wearing and irradiation aging resistance. Composites Part B: Engineering, 2021, 225, 109253.	12.0	20
32	Facile Preparation of Supertoughened Polylactide-Based Thermoplastic Vulcanizates without Sacrificing the Stiffness Based on the Selective Distribution of Silica. Industrial & Engineering Chemistry Research, 2020, 59, 9950-9958.	3.7	20
33	Elevated ductility, optical, and air barrier properties of poly (butyleneadipateâ€coâ€terephthalate) bioâ€based films via novel thermoplastic starch feature. Polymers for Advanced Technologies, 2019, 30, 852-862.	3.2	19
34	Facile Strategy to Construct Metalâ€“Organic Coordination Thermoplastic Starch with High Hydrophobicity, Glass-Transition Temperature, and Improved Shape Recovery. ACS Sustainable Chemistry and Engineering, 2020, 8, 8655-8663.	6.7	19
35	Oxidized regenerated celluloses to fabricate high fire safety for epoxy resin with super expansion char layer. Cellulose, 2021, 28, 2995-3015.	4.9	19
36	Cell evolution and compressive properties of styreneâ€“butadieneâ€“styrene toughened and calcium carbonate reinforced polystyrene extrusion foams with supercritical carbon dioxide. Journal of Applied Polymer Science, 2016, 133, .	2.6	17

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37	Preparation and properties of starch oxalate half-ester with different degrees of substitution. Journal of Polymer Research, 2010, 17, 43-51.	2.4	15
38	Synthesis of Poly(butylene succinate) phosphorus-containing ionomers for versatile crystallization and improved thermal conductivity. Polymer, 2018, 154, 258-271.	3.8	15
39	Fabrication and Properties of Polyimide/Carbon Fiber Aerogel and the Derivative Carbon Aerogel. Industrial & Engineering Chemistry Research, 2022, 61, 3952-3961.	3.7	15
40	Adopting Intrinsic Hydrophilic Thermoplastic Starch Composites to Fabricate Antifogging Sustainable Films with High Antibiosis and Transparency. ACS Sustainable Chemistry and Engineering, 2022, 10, 3661-3672.	6.7	14
41	Poly(propylene carbonate)/poly(3â€hydroxybutyrate)â€based bionanocomposites reinforced with cellulose nanocrystal for potential application as a packaging material. Polymers for Advanced Technologies, 2020, 31, 853-863.	3.2	13
42	Structure, and thermal and mechanical properties of poly(propylene carbonate) capped with different types of acid anhydride via reactive extrusion. RSC Advances, 2016, 6, 107547-107555.	3.6	11
43	Fabrication of c-6 position carboxyl regenerated cotton cellulose by H 2 O 2 and its promotion in flame retardency of epoxy resin. Polymer Degradation and Stability, 2017, 142, 150-159.	5.8	11
44	Tensile properties of polycaprolactone/nano-CaCO3 composites. Journal of Polymer Engineering, 2014, 34, 69-73.	1.4	10
45	Relationship between screw structure and properties of recycled glass fiber reinforced flame retardant nylon 46. RSC Advances, 2015, 5, 13296-13306.	3.6	10
46	Fabrication of polystyrene/nanoâ€‹<scp>C</scp>a<scp>CO</scp>₃ foams with unimodal or bimodal cell structure from extrusion foaming using supercritical carbon dioxide. Polymer Composites, 2016, 37, 1864-1873.	4.6	9
47	Influence of Starch Oxidization and Modification on Interfacial Interaction, Rheological Behavior, and Properties of Poly(Propylene Carbonate)/Starch Blends. Polymer-Plastics Technology and Engineering, 2017, 56, 1084-1095.	1.9	9
48	Fabricationâ€‹controlled morphology of poly(butylene succinate) nanoâ€‹microcellular foams by supercritical <scp>CO</scp>₂. Polymers for Advanced Technologies, 2018, 29, 1953-1965.	3.2	9
49	Preparation of poly(propylene carbonate)/nano calcium carbonate composites and their supercritical carbon dioxide foaming behavior. Journal of Applied Polymer Science, 2015, 132, .	2.6	8
50	Formation of novel â€œcoral reef-likeâ€•structures for polycarbonate microcellular foam via asphalt-based microporous organic polymers and supercritical CO2. European Polymer Journal, 2020, 134, 109780.	5.4	8
51	Green fabrication of thermally-stable oxidized cellulose nanocrystals by evolved Fenton reaction and in-situ nanoreinforced thermoplastic starch. Cellulose, 2021, 28, 8405-8418.	4.9	8
52	Tailoring flexibility and dispersity of thermoplastic starch gel by controlling intermolecular structure for improving folding endurance of polylactide. European Polymer Journal, 2021, 159, 110731.	5.4	8
53	Fabrication of microcellular epoxidized natural rubber foam with superior ductility by designable chemical and physical crosslinking networks. Journal of Supercritical Fluids, 2022, 181, 105508.	3.2	8
54	An Investigation of the Effect of Semi-Acetal Formation on the Properties of Dialdehyde Starch and its Thermoplastic Blend with Glycerol. Journal of Macromolecular Science - Physics, 2015, 54, 836-850.	1.0	6

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55	Synergetic effect of nanoclay and nano-CaCO₃ hybrid filler systems on the foaming properties and cellular structure of polystyrene nanocomposite foams using supercritical CO₂. Frontiers in Forests and Global Change, 2020, 39, 185-202.	1.1	5
56	Thermal, Mechanical Properties and Rheological Behavior of Poly(Propylene Carbonate)/Poly(Ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 T	5.6	4
57	Thermal and Mechanical Properties of PA66 Short Fiber-Reinforced Poly(propylene carbonate) Composite via Hydrogen Bonding Interaction and Its Rheological Responses. Polymer-Plastics Technology and Engineering, 2016, 55, 138-148.	1.9	2
58	Recovery of Au Nanoparticles via Highâ€Solubility Carboxylic Starch and its Significantly Improved Catalysis of Propylene Epoxidation. Starch/Staerke, 2020, 72, 1900313.	2.1	2
59	Facile strategy to improve thermal conductivity of anisotropic poly(butylene succinate) phosphorusâ€containing ionomer films via compression molding. Polymers for Advanced Technologies, 2021, 32, 1194-1204.	3.2	2
60	Effect of extrusion screw type on properties of recycled glass fiber reinforced liquid crystalline polymer. Polymer Composites, 2016, 37, 370-378.	4.6	1
61	Sustainabilityâ€guided lifeâ€cycle design and assessment for bioâ€based composite foams: Integrate flame retardancy/lightweight in usage and energy utilization after service. Journal of Applied Polymer Science, 2021, 138, 51330.	2.6	1
62	Study on the mechanism of enlarged spherulite diameter for aliphatic polyester ionomers. Polymer, 2022, 246, 124759.	3.8	1