Zhibin Guan

List of Publications by Year
in descending order

61 papers	7,844 citations	87843 38 h-index	123376 61 g-index
66 all docs	66 docs citations	66 times ranked	7413 citing authors

#	Article	IF	Citations
1	Multiphase design of autonomic self-healing thermoplastic elastomers. Nature Chemistry, 2012, 4, 467-472.	6.6	1,021
2	Malleable and Self-Healing Covalent Polymer Networks through Tunable Dynamic Boronic Ester Bonds. Journal of the American Chemical Society, 2015, 137, 6492-6495.	6.6	768
3	Making Insoluble Polymer Networks Malleable via Olefin Metathesis. Journal of the American Chemical Society, 2012, 134, 8424-8427.	6.6	475
4	Self-Healing Multiphase Polymers via Dynamic Metalâ€“Ligand Interactions. Journal of the American Chemical Society, 2014, 136, 16128-16131.	6.6	467
5	Olefin Metathesis for Effective Polymer Healing via Dynamic Exchange of Strong Carbonâ€“Carbon Double Bonds. Journal of the American Chemical Society, 2012, 134, 14226-14231.	6.6	444
6	Silyl Ether as a Robust and Thermally Stable Dynamic Covalent Motif for Malleable Polymer Design. Journal of the American Chemical Society, 2017, 139, 14881-14884.	6.6	385
7	Control of hierarchical polymer mechanics with bioinspired metal-coordination dynamics. Nature Materials, 2015, 14, 1210-1216.	13.3	375
8	Enhancing Mechanical Performance of a Covalent Self-Healing Material by Sacrificial Noncovalent Bonds. Journal of the American Chemical Society, 2015, 137, 4846-4850.	6.6	367
9	Efficient and selective degradation of polyethylenes into liquid fuels and waxes under mild conditions. Science Advances, 2016, 2, e1501591.	4.7	268
10	Recyclable, Strong, and Highly Malleable Thermosets Based on Boroxine Networks. Journal of the American Chemical Society, 2018, 140, 6217-6220.	6.6	265
11	Direct Silyl Ether Metathesis for Vitrimers with Exceptional Thermal Stability. Journal of the American Chemical Society, 2019, 141, 16595-16599.	6.6	198
12	Ligand Electronic Effects on Late Transition Metal Polymerization Catalysts. Organometallics, 2005, 24, 1145-1155.	1.1	189
13	Control of Polymer Topology by Chain-Walking Catalysts. Chemistry - A European Journal, 2002, 8, 3086.	1.7	169
14	Multifunctional Dendronized Peptide Polymer Platform for Safe and Effective siRNA Delivery. Journal of the American Chemical Society, 2013, 135, 4962-4965.	6.6	136
15	Living Polymerization of Î±-Olefins at Elevated Temperatures Catalyzed by a Highly Active and Robust Cyclophane-Based Nickel Catalyst. Macromolecules, 2005, 38, 2544-2546.	2.2	130
16	Effect of Ligand Electronics on the Stability and Chain Transfer Rates of Substituted Pd(II) Î±-Diimine Catalysts. Macromolecules, 2010, 43, 4091-4097.	2.2	126
17	Modular Domain Structure:â€‰ A Biomimetic Strategy for Advanced Polymeric Materials. Journal of the American Chemical Society, 2004, 126, 2058-2065.	6.6	125
18	Nickel(II) and Palladium(II) Polymerization Catalysts Bearing a Fluorinated Cyclophane Ligand: Stabilization of the Reactive Intermediate. Organometallics, 2009, 28, 4452-4463.	1.1	125

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19	Tuning Dynamic Mechanical Response in Metallopolymer Networks through Simultaneous Control of Structural and Temporal Properties of the Networks. Macromolecules, 2016, 49, 6310-6321.	2.2	124
20	Synthesis of New Phosphine Imine Ligands and Their Effects on the Thermal Stability of Late-Transition-Metal Olefin Polymerization Catalysts. Organometallics, 2002, 21, 3580-3586.	1.1	120
21	Mechanically Robust and Selfâ€Healable Superlattice Nanocomposites by Selfâ€Assembly of Singleâ€Component â€œStickyâ€•Polymerâ€Grafted Nanoparticles. Advanced Materials, 2015, 27, 3934-3941.	11.1	111
22	Direct correlation of single-molecule properties with bulk mechanical performance for the biomimetic design of polymers. Nature Materials, 2014, 13, 1055-1062.	13.3	107
23	Control of Polymer Topology through Transition-Metal Catalysis:Â Synthesis of Hyperbranched Polymers by Cobalt-Mediated Free Radical Polymerization. Journal of the American Chemical Society, 2002, 124, 5616-5617.	6.6	95
24	Forced Unfolding of Single-Chain Polymeric Nanoparticles. Journal of the American Chemical Society, 2015, 137, 6880-6888.	6.6	89
25	Saccharide-Peptide Hybrid Copolymers as Biomaterials. Angewandte Chemie - International Edition, 2005, 44, 6529-6533.	7.2	87
26	Control of polymer topology through late-transition-metal catalysis. Journal of Polymer Science Part A, 2003, 41, 3680-3692.	2.5	84
27	Late-Transition-Metal Complexes with Bisazaferrocene Ligands for Ethylene Oligomerization. Organometallics, 2003, 22, 5033-5046.	1.1	75
28	Recent Progress of Catalytic Polymerization for Controlling Polymer Topology. Chemistry - an Asian Journal, 2010, 5, 1058-1070.	1.7	67
29	Catalytic acceptorless dehydrogenations: Ru-Macho catalyzed construction of amides and imines. Tetrahedron, 2014, 70, 4213-4218.	1.0	67
30	Structure-Based Design of Dendritic Peptide Bolaamphiphiles for siRNA Delivery. ACS Central Science, 2015, 1, 303-312.	5.3	57
31	Enhanced Glassy State Mechanical Properties of Polymer Nanocomposites via Supramolecular Interactions. Nano Letters, 2015, 15, 5465-5471.	4.5	54
32	Self-assembly of coreâ€“shell nanoparticles for self-healing materials. Polymer Chemistry, 2013, 4, 4885.	1.9	51
33	Supramolecular design in biopolymers and biomimetic polymers for advanced mechanical properties. Polymer International, 2007, 56, 467-473.	1.6	46
34	Redox Chemicalâ€Fueled Dissipative Selfâ€Assembly of Active Materials. ChemSystemsChem, 2020, 2, e1900030.	1.1	45
35	Large Continuous Mechanical Gradient Formation via Metalâ€“Ligand Interactions. Angewandte Chemie - International Edition, 2017, 56, 15575-15579.	7.2	43
36	Immunomodulation of the NLRP3 Inflammasome through Structure-Based Activator Design and Functional Regulation via Lysosomal Rupture. ACS Central Science, 2018, 4, 982-995.	5.3	42

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37	Nickel(II) and Palladium(II) Complexes with an Alkane-Bridged Macrocyclic Ligand:Â Synthesis, Characterization, and Polymerization Tests. Organometallics, 2005, 24, 4933-4939.	1.1	40
38	Maintaining functional islets through encapsulation in an injectable saccharideâ€“peptide hydrogel. Biomaterials, 2013, 34, 3984-3991.	5.7	39
39	Fluorocarbon Modified Low-Molecular-Weight Polyethylenimine for siRNA Delivery. Bioconjugate Chemistry, 2016, 27, 1784-1788.	1.8	39
40	A Threeâ€Armed Polymer with Tunable Selfâ€Assembly and Selfâ€Healing Properties Based on Benzeneâ€1,3,5â€tricarboxamide and Metalâ€“Ligand Interactions. Macromolecular Rapid Communications, 2019, 40, e1800909.	2.0	30
41	Electrically Fueled Active Supramolecular Materials. Journal of the American Chemical Society, 2022, 144, 7844-7851.	6.6	30
42	Cascade Chain-Walking Polymerization to Generate Large Dendritic Nanoparticles. Macromolecules, 2010, 43, 4829-4832.	2.2	28
43	Dendritic peptide bolaamphiphiles for siRNA delivery to primary adipocytes. Biomaterials, 2018, 178, 458-466.	5.7	26
44	Foldamers as Cross-Links for Tuning the Dynamic Mechanical Property of Methacrylate Copolymers. Macromolecules, 2010, 43, 6185-6192.	2.2	24
45	â€œClickedâ€•fluoropolymer elastomers as robust materials for potential microfluidic device applications. Journal of Materials Chemistry, 2012, 22, 1100-1106.	6.7	24
46	Amino Acid-Functionalized Dendritic Polyglycerol for Safe and Effective siRNA Delivery. Biomacromolecules, 2015, 16, 3869-3877.	2.6	19
47	Phosphine-Iminoquinoline Iron Complexes for Ethylene Polymerization and Copolymerization. Organometallics, 2017, 36, 3758-3764.	1.1	17
48	Multivalent Peptide-Functionalized Bioreducible Polymers for Cellular Delivery of Various RNAs. Biomacromolecules, 2020, 21, 1613-1624.	2.6	16
49	In situ ultra-small-angle X-ray scattering study under uniaxial stretching of colloidal crystals prepared by silica nanoparticles bearing hydrogen-bonding polymer grafts. IUCrJ, 2016, 3, 211-218.	1.0	16
50	Focused Library Approach to Discover Discrete Dipeptide Bolaamphiphiles for siRNA Delivery. Biomacromolecules, 2016, 17, 3138-3144.	2.6	15
51	Self-healing magnetic nanocomposites with robust mechanical properties and high magnetic actuation potential prepared from commodity monomers via graft-from approach. Polymer Chemistry, 2020, 11, 1292-1297.	1.9	12
52	Large Continuous Mechanical Gradient Formation via Metalâ€“Ligand Interactions. Angewandte Chemie, 2017, 129, 15781-15785.	1.6	11
53	Antisense oligonucleotide and thyroid hormone conjugates for obesity treatment. Scientific Reports, 2017, 7, 9307.	1.6	11
54	Multivalent dendritic polyglycerolamine with arginine and histidine end groups for efficient siRNA transfection. Beilstein Journal of Organic Chemistry, 2015, 11, 763-772.	1.3	9

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55	Biodegradable Dendronized Polymers for Efficient mRNA Delivery. ChemistrySelect, 2016, 1, 4413-4417.	0.7	8
56	Double-Linear Insertion Mode of Î±,Ï‰-Dienes Enabled by Thio-imino-quinoline Iron Catalyst. ACS Catalysis, 2020, 10, 15092-15103.	5.5	7
57	Direct observation of a cationic ruthenium complex for ethylene insertion polymerization. Chemical Science, 2013, 4, 2902.	3.7	6
58	Chemothermally Driven Outâ€ofâ€Equilibrium Materials for Macroscopic Motion. ChemSystemsChem, 2020, 2, e2000024.	1.1	6
59	Multifunctional Dendronized Polypeptides for Controlled Adjuvanticity. Biomacromolecules, 2021, , .	2.6	5
60	Bioinspired Supramolecular Design in Polymers for Advanced Mechanical Properties. , 0, , 235-258.		1
61	Bio-inspired Design of Modular Multi-domain Polymers for Advanced Biomaterials. Materials Research Society Symposia Proceedings, 2005, 873, 1.	0.1	0