Chuanhui Xu

List of Publications by Year
in descending order

84 papers	3,947 citations	94433 37 h-index	128289 60 g-index
84 all docs	84 docs citations	84 times ranked	2431 citing authors

#	Article	IF	Citations
1	A Highâ€Performance, Sensitive, Wearable Multifunctional Sensor Based on Rubber/CNT for Human Motion and Skin Temperature Detection. Advanced Materials, 2022, 34, e2107309.	21.0	244
2	Design of Self-Healing Supramolecular Rubbers by Introducing Ionic Cross-Links into Natural Rubber via a Controlled Vulcanization. ACS Applied Materials & Interfaces, 2016, 8, 17728-17737.	8.0	211
3	Dynamically Vulcanized Biobased Polylactide/Natural Rubber Blend Material with Continuous Cross-Linked Rubber Phase. ACS Applied Materials & Interfaces, 2014, 6, 3811-3816.	8.0	198
4	Self-healing chitosan/vanillin hydrogels based on Schiff-base bond/hydrogen bond hybrid linkages. Polymer Testing, 2018, 66, 155-163.	4.8	147
5	High-efficiency removal of dyes from wastewater by fully recycling litchi peel biochar. Chemosphere, 2020, 246, 125734.	8.2	136
6	Fully Biobased Shape Memory Material Based on Novel Cocontinuous Structure in Poly(Lactic) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 Interfacial Compatibilization. ACS Sustainable Chemistry and Engineering, 2015, 3, 2856-2865.	6.7	119
7	Supertoughened Biobased Poly(lactic acid)â€"Epoxidized Natural Rubber Thermoplastic Vulcanizates: Fabrication, Co-continuous Phase Structure, Interfacial in Situ Compatibilization, and Toughening Mechanism. Journal of Physical Chemistry B, 2015, 119, 12138-12146.	2.6	115
8	Biobased, self-healable, high strength rubber with tunicate cellulose nanocrystals. Nanoscale, 2017, 9, 15696-15706.	5.6	115
9	Bio-Based PLA/NR-PMMA/NR Ternary Thermoplastic Vulcanizates with Balanced Stiffness and Toughness: â€œSoftâ€"Hardâ€•Coreâ€"Shell Continuous Rubber Phase, In Situ Compatibilization, and Properties. ACS Sustainable Chemistry and Engineering, 2018, 6, 6488-6496.	6.7	105
10	Recyclable and heat-healable epoxidized natural rubber/bentonite composites. Composites Science and Technology, 2018, 167, 421-430.	7.8	98
11	A novel strategy to construct co-continuous PLA/NBR thermoplastic vulcanizates: Metal-ligand coordination-induced dynamic vulcanization, balanced stiffness-toughness and shape memory effect. Chemical Engineering Journal, 2020, 385, 123828.	12.7	91
12	Self-Healing Natural Rubber with Tailorable Mechanical Properties Based on Ionic Supramolecular Hybrid Network. ACS Applied Materials & Interfaces, 2017, 9, 29363-29373.	8.0	89
13	Design of â€œZn²⁺ Salt-Bondingsâ€•Cross-Linked Carboxylated Styrene Butadiene Rubber with Reprocessing and Recycling Ability via Rearrangements of Ionic Cross-Linkings. ACS Sustainable Chemistry and Engineering, 2016, 4, 6981-6990.	6.7	85
14	Adsorption of Cu(<scp>ii</scp>), Zn(<scp>ii</scp>), and Pb(<scp>ii</scp>) from aqueous single and binary metal solutions by regenerated cellulose and sodium alginate chemically modified with polyethyleneimine. RSC Advances, 2018, 8, 18723-18733.	3.6	84
15	Self-Healable, Recyclable, and Strengthened Epoxidized Natural Rubber/Carboxymethyl Chitosan Biobased Composites with Hydrogen Bonding Supramolecular Hybrid Networks. ACS Sustainable Chemistry and Engineering, 2019, 7, 15778-15789.	6.7	79
16	Crosslinked bicontinuous biobased polylactide/natural rubber materials: Super toughness, â€œnet-likeâ€•structure of NR phase and excellent interfacial adhesion. Polymer Testing, 2014, 38, 73-80.	4.8	78
17	Biobased Heat-Triggered Shape-Memory Polymers Based on Polylactide/Epoxidized Natural Rubber Blend System Fabricated via Peroxide-Induced Dynamic Vulcanization: Co-continuous Phase Structure, Shape Memory Behavior, and Interfacial Compatibilization. Industrial & Engineering Chemistry Research, 2015, 54, 8723-8731.	3.7	74
18	Design of self-healable supramolecular hybrid network based on carboxylated styrene butadiene rubber and nano-chitosan. Carbohydrate Polymers, 2019, 205, 410-419.	10.2	74

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19	Dynamically vulcanized PP/EPDM blends with balanced stiffness and toughness via in-situ compatibilization of MAA and excess ZnO nanoparticles: Preparation, structure and properties. Composites Part B: Engineering, 2019, 160, 147-157.	12.0	74
20	Fabrication of â€œZn²⁺ Salt-Bondingsâ€•Cross-Linked SBS-<i>g</i>-COOH/ZnO Composites: Thiolâ€“Ene Reaction Modification of SBS, Structure, High Modulus, and Shape Memory Properties. Macromolecules, 2019, 52, 4329-4340.	4.8	73
21	PP/EPDM-based dynamically vulcanized thermoplastic olefin with zinc dimethacrylate: Preparation, rheology, morphology, crystallization and mechanical properties. Polymer Testing, 2012, 31, 728-736.	4.8	68
22	Crosslink network evolution of nature rubber/zinc dimethacrylate composite during peroxide vulcanization. Polymer Composites, 2011, 32, 1505-1514.	4.6	67
23	Zinc Dimethacrylate Induced in Situ Interfacial Compatibilization Turns EPDM/PP TPVs into a Shape Memory Material. Industrial & Engineering Chemistry Research, 2016, 55, 4539-4548.	3.7	64
24	Crosslinked bicontinuous biobased PLA/NR blends via dynamic vulcanization using different curing systems. Carbohydrate Polymers, 2014, 113, 438-445.	10.2	63
25	Strengthened, recyclable shape memory rubber films with a rigid filler nano-capillary network. Journal of Materials Chemistry A, 2019, 7, 6901-6910.	10.3	60
26	Strengthened, Self-Healing, and Conductive ENR-Based Composites Based on Multiple Hydrogen Bonding Interactions. ACS Sustainable Chemistry and Engineering, 2020, 8, 13724-13733.	6.7	60
27	Study on long-term pest control and stability of double-layer pesticide carrier in indoor and outdoor environment. Chemical Engineering Journal, 2021, 403, 126342.	12.7	60
28	Hybridization of carboxymethyl chitosan with MOFs to construct recyclable, long-acting and intelligent antibacterial agent carrier. Carbohydrate Polymers, 2020, 233, 115848.	10.2	53
29	Design of shape-memory materials based on sea-island structured EPDM/PP TPVs via in-situ compatibilization of methacrylic acid and excess zinc oxide nanoparticles. Composites Science and Technology, 2018, 167, 431-439.	7.8	52
30	High-performance natural rubber nanocomposites with marine biomass (tunicate cellulose). Cellulose, 2017, 24, 2849-2860.	4.9	49
31	Preparation of carboxylic styrene butadiene rubber/chitosan composites with dense supramolecular network via solution mixing process. Composites Part A: Applied Science and Manufacturing, 2019, 117, 116-124.	7.6	49
32	Design of healable epoxy composite based on Î²-hydroxyl esters crosslinked networks by using carboxylated cellulose nanocrystals as crosslinker. Composites Science and Technology, 2019, 181, 107677.	7.8	43
33	Cellulose nanocrystals reinforced foamed nitrile rubber nanocomposites. Carbohydrate Polymers, 2015, 130, 149-154.	10.2	42
34	Strengthened, Antibacterial, and Conductive Flexible Film for Humidity and Strain Sensors. ACS Applied Materials & Interfaces, 2020, 12, 35482-35492.	8.0	41
35	New Approach to Fabricate Novel Fluorosilicone Thermoplastic Vulcanizate with Bicrosslinked Silicone Rubber-Core/Fluororubber-Shell Particles Dispersed in Poly(vinylidene Fluoride): Structure and Property. Industrial & Engineering Chemistry Research, 2016, 55, 1701-1709.	3.7	39
36	Fabrication of High Performance Magnetic Rubber from NBR and Fe₃O₄via in Situ Compatibilization with Zinc Dimethacrylate. Industrial & Engineering Chemistry Research, 2017, 56, 183-190.	3.7	39

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37	Anisotropic Shape Memory Behaviors of Polylactic Acid/Citric Acidâ€“Bentonite Composite with a Gradient Filler Concentration in Thickness Direction. Industrial & Engineering Chemistry Research, 2018, 57, 6265-6274.	3.7	39
38	Curcumin-loaded nanoMOFs@CMFP: A biological preserving paste with antibacterial properties and long-acting, controllable release. Food Chemistry, 2021, 337, 127987.	8.2	35
39	Mechanical Strong and Recyclable Rubber Nanocomposites with Sustainable Cellulose Nanocrystals and Interfacial Exchangeable Bonds. ACS Sustainable Chemistry and Engineering, 2021, 9, 9409-9417.	6.7	34
40	Specific nonlinear viscoelasticity behaviors of natural rubber and zinc dimethacrylate composites due to multiâ€crosslinking bond interaction by using rubber process analyzer 2000. Polymer Composites, 2011, 32, 1593-1600.	4.6	33
41	Strengthened, Recyclable, Weldable, and Conducting-Controllable Biobased Rubber Film with a Continuous Water-Soluble Framework Network. ACS Sustainable Chemistry and Engineering, 2020, 8, 1285-1294.	6.7	33
42	Sodium alginate crosslinked oxidized natural rubber supramolecular network with rapid self-healing at room temperature and improved mechanical properties. Composites Part A: Applied Science and Manufacturing, 2021, 150, 106601.	7.6	27
43	Stress softening of NR reinforced by <i>in situ</i> prepared zinc dimethacrylate. Journal of Applied Polymer Science, 2012, 123, 833-841.	2.6	26
44	Poly (vinylidene fluoride)/fluororubber/silicone rubber thermoplastic vulcanizates prepared through core-shell dynamic vulcanization: Formation of different rubber/plastic interfaces via controlling the core from â€œsoftâ€to â€œhardâ€. Materials Chemistry and Physics, 2017, 195, 123-131.	4.0	26
45	A Green Modified Microsphere of Chitosan Encapsulating Dimethyl Fumarate and Cross-Linked by Vanillin and Its Application for Litchi Preservation. Industrial & Engineering Chemistry Research, 2016, 55, 4490-4498.	3.7	25
46	Multifunctional flexible Ag-MOFs@CMFP composite paper for fruit preservation and real-time wireless monitoring of fruit quality during storage and transportation. Food Chemistry, 2022, 395, 133614.	8.2	25
47	Structure and properties of peroxide dynamically vulcanized polypropylene/ethyleneâ€“propyleneâ€“diene/zinc dimethacrylate composites. Polymer Composites, 2012, 33, 1206-1214.	4.6	24
48	Temperature dependence of the mechanical properties and the inner structures of natural rubber reinforced by <i>in situ</i> polymerization of zinc dimethacrylate. Journal of Applied Polymer Science, 2013, 128, 2350-2357.	2.6	24
49	Fabrication of high-performance magnetic elastomers by using natural polymer as auxiliary dispersant of Fe3O4 nanoparticles. Composites Part A: Applied Science and Manufacturing, 2021, 140, 106158.	7.6	24
50	In situ reactive compatibilization and reinforcement of peroxide dynamically vulcanized polypropylene/ethyleneâ€propyleneâ€diene monomer tpv by zinc dimethacrylate. Polymer Composites, 2013, 34, 1357-1366.	4.6	22
51	Healable, recyclable, and adhesive rubber composites equipped with ester linkages, zinc ionic bonds, and hydrogen bonds. Composites Part A: Applied Science and Manufacturing, 2022, 155, 106816.	7.6	22
52	Shape memory effect of dynamically vulcanized ethylene-propylene-diene rubber/polypropylene blends realized by in-situ compatibilization of sodium methacrylate. Composites Part B: Engineering, 2019, 179, 107532.	12.0	20
53	Self-healing epoxidized natural rubber with ionic/coordination crosslinks. Materials Chemistry and Physics, 2022, 285, 126063.	4.0	19
54	Stress-Strain Behaviors and Crosslinked Networks Studies of Natural Rubber-Zinc Dimethacrylate Composites. Journal of Macromolecular Science - Physics, 2012, 51, 1384-1400.	1.0	18

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55	A study on the crosslink network evolution of magnesium dimethacrylate/natural rubber composite. Journal of Applied Polymer Science, 2012, 125, 2449-2459.	2.6	18
56	Thermal aging on mechanical properties and crosslinked network of natural rubber/zinc Dimethacrylate composites. Journal of Applied Polymer Science, 2012, 124, 2240-2249.	2.6	17
57	Endeavour to balance mechanical properties and self-healing of nature rubber by increasing covalent crosslinks via a controlled vulcanization. European Polymer Journal, 2021, 161, 110823.	5.4	17
58	<i>In situ</i> reactive compatibilized polypropylene/nitrile butadiene rubber blends by zinc dimethacrylate: Preparation, structure, and properties. Polymer Engineering and Science, 2014, 54, 2321-2331.	3.1	16
59	Preparation and characterization of individual chitin nanofibers with high stability from chitin gels by low-intensity ultrasonication for antibacterial finishing. Cellulose, 2018, 25, 999-1010.	4.9	16
60	A super long-acting and anti-photolysis pesticide release platform through self-assembled natural polymer-based polyelectrolyte. Reactive and Functional Polymers, 2020, 146, 104429.	4.1	16
61	Nanocellulose-A Sustainable and Efficient Nanofiller for Rubber Nanocomposites: From Reinforcement to Smart Soft Materials. Polymer Reviews, 2022, 62, 549-584.	10.9	16
62	Curcumin-loaded HKUST-1@ carboxymethyl starch-based composites with moisture-responsive release properties and synergistic antibacterial effect for perishable fruits. International Journal of Biological Macromolecules, 2022, 214, 181-191.	7.5	16
63	A dual stimuli-responsive and safer controlled release platform of pesticide through constructing UiO-66-based alginate hydrogel. Polymer Testing, 2021, 97, 107152.	4.8	15
64	A study on the crosslink network evolution of nitrile butadiene rubber reinforced by in situ zinc dimethacrylate. Polymer Composites, 2011, 32, 2084-2092.	4.6	14
65	Universal, controllable, large-scale and facile fabrication of nano-MOFs tightly-bonded on flexible substrate. Chemical Engineering Journal, 2020, 395, 125181.	12.7	14
66	Antioxidant effects on curing/processing and thermo-oxidative aging of filled nitrile rubber. Materials Chemistry and Physics, 2020, 253, 123403.	4.0	12
67	Strengthened, conductivity-tunable, and low solvent-sensitive flexible conductive rubber films with a Zn2+-crosslinked one-body segregated network. Composites Science and Technology, 2021, 203, 108606.	7.8	12
68	Study of Viscoelastic Properties of EPDM Filled with Zinc Dimethacrylate Prepared In Situ by Using a Rubber Process Analyzer. Journal of Macromolecular Science - Physics, 2012, 51, 1921-1933.	1.0	10
69	Viscoelasticity behaviors of lightly cured natural rubber/zinc dimethacrylate composites. Polymer Composites, 2012, 33, 967-975.	4.6	10
70	Dynamic viscoelasticity behaviors of magnesium dimethacrylate/natural rubber composites with different cure extent. Polymer Composites, 2012, 33, 1244-1253.	4.6	10
71	Novel fluorosilicone thermoplastic vulcanizates prepared via coreâ€shell dynamic vulcanization: Effect of fluororubber/silicone rubber ratio on morphology, crystallization behavior, and mechanical properties. Polymers for Advanced Technologies, 2018, 29, 1456-1468.	3.2	10
72	Conductivity controllable rubber films: response to humidity based on a bio-based continuous segregated cell network. Journal of Materials Chemistry A, 2021, 9, 8749-8760.	10.3	10

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73	Study of the Crosslinking Evolution of Styrene-Butadiene Rubber/Zinc Dimethacrylate Based on Dissolution/Swelling Experiments. Journal of Macromolecular Science - Physics, 2013, 52, 319-333.	1.0	9
74	Novel Composite Microparticles of Alginate Coated with Chitosan for Controlled Release and Protection of Ascorbic Acid. Advances in Polymer Technology, 2017, 36, 58-67.	1.7	9
75	Frame-structured and self-healing ENR-based nanocomposites for strain sensors. European Polymer Journal, 2021, 154, 110569.	5.4	9
76	A study on stress-softening of nitrile butadiene rubber reinforced by in situ zinc dimethacrylate. Journal of Reinforced Plastics and Composites, 2012, 31, 705-716.	3.1	8
77	Enhanced, hydrophobic, initial-shape programmable shape-memory composites with a bio-based nano-framework via gradient metal-ligand cross-linking. Composites Science and Technology, 2022, 220, 109255.	7.8	8
78	Glass fibers reinforced poly(ethylene 2,6â€naphthalate)/ethylene propylene diene monomer composites: Structure, mechanical, and thermal properties. Polymer Composites, 2014, 35, 939-947.	4.6	7
79	Polyvinylidene Fluoride/Acrylonitrile Butadiene Rubber Blends Prepared Via Dynamic Vulcanization. Journal of Macromolecular Science - Physics, 2015, 54, 58-70.	1.0	7
80	Silicaâ€reinforced ethylene propylene diene monomer/polypropylene thermoplastic vulcanizates with interfacial compatibilized by methylacrylate. Polymer Composites, 2021, 42, 701-713.	4.6	7
81	Dynamic rheology studies of carboxylated butadiene-styrene rubber/cellulose nanocrystals nanocomposites: Vulcanization process and network structures. Polymer Composites, 2015, 36, 623-629.	4.6	6
82	In situ reactive compatibilization of natural rubber/acrylic-bentonite composites via peroxide-induced vulcanization. Materials Chemistry and Physics, 2016, 170, 193-200.	4.0	6
83	Structure and Performance of Carboxylic Styrene Butadiene Rubber/Citric Acid Composite Films. Industrial & Engineering Chemistry Research, 2020, 59, 13613-13622.	3.7	5
84	Morphology and properties of poly(vinylidene fluoride)/silicone rubber blends. Journal of Applied Polymer Science, 2014, 131, .	2.6	3