Pingchuan Sun

List of Publications by Year
in descending order

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108 papers	3,843 citations	109321 35 h-index	144013 57 g-index
109 all docs	109 docs citations	109 times ranked	4738 citing authors

#	Article	IF	Citations
1	Highly efficient photothermal nanoagent achieved by harvesting energy via excited-state intramolecular motion within nanoparticles. Nature Communications, 2019, 10, 768.	12.8	296
2	Bioâ€Inspired Highâ€Performance and Recyclable Crossâ€Linked Polymers. Advanced Materials, 2013, 25, 4912-4917.	21.0	224
3	Cation-induced chirality in a bifunctional metal-organic framework for quantitative enantioselective recognition. Nature Communications, 2019, 10, 5117.	12.8	150
4	Robust Anisotropic Cellulose Hydrogels Fabricated via Strong Self-aggregation Forces for Cardiomyocytes Unidirectional Growth. Chemistry of Materials, 2018, 30, 5175-5183.	6.7	137
5	Synthesis and Characterization of Mesoporous Ceria with Hierarchical Nanoarchitecture Controlled by Amino Acids. Journal of Physical Chemistry B, 2006, 110, 25782-25790.	2.6	133
6	Artificial spider silk from ion-doped and twisted core-sheath hydrogel fibres. Nature Communications, 2019, 10, 5293.	12.8	123
7	Heterogeneity, Segmental and Hydrogen Bond Dynamics, and Aging of Supramolecular Self-Healing Rubber. Macromolecules, 2013, 46, 1841-1850.	4.8	89
8	Highly Bidirectional Bendable Actuator Engineered by LCSTâ€“UCST Bilayer Hydrogel with Enhanced Interface. ACS Applied Materials & Interfaces, 2020, 12, 55290-55298.	8.0	89
9	Mobility, Miscibility, and Microdomain Structure in Nanostructured Thermoset Blends of Epoxy Resin and Amphiphilic Poly(ethylene oxide)-block-poly(propylene oxide)-block-poly(ethylene oxide) Triblock Copolymers Characterized by Solid-State NMR. Macromolecules, 2005, 38, 5654-5667.	4.8	77
10	Efficient Synthesis of Molecularly Imprinted Polymers with Enzyme Inhibition Potency by the Controlled Surface Imprinting Approach. ACS Macro Letters, 2013, 2, 566-570.	4.8	69
11	Using Zn²⁺ Ionomer To Catalyze Transesterification Reaction in Epoxy Vitrimer. Industrial & Engineering Chemistry Research, 2019, 58, 5698-5706.	3.7	67
12	Various Types of Hydrogen Bonds, Their Temperature Dependence and Waterâ^'Polymer Interaction in Hydrated Poly(Acrylic Acid) as Revealed by ¹H Solid-State NMR Spectroscopy. Macromolecules, 2007, 40, 5776-5786.	4.8	66
13	Unusual Rheological Behavior of Liquid Polybutadiene Rubber/Clay Nanocomposite Gels:Â The Role of Polymerâ^'Clay Interaction, Clay Exfoliation, and Clay Orientation and Disorientation. Macromolecules, 2006, 39, 6653-6660.	4.8	64
14	Using Dynamic Bonds to Enhance the Mechanical Performance: From Microscopic Molecular Interactions to Macroscopic Properties. Macromolecules, 2019, 52, 5014-5025.	4.8	64
15	Silk Fibroin/Montmorillonite Nanocomposites: Effect of pH on the Conformational Transition and Clay Dispersion. Biomacromolecules, 2010, 11, 1796-1801.	5.4	62
16	Viscoelasticity and Structures in Chemically and Physically Dual-Cross-Linked Hydrogels: Insights from Rheology and Proton Multiple-Quantum NMR Spectroscopy. Macromolecules, 2017, 50, 9340-9352.	4.8	59
17	Reversible Cross-Linking, Microdomain Structure, and Heterogeneous Dynamics in Thermally Reversible Cross-Linked Polyurethane as Revealed by Solid-State NMR. Journal of Physical Chemistry B, 2014, 118, 1126-1137.	2.6	58
18	Low temperature oxidative desulfurization with hierarchically mesoporous titaniumsilicate Ti-SBA-2 single crystals. Chemical Communications, 2015, 51, 11500-11503.	4.1	58

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19	Hierarchically helical mesostructured silica nanofibers templated by achiral cationic surfactant. Journal of Materials Chemistry, 2006, 16, 4117.	6.7	57
20	Customizable Multidimensional Self-Wrinkling Structure Constructed via Modulus Gradient in Chitosan Hydrogels. Chemistry of Materials, 2019, 31, 10032-10039.	6.7	55
21	Bioinspired, nucleobase-driven, highly resilient, and fast-responsive antifreeze ionic conductive hydrogels for durable pressure and strain sensors. Journal of Materials Chemistry A, 2021, 9, 20703-20713.	10.3	55
22	A Single Molecular Dielsâ€“Alder Crosslinker for Achieving Recyclable Crossâ€Linked Polymers. Macromolecular Rapid Communications, 2015, 36, 1687-1692.	3.9	52
23	High-performance ionic conductive poly(vinyl alcohol) hydrogels for flexible strain sensors based on a universal soaking strategy. Materials Chemistry Frontiers, 2021, 5, 315-323.	5.9	51
24	Confinement-Induced Deviation of Chain Mobility and Glass Transition Temperature for Polystyrene/Au Nanoparticles. Macromolecules, 2013, 46, 2292-2297.	4.8	50
25	Exfoliation of Organo-Clay in Telechelic Liquid Polybutadiene Rubber. Macromolecules, 2005, 38, 4030-4033.	4.8	49
26	High-performance recyclable cross-linked polyurethane with orthogonal dynamic bonds: The molecular design, microstructures, and macroscopic properties. Polymer, 2018, 148, 127-137.	3.8	48
27	Optimized Enhancement Effect of Sulfur in Feâ€“Nâ€“S Codoped Carbon Nanosheets for Efficient Oxygen Reduction Reaction. ACS Applied Materials & Interfaces, 2020, 12, 23995-24006.	8.0	48
28	Simulated annealing study of morphological transitions of diblock copolymers in solution. Journal of Chemical Physics, 2005, 122, 204905.	3.0	47
29	A New Strategy To Synthesize Temperature- and pH-Sensitive Multicompartment Block Copolymer Nanoparticles by Two Macro-RAFT Agents Comediated Dispersion Polymerization. Macromolecules, 2014, 47, 7442-7452.	4.8	47
30	Conformations and Intermolecular Interactions in Cellulose/Silk Fibroin Blend Films: A Solid-State NMR Perspective. Journal of Physical Chemistry B, 2017, 121, 6108-6116.	2.6	47
31	Macro-RAFT agent mediated dispersion copolymerization: a small amount of solvophilic co-monomer leads to a great change. Polymer Chemistry, 2015, 6, 4911-4920.	3.9	45
32	Poly(N-isopropylacrylamide)/polydopamine/clay nanocomposite hydrogels with stretchability, conductivity, and dual light- and thermo- responsive bending and adhesive properties. Colloids and Surfaces B: Biointerfaces, 2019, 177, 149-159.	5.0	45
33	Phase cycling schemes for finite-pulse-RFDR MAS solid state NMR experiments. Journal of Magnetic Resonance, 2015, 252, 55-66.	2.1	43
34	Solid-state NMR characterization of unsaturated polyester thermoset blends containing PEOâ€“PPOâ€“PEO block copolymers. Polymer, 2008, 49, 2886-2897.	3.8	41
35	Dual Crossâ€linked Vinyl Vitrimer with Efficient Selfâ€Catalysis Achieving Tripleâ€Shapeâ€Memory Properties. Macromolecular Rapid Communications, 2019, 40, e1900313.	3.9	38
36	High-performance polyurethane nanocomposites based on UPy-modified cellulose nanocrystals. Carbohydrate Polymers, 2019, 219, 191-200.	10.2	37

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37	Bioinspired Polyurethane Using Multifunctional Block Modules with Synergistic Dynamic Bonds. ACS Macro Letters, 2021, 10, 510-517.	4.8	36
38	Amphiphilic Triblock Copolymer Bioconjugates with Biotin Groups at the Junction Points: Synthesis, Self-Assembly, and Bioactivity. Macromolecules, 2011, 44, 2016-2024.	4.8	34
39	Unique Interphase and Cross-Linked Network Controlled by Different Miscible Blocks in Nanostructured Epoxy/Block Copolymer Blends Characterized by Solid-State NMR. Journal of Physical Chemistry C, 2014, 118, 13285-13299.	3.1	34
40	Critical Effect of Segmental Dynamics in Polybutadiene/Clay Nanocomposites Characterized by Solid State ¹H NMR Spectroscopy. Journal of Physical Chemistry C, 2014, 118, 5606-5614.	3.1	34
41	Mg²⁺-assisted low temperature reduction of alloyed AuPd/C: an efficient catalyst for hydrogen generation from formic acid at room temperature. Chemical Communications, 2015, 51, 10887-10890.	4.1	34
42	Bioinspired tough, conductive hydrogels with thermally reversible adhesiveness based on nanoclay confined NIPAM polymerization and a dopamine modified polypeptide. Materials Chemistry Frontiers, 2020, 4, 189-196.	5.9	33
43	Strain-induced structural and dynamic changes in segmented polyurethane elastomers. Polymer, 2019, 163, 154-161.	3.8	31
44	Supramolecular Polydimethylsiloxane Elastomer with Enhanced Mechanical Properties and Self-Healing Ability Engineered by Synergetic Dynamic Bonds. ACS Applied Polymer Materials, 2021, 3, 3373-3382.	4.4	31
45	RAFTâ€mediated emulsion polymerization of styrene using brush copolymer as surfactant macroâ€RAFT agent: Effect of the brush copolymer sequence and chemical composition. Journal of Polymer Science Part A, 2013, 51, 1147-1161.	2.3	30
46	Mechanically strong and tough hydrogels with pH-triggered self-healing and shape memory properties based on a dual physically crosslinked network. Polymer Chemistry, 2020, 11, 1906-1918.	3.9	30
47	Bio-inspired self-healing polyurethanes with multiple stimulus responsiveness. Polymer Chemistry, 2019, 10, 3362-3370.	3.9	29
48	Hierarchical Dynamics in a Transient Polymer Network Cross-Linked by Orthogonal Dynamic Bonds. Macromolecules, 2020, 53, 5937-5949.	4.8	29
49	Probing Chain Interpenetration in Polymer Glasses by1H Dipolar Filter Solid-State NMR under Fast Magic Angle Spinning. Macromolecules, 2007, 40, 4736-4739.	4.8	28
50	Facile one-step room-temperature synthesis of Mn-based spinel nanoparticles for electro-catalytic oxygen reduction. RSC Advances, 2014, 4, 4727-4731.	3.6	27
51	Polyelectrolyteâ€“Surfactant Mesomorphous Complex Templating: A Versatile Approach for Hierarchically Porous Materials. Langmuir, 2020, 36, 1851-1863.	3.5	26
52	Multiple-responsive shape memory polyacrylonitrile/graphene nanocomposites with rapid self-healing and recycling properties. RSC Advances, 2018, 8, 1225-1231.	3.6	25
53	Hierarchically Mesoporous Titanosilicate Single-Crystalline Nanospheres for Room Temperature Oxidativeâ€“Adsorptive Desulfurization. ACS Applied Nano Materials, 2019, 2, 6602-6610.	5.0	25
54	Hierarchically mesoporous silica single-crystalline nanorods with three dimensional cubic Fm-3m mesostructure. Journal of Materials Chemistry A, 2013, 1, 14555.	10.3	24

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55	Ultrafine PdAu nanoparticles immobilized on amine functionalized carbon black toward fast dehydrogenation of formic acid at room temperature. Nanoscale Advances, 2019, 1, 4415-4421.	4.6	24
56	Rapid self-healing and recycling of multiple-responsive mechanically enhanced epoxy resin/graphene nanocomposites. RSC Advances, 2017, 7, 46336-46343.	3.6	23
57	RAFTâ€mediated batch emulsion polymerization of styrene using poly[Nâ€(4â€vinylbenzyl)â€N,Nâ€dibutylamine hydrochloride] trithiocarbonate as both surfactant and macroâ€RAFT agent. Journal of Polymer Science Part A, 2012, 50, 2484-2498.	2.3	22
58	Radiolaria-like Silica with Radial Spines Fabricated by a Dynamic Self-Organization. Journal of Physical Chemistry C, 2007, 111, 16544-16548.	3.1	21
59	Probing the Nanostructure, Interfacial Interaction, and Dynamics of Chitosan-Based Nanoparticles by Multiscale Solid-State NMR. ACS Applied Materials & Interfaces, 2014, 6, 21397-21407.	8.0	21
60	Fluorescent, electrically responsive and ultratough self-healing hydrogels via bioinspired all-in-one hierarchical micelles. Materials Horizons, 2021, 8, 3096-3104.	12.2	21
61	Auâ€“Pd alloy catalyst with high performance for hydrogen generation from formic acid-formate solution at nearly 0 Â°C. RSC Advances, 2014, 4, 44500-44503.	3.6	20
62	Reversible Interactions of Proteins with Mixed Shell Polymeric Micelles: Tuning the Surface Hydrophobic/Hydrophilic Balance toward Efficient Artificial Chaperones. Langmuir, 2016, 32, 2737-2749.	3.5	20
63	A general approach for hierarchically porous metal/N/C nanosphere electrocatalysts: nano-confined pyrolysis of in situ-formed amorphous metalâ€“ligand complexes. Journal of Materials Chemistry A, 2020, 8, 21026-21035.	10.3	20
64	Molecular origin of the shape memory properties of heat-shrink crosslinked polymers as revealed by solid-state NMR. Polymer, 2016, 107, 61-70.	3.8	19
65	Encapsulated FeP nanoparticles with in-situ formed P-doped graphene layers: Boosting activity in oxygen reduction reaction. Science China Materials, 2021, 64, 1159-1172.	6.3	19
66	Enhanced Exfoliation of Organoclay in Partially Endâ€Functionalized Nonâ€Polar Polymer. Macromolecular Materials and Engineering, 2009, 294, 190-195.	3.6	15
67	Dynamic polymer brushes on the surface of silica particles. RSC Advances, 2013, 3, 7023.	3.6	15
68	Binding mechanism of the tyrosine-kinase inhibitor nilotinib to human serum albumin determined by 1 H STD NMR, 19 F NMR, and molecular modeling. Journal of Pharmaceutical and Biomedical Analysis, 2016, 124, 1-9.	2.8	15
69	Hierarchically porous Fe/N/S/C nanospheres with high-content of Fe-Nx for enhanced ORR and Zn-air battery performance. Green Energy and Environment, 2023, 8, 1693-1702.	8.7	15
70	Interface cross-linked polymeric micelles with mixed coronal chains prepared by RAFT polymerization at the interface. Soft Matter, 2012, 8, 11809.	2.7	14
71	Comparative analysis of the interaction of capecitabine and gefitinib with human serum albumin using 19 F nuclear magnetic resonance-based approach. Journal of Pharmaceutical and Biomedical Analysis, 2016, 129, 15-20.	2.8	14
72	Steam-assisted strategy to fabricate Anatase-free hierarchical titanium Silicalite-1 Single-Crystal for oxidative desulfurization. Journal of Colloid and Interface Science, 2022, 617, 32-43.	9.4	14

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73	Tracking the interdiffusion of polymers at a molecular level by¹H dipolar filter solid-state NMR under fast magic angle spinning. Soft Matter, 2011, 7, 691-697.	2.7	13
74	The strong interaction between poly(vinyl chloride) and a new eco-friendly plasticizer: A combined experiment and calculation study. Polymer, 2014, 55, 2831-2840.	3.8	13
75	2H Solid-State NMR Analysis of the Dynamics and Organization of Water in Hydrated Chitosan. Polymers, 2016, 8, 149.	4.5	13
76	Platinum Nanoparticles Supported on Hierarchically Porous Aluminosilicate Nanospheres for Low-Temperature Catalytic Combustion of Volatile Organic Compounds. ACS Applied Nano Materials, 2020, 3, 8472-8482.	5.0	12
77	Antifogging and antibacterial properties of amphiphilic coatings based on zwitterionic copolymers. Science China Technological Sciences, 2021, 64, 817-826.	4.0	11
78	Evolution of interphase in styrene-butadiene block copolymers as revealed by 1H solid-state NMR: Effect of temperature and molecular architecture. Polymer, 2010, 51, 2069-2076.	3.8	10
79	Versatile multicompartment nanoparticles constructed with two thermo-responsive, pH-responsive and hydrolytic diblock copolymers. Polymer Chemistry, 2017, 8, 5593-5602.	3.9	10
80	Hierarchically porous silica supported ceria and platinum nanoparticles for catalytic combustion of toluene. Journal of Alloys and Compounds, 2021, 867, 159030.	5.5	10
81	NMR characterization of absorbed water in equilibrium swollen hydrogel P(AM-NaA). Journal of Applied Polymer Science, 1999, 72, 1203-1207.	2.6	9
82	Reactive triblock copolymer micelles induced by click reaction: A platform for RAFT polymerization. Soft Matter, 2011, 7, 11194.	2.7	9
83	Accessing Structure and Dynamics of Mobile Phase in Organic Solids by Real-Time T_{1C} Filter PISEMA NMR Spectroscopy. Journal of Physical Chemistry A, 2012, 116, 979-984.	2.5	9
84	Heterogeneous Dynamics and Microdomain Structure of High-Performance Chitosan Film as Revealed by Solid-State NMR. Journal of Physical Chemistry C, 2021, 125, 13572-13580.	3.1	8
85	Achieving long lifetime of room-temperature phosphorescence via constructing vitrimer networks. Materials Chemistry Frontiers, 2022, 6, 1068-1078.	5.9	8
86	Title is missing!. Journal of Porous Materials, 2003, 10, 145-150.	2.6	7
87	Simulated annealing study of gyroid formation in diblock copolymer solutions. Physical Review E, 2005, 72, 061408.	2.1	7
88	Effect of PEO molecular weight on the miscibility and dynamics in epoxy/PEO blends. European Physical Journal E, 2015, 38, 118.	1.6	7
89	Entropy effect of alkyl tails on phase behaviors of side-chain-jacketed polyacetylenes: Columnar phase and isotropic phase reentry. Polymer, 2016, 87, 260-267.	3.8	7
90	Efficient Identification of Different Types of Carbons in Organic Solids by 2D Solid-State NMR Spectroscopy. Journal of Physical Chemistry A, 2011, 115, 11665-11670.	2.5	6

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91	Hydrophilic interface-crosslinked polymer micelles: a platform for nanoreactors and nanocarriers. Polymer Chemistry, 2013, 4, 4499.	3.9	6
92	In-situ growth of cobalt manganate spinel nanodots on carbon black toward high-performance zinc-air battery: Dual functions of 3-aminopropyltriethoxysilane. Journal of Colloid and Interface Science, 2022, 608, 386-395.	9.4	6
93	PGSE NMR studies of water states of hydrogel P(Am-NaA). Journal of Applied Polymer Science, 2000, 77, 424-427.	2.6	5
94	Rubber/exfoliated-clay nanocomposite gel: Direct exfoliation of montmorillonite by telechelic liquid rubber. Science Bulletin, 2004, 49, 1664-1666.	1.7	5
95	Synthesis of nanoporous silica with interior composite cells with synthetic block copolypeptide as template. Science Bulletin, 2006, 51, 493-497.	1.7	5
96	Solid state NMR study of hydrogen bonding, miscibility, and dynamics in multiphase polymer systems. Frontiers of Chemistry in China: Selected Publications From Chinese Universities, 2011, 6, 173-189.	0.4	5
97	Effects of rare earth metal doping on Au/ReZrO₂ catalysts for efficient hydrogen generation from formic acid. New Journal of Chemistry, 2021, 45, 5704-5711.	2.8	5
98	Room temperature tunable multicolor phosphorescent polymers for humidity detection and information encryption. RSC Advances, 2022, 12, 8145-8153.	3.6	5
99	Synergy between Polyamine and Anionic Surfactant: A Bioinspired Approach for Ordered Mesoporous Silica. Langmuir, 2014, 30, 2329-2334.	3.5	4
100	Hierarchically Porous Mesostructured Polydopamine Nanospheres and Derived Carbon for Supercapacitors. Langmuir, 2022, 38, 8964-8974.	3.5	4
101	B 3Q MAS NMR Study on Glucoseâ€Responsive Micelles Selfâ€assembled from PEGâ€bâ€P(AAâ€coâ€AAPBA). Chinese Journal of Chemistry, 2014, 32, 97-102.	4.9	3
102	Hierarchically Porous Silica Prepared with Anionic Polyelectrolyteâ€“Nonionic Surfactant Mesomorphous Complex as Dynamic Template. ACS Omega, 2019, 4, 1443-1448.	3.5	3
103	Hydrogenation induced deviation of temperature and concentration dependences of polymer-solvent interactions in poly(vinyl chloride) and a new eco-friendly plasticizer. European Physical Journal Plus, 2015, 130, 1.	2.6	2
104	Probing the Dynamic Structural Evolution of End-Functionalized Polybutadiene/Organo-Clay Nanocomposite Gels before and after Yielding by Nonlinear Rheology and 1H Double-Quantum NMR. Polymers, 2022, 14, 1518.	4.5	2
105	Investigation on the artificial exchange signals induced by the RIDER effect in CODEX experiments. Solid State Nuclear Magnetic Resonance, 2012, 47-48, 28-34.	2.3	1
106	Efficient oxidative-adsorptive desulfurization over highly dispersed molybdenum oxide supported on hierarchically mesoporous silica. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 645, 128922.	4.7	1
107	Spectroscopic Analysis of Epoxy/Block Copolymer Blends. , 2016, , 1-35.		0
108	Spectroscopic Analysis of Epoxy/Block-Copolymer Blends. , 2017, , 919-953.		0