

Shimei Xu

List of Publications by Year in descending order

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82
papers

2,261
citations

201674

27
h-index

265206

42
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all docs

83
docs citations

83
times ranked

2468
citing authors

#	ARTICLE	IF	CITATIONS
1	Photothermal Nanocomposite Hydrogel Actuator with Electric-Field-Induced Gradient and Oriented Structure. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 7688-7692.	8.0	137
2	Adsorption behaviors of acid and basic dyes on crosslinked amphoteric starch. <i>Chemical Engineering Journal</i> , 2006, 117, 161-167.	12.7	101
3	From trash to treasure: Chemical recycling and upcycling of commodity plastic waste to fuels, high-valued chemicals and advanced materials. <i>Journal of Energy Chemistry</i> , 2022, 69, 369-388.	12.9	91
4	Rapid Recovery Hydrogel Actuators in Air with Bionic Large-Ranged Gradient Structure. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 40125-40131.	8.0	89
5	Flame-Retardant Flexible Polyurethane Foams with Highly Efficient Melamine Salt. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 7112-7119.	3.7	75
6	A fast and mild closed-loop recycling of anhydride-cured epoxy through microwave-assisted catalytic degradation by trifunctional amine and subsequent reuse without separation. <i>Green Chemistry</i> , 2019, 21, 2487-2493.	9.0	75
7	Cellulose acetate-based SiO ₂ /TiO ₂ hybrid microsphere composite aerogel films for water-in-oil emulsion separation. <i>Applied Surface Science</i> , 2018, 435, 609-616.	6.1	73
8	Synthesis and characterization of a porous and hydrophobic cellulose-based composite for efficient and fast oil-water separation. <i>Carbohydrate Polymers</i> , 2016, 140, 188-194.	10.2	66
9	Ultrahigh-Temperature Insulating and Fire-Resistant Aerogels from Cationic Amylopectin and Clay via a Facile Route. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 11582-11592.	6.7	62
10	A Fast, Reversible, and Robust Gradient Nanocomposite Hydrogel Actuator with Water-Promoted Thermal Response. <i>Macromolecular Rapid Communications</i> , 2018, 39, e1700863.	3.9	60
11	Synthesis of SiO ₂ -polyacrylic acid hybrid hydrogel with high mechanical properties and salt tolerance using sodium silicate precursor through sol-gel process. <i>Materials Letters</i> , 2009, 63, 527-529.	2.6	59
12	Dual Cross-Linked Ion-Based Temperature-Responsive Conductive Hydrogels with Multiple Sensors and Steady Electrocardiogram Monitoring. <i>Chemistry of Materials</i> , 2020, 32, 7670-7678.	6.7	54
13	Temperature-Responsive Intumescent Chemistry toward Fire Resistance and Super Thermal Insulation under Extremely Harsh Conditions. <i>Chemistry of Materials</i> , 2021, 33, 6018-6028.	6.7	51
14	Recycling waste epoxy resin as hydrophobic coating of melamine foam for high-efficiency oil absorption. <i>Applied Surface Science</i> , 2020, 529, 147151.	6.1	44
15	From waste epoxy resins to efficient oil/water separation materials via a microwave assisted pore-forming strategy. <i>Materials Horizons</i> , 2019, 6, 1733-1739.	12.2	43
16	A transparent Laponite polymer nanocomposite hydrogel synthesis via in-situ copolymerization of two ionic monomers. <i>Applied Clay Science</i> , 2013, 72, 196-200.	5.2	39
17	Biomimetic Color-Changing Hierarchical and Gradient Hydrogel Actuators Based on Salt-Induced Microphase Separation. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 48428-48436.	8.0	39
18	Porous gel materials from waste thermosetting unsaturated polyester for high-efficiency wastewater treatment. <i>Chemical Engineering Journal</i> , 2019, 361, 21-30.	12.7	39

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19	Tough dual nanocomposite hydrogels with inorganic hybrid crosslinking. <i>Soft Matter</i> , 2016, 12, 1649-1654.	2.7	36
20	Energy-Efficient Conversion of Amine-Cured Epoxy Resins into Functional Chemicals Based on Swelling-Induced Nanopores. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 2226-2235.	6.7	35
21	The swelling behaviors and network parameters of cationic starch- <i>acrylic acid</i> /poly(dimethyldiallylammonium chloride) semi-interpenetrating polymer networks hydrogels. <i>Journal of Applied Polymer Science</i> , 2008, 110, 1828-1836.	2.6	34
22	pH/temperature double responsive behaviors and mechanical strength of laponite-crosslinked poly(DEA-co-DMAEMA) nanocomposite hydrogels. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2015, 53, 876-884.	2.1	34
23	Electric field-induced gradient strength in nanocomposite hydrogel through gradient crosslinking of clay. <i>Journal of Materials Chemistry B</i> , 2015, 3, 4426-4430.	5.8	34
24	Preparation of amphoteric nanocomposite hydrogels based on exfoliation of montmorillonite via in-situ intercalative polymerization of hydrophilic cationic and anionic monomers. <i>Applied Clay Science</i> , 2014, 97-98, 132-137.	5.2	33
25	Effect of the anionic-group/cationic-group ratio on the swelling behavior and controlled release of agrochemicals of the amphoteric, superabsorbent polymer poly(acrylic acid-co- <i>acrylic acid</i>). <i>Journal of Applied Polymer Science</i> , 2010, 116, 2049-2056.	2.6	33
26	Synergistic catalysis of binary alkalis for the recycling of unsaturated polyester under mild conditions. <i>Green Chemistry</i> , 2019, 21, 3006-3012.	9.0	31
27	Preparation and characteristic of electric stimuli responsive hydrogel composed of polyvinyl alcohol/poly (sodium maleate-co-sodium acrylate). <i>Journal of Applied Polymer Science</i> , 2008, 107, 391-395.	2.6	30
28	Chemical recovery of thermosetting unsaturated polyester resins. <i>Green Chemistry</i> , 2022, 24, 701-712.	9.0	29
29	Multiple functional materials from crushing waste thermosetting resins. <i>Materials Horizons</i> , 2021, 8, 234-243.	12.2	28
30	A dimensional stable hydrogel-born foam with enhanced mechanical and thermal insulation and fire-retarding properties via fast microwave foaming. <i>Chemical Engineering Journal</i> , 2020, 399, 125781.	12.7	27
31	A gradient Laponite-crosslinked nanocomposite hydrogel with anisotropic stress and thermo-response. <i>Applied Clay Science</i> , 2017, 148, 77-82.	5.2	25
32	Autofluorescence of hydrogels without a fluorophore. <i>Soft Matter</i> , 2019, 15, 3588-3594.	2.7	25
33	One-pot preparation of ultrastrong double network hydrogels. <i>Journal of Polymer Research</i> , 2012, 19, 1.	2.4	24
34	Preparation and swelling behavior of amphoteric superabsorbent composite with semi-IPN composed of poly(acrylic acid)/Ca-bentonite/poly(dimethyldiallylammonium chloride). <i>Polymers for Advanced Technologies</i> , 2007, 18, 194-199.	3.2	23
35	Synthesis and properties of a novel double network nanocomposite hydrogel. <i>Polymers for Advanced Technologies</i> , 2009, 20, 645-649.	3.2	23
36	Ag ₂ O/sodium alginate supramolecular hydrogel as a film photocatalyst for removal of organic dyes in wastewater. <i>RSC Advances</i> , 2017, 7, 15077-15083.	3.6	22

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37	Salt and pH responsive property of a starch-based amphoteric superabsorbent hydrogel with quaternary ammonium and carboxyl groups (II). <i>Journal of Applied Polymer Science</i> , 2006, 101, 1995-1999.	2.6	21
38	Cosolvent-promoted selective non-aqueous hydrolysis of PET wastes and facile product separation. <i>Green Chemistry</i> , 2022, 24, 3284-3292.	9.0	21
39	Tuning morphology and mechanical property of polyacrylamide/Laponite/titania dual nanocomposite hydrogels by titania. <i>Polymer Composites</i> , 2019, 40, E466.	4.6	20
40	A facile approach to prepare strong poly(acrylic acid)/LAPONITE® ionic nanocomposite hydrogels at high clay concentrations. <i>RSC Advances</i> , 2015, 5, 60152-60160.	3.6	19
41	An amphoteric semi-IPN nanocomposite hydrogels based on intercalation of cationic polyacrylamide into bentonite. <i>Materials Letters</i> , 2008, 62, 3999-4002.	2.6	18
42	Affinity-tuned peroxidase-like activity of hydrogel-supported Fe_3O_4 nanozyme through alteration of crosslinking concentration. <i>Journal of Applied Polymer Science</i> , 2016, 133, .	2.6	18
43	Direct determination of creatinine based on poly(ethyleneimine)/phosphotungstic acid multilayer modified electrode. <i>Talanta</i> , 2016, 151, 114-118.	5.5	18
44	Strengthening mechanism of poly(acrylamide)/graphene oxide/laponite dual nanocomposite hydrogels. <i>Journal of Applied Polymer Science</i> , 2017, 134, .	2.6	18
45	Fast microwave-assisted hydrolysis of unsaturated polyester resin into column packing for rapid purifying of dye wastewater. <i>Journal of Hazardous Materials</i> , 2020, 384, 121465.	12.4	18
46	Controlled loading and release of methylene blue from LbL polyurethane/poly(acrylic acid) film. <i>Polymers for Advanced Technologies</i> , 2012, 23, 1283-1286.	3.2	17
47	Synthesis of amphoteric nanocomposite hydrogels with ultrahigh tensibility. <i>Polymer Composites</i> , 2015, 36, 538-544.	4.6	17
48	Preparation and mechanical properties of a transparent ionic nanocomposite hydrogel. <i>Journal of Polymer Research</i> , 2014, 21, 1.	2.4	16
49	Stretchable dual nanocomposite hydrogels strengthened by physical interaction between inorganic hybrid crosslinker and polymers. <i>Applied Clay Science</i> , 2017, 150, 71-80.	5.2	16
50	Super tough bentonite/SiO ₂ -based dual nanocomposite hydrogels using silane as both an intercalator and a crosslinker. <i>Applied Clay Science</i> , 2018, 156, 53-60.	5.2	16
51	Recycling waste thermosetting unsaturated polyester resins into oligomers for preparing amphiphilic aerogels. <i>Waste Management</i> , 2021, 126, 89-96.	7.4	16
52	Mechanically strengthened double network composite hydrogels with high water content: a preliminary study. <i>Journal of Polymer Research</i> , 2011, 18, 1131-1136.	2.4	15
53	Layer-by-layer assembly of poly(allylamine hydrochloride)/polyurethane and its loading and release behavior for methylene orange. <i>Journal of Applied Polymer Science</i> , 2013, 129, 2070-2075.	2.6	15
54	Unusual thermo-responsive behaviors of poly(NIPAM-co-AM)/PEG/PTA composite hydrogels. <i>Materials Letters</i> , 2015, 143, 24-26.	2.6	15

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55	A nonswellable gradient hydrogel with tunable mechanical properties. <i>Journal of Materials Chemistry B</i> , 2020, 8, 2702-2708.	5.8	15
56	Multicycling of Epoxy Thermoset Through a Two-Step Strategy of Alcoholysis and Hydrolysis using a Self-Separating Catalysis System. <i>ChemSusChem</i> , 2022, 15, .	6.8	15
57	High-Efficiency Hydrolysis of Thermosetting Polyester Resins into Porous Functional Materials Using Low-Boiling Aqueous Solvents. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 16010-16019.	6.7	14
58	Adsorption Behavior of Acid Yellow G by Highly-Crosslinked Amphoteric Starch. <i>Journal of Polymer Research</i> , 2006, 13, 91-95.	2.4	13
59	Organo-montmorillonite supported titania nanocomposite synthesized by using poly(methyl Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 382 Td 22, 3189-3198.	4.9	13
60	Surfactant-assisted synthesis of a transparent ionic nanocomposite hydrogel. <i>Applied Clay Science</i> , 2014, 101, 335-338.	5.2	11
61	Preparation and characterization of covalently bonded <sc>PVA</sc>/<sc>Laponite</sc>/<sc>HAPI</sc> nanocomposite multilayer freestanding films by layer-by-layer assembly. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2015, 53, 545-551.	2.1	11
62	Synthesis and mechanical strength of a novel double network nanocomposite hydrogel with core-shell structure. <i>Polymers for Advanced Technologies</i> , 2012, 23, 736-741.	3.2	10
63	Controlled loading and release of methylene blue for hydrogen-bonded LbL poly(vinyl Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 4 Tf 50 382 Td	2.4	10
64	Fast swelling behaviors of thermosensitive poly(N-isopropylacrylamide-co-methacryloxyethyltrimethyl ammonium) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382 Td Science, 2018, 135, 46375.	2.6	10
65	Strengthening Network of Polyacrylic Acid/Silica Nanocomposite Hydrogels. <i>Polymer Composites</i> , 2018, 39, 3969-3976.	4.6	10
66	Recovery and Reutilization of Epoxy Thermoset via Acidic Ion Exchange Resin-Induced Controllable Oxidative Degradation and Subsequent Microspheroidization. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 5582-5589.	6.7	10
67	Ultra-strong mechanical property and force-driven malleability of water-poor hydrogels. <i>Journal of Colloid and Interface Science</i> , 2019, 542, 281-288.	9.4	9
68	A tough and fluorescent dual nanocomposite hydrogel based on SiO ₂ @TiO ₂ core-shell nanoparticles. <i>Applied Surface Science</i> , 2019, 467-468, 588-595.	6.1	9
69	Electrochemical sensor for detecting both oxidizing and reducing compounds based on poly(ethyleneimine)/phosphotungstic acid multilayer film modified electrode. <i>Electrochimica Acta</i> , 2015, 174, 706-711.	5.2	8
70	A robust and coarse surface mesh modified by interpenetrating polymer network hydrogel for oil-water separation. <i>Journal of Applied Polymer Science</i> , 2015, 132, .	2.6	8
71	Adsorption behaviors of ammonium nitrogen by an amphoteric hydrogel. <i>Desalination and Water Treatment</i> , 2016, 57, 5753-5759.	1.0	7
72	PEG-Induced Controllable Thin Thickness Gradient and Water Retention: A Simple Way to Programme Deformation of Hydrogel Actuators. <i>Macromolecular Rapid Communications</i> , 2021, 42, e2000749.	3.9	7

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73	Physical Cross-Linkage Constructed Supramolecular Conductive Hydrogel as Sustainable and Remolded Epidermal Electronics. <i>ACS Applied Polymer Materials</i> , 2022, 4, 2585-2594.	4.4	6
74	Layer-by-layer assembled hydrogel nanocomposite film with a high loading capacity. <i>Journal of Applied Polymer Science</i> , 2014, 131, .	2.6	5
75	Saline-enabled self-healing of polyelectrolyte multilayer films. <i>RSC Advances</i> , 2015, 5, 8877-8881.	3.6	5
76	Dispersion and rheological behaviors of laponite in 2-acrylamido-2-methylpropanesulfonic acid solution. <i>Applied Clay Science</i> , 2017, 137, 94-100.	5.2	5
77	Multidimensional gradient hydrogel and its application in sustained release. <i>Colloid and Polymer Science</i> , 2020, 298, 1187-1195.	2.1	4
78	Fabrication of polyelectrolyte/amine-modified silica composite thin film by coupling of layer-by-layer assembly and sol-gel techniques. <i>Journal of Polymer Research</i> , 2014, 21, 1.	2.4	2
79	Fabrication of Stiffness Gradient Nanocomposite Hydrogels for Mimicking Cell Microenvironment. <i>Macromolecular Research</i> , 2021, 29, 453-461.	2.4	2
80	Mechanically tunable ion-crosslinked alginate-based gradient hydrogels by electrolysis-electrophoresis method. <i>Carbohydrate Polymers</i> , 2022, 289, 119473.	10.2	2
81	Preparation and swelling behavior of pH-sensitive and saltresistant amphoteric semi-IPNs hydrogels based on starch phosphate and poly[2-[(methacryloyloxy) ethyl] trimethylammonium] chloride. <i>E-Polymers</i> , 2010, 10, .	3.0	1
82	Enhanced Salt Tolerance of Polyurethane Based Multilayer Films. <i>Chinese Journal of Chemistry</i> , 2014, 32, 914-920.	4.9	1