

Peng-Fei Cao

List of Publications by Year in descending order

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Version: 2024-02-01

67
papers

2,775
citations

159585

30
h-index

189892

50
g-index

69
all docs

69
docs citations

69
times ranked

3212
citing authors

#	ARTICLE	IF	CITATIONS
1	Surpassing the stiffness-extensibility trade-off of elastomers via mastering the hydrogen-bonding clusters. <i>Matter</i> , 2022, 5, 237-252.	10.0	40
2	Unravelling the Mechanism of Viscoelasticity in Polymers with Phase-Separated Dynamic Bonds. <i>ACS Nano</i> , 2022, 16, 4746-4755.	14.6	23
3	Selective Plasticization of Poly (ethylene oxide) (PEO) Block in Nanostructured Polystyrene- <i>b</i> -PEO- <i>b</i> -Polystyrene Triblock Copolymer Electrolytes. <i>Journal of the Electrochemical Society</i> , 2022, 169, 050506.	2.9	1
4	Elastic vitrimers: Beyond thermoplastic and thermoset elastomers. <i>Matter</i> , 2022, 5, 1391-1422.	10.0	90
5	Self-Healable, Highly Stretchable, Ionic Conducting Polymers as Efficient Protecting Layers for Stable Lithium-Metal Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 26014-26023.	8.0	23
6	Are Porous Polymers Practical to Protect Li-Metal Anodes? -Current Strategies and Future Opportunities. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	17
7	Autonomous Self-Healing Elastomers with Unprecedented Adhesion Force. <i>Advanced Functional Materials</i> , 2021, 31, 2006298.	14.9	64
8	Turning Rubber into a Glass: Mechanical Reinforcement by Microphase Separation. <i>ACS Macro Letters</i> , 2021, 10, 197-202.	4.8	12
9	Core-Shell Gold Nanoparticle-Star Copolymer Composites with Gradient Transfer and Transport Properties: Toward Electro-Optical Sensors and Catalysis. <i>ACS Applied Nano Materials</i> , 2021, 4, 1394-1400.	5.0	6
10	Single-Ion Conducting Polymer Electrolytes for Solid-State Lithium-Metal Batteries: Design, Performance, and Challenges. <i>Advanced Energy Materials</i> , 2021, 11, 2003836.	19.5	206
11	Critical Role of the Interfacial Layer in Associating Polymers with Microphase Separation. <i>Macromolecules</i> , 2021, 54, 4246-4256.	4.8	22
12	Highly Stretchable, Ultratough, and Multifunctional Poly(vinyl chloride)-Based Plastics via a Green, Star-Shaped Macromolecular Additive. <i>Macromolecules</i> , 2021, 54, 3169-3180.	4.8	15
13	Highly Recyclable, Mechanically Isotropic and Healable 3D-Printed Elastomers via Polyurea Vitrimers. , 2021, 3, 1095-1103.		44
14	Glass-fiber-reinforced polymeric film as an efficient protecting layer for stable Li metal electrodes. <i>Cell Reports Physical Science</i> , 2021, 2, 100534.	5.6	15
15	Rational Polymer Design of Stretchable Poly(ionic liquid) Membranes for Dual Applications. <i>Macromolecules</i> , 2021, 54, 896-905.	4.8	19
16	Unraveling the Role of Neutral Units for Single-Ion Conducting Polymer Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 51525-51534.	8.0	18
17	An <i>in situ</i> generated polymer electrolyte via anionic ring-opening polymerization for lithium-sulfur batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 25927-25933.	10.3	11
18	Viscoelasticity in associating oligomers and polymers: experimental test of the bond lifetime renormalization model. <i>Soft Matter</i> , 2020, 16, 390-401.	2.7	40

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19	Facile Fabrication of Porous Si Microspheres from Low-Cost Precursors for High-Capacity Electrode. <i>Advanced Materials Interfaces</i> , 2020, 7, 1901726.	3.7	11
20	Ionic conductive polymers as artificial solid electrolyte interphase films in Li metal batteries – A review. <i>Materials Today</i> , 2020, 40, 140-159.	14.2	115
21	4D Printing via an Unconventional Fused Deposition Modeling Route to High-Performance Thermosets. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 50052-50060.	8.0	52
22	Recent Developments and Challenges in Hybrid Solid Electrolytes for Lithium-Ion Batteries. <i>Frontiers in Energy Research</i> , 2020, 8, .	2.3	52
23	Improved Single-Ion Conductivity of Polymer Electrolyte via Accelerated Segmental Dynamics. <i>ACS Applied Energy Materials</i> , 2020, 3, 12540-12548.	5.1	31
24	Adhesive Polymers as Efficient Binders for High-Capacity Silicon Electrodes. <i>ACS Applied Energy Materials</i> , 2020, 3, 3387-3396.	5.1	34
25	Ultra-efficient polymer binder for silicon anode in high-capacity lithium-ion batteries. <i>Nano Energy</i> , 2020, 73, 104804.	16.0	57
26	Elastic Single-Ion Conducting Polymer Electrolytes: Toward a Versatile Approach for Intrinsically Stretchable Functional Polymers. <i>Macromolecules</i> , 2020, 53, 3591-3601.	4.8	41
27	Tailored CO ₂ -philic Gas Separation Membranes via One-Pot Thiol-ene Chemistry. <i>Macromolecules</i> , 2019, 52, 5819-5828.	4.8	20
28	From natural material to high-performance silicon based anode: Towards cost-efficient silicon based electrodes in high-performance Li-ion batteries. <i>Electrochimica Acta</i> , 2019, 327, 135058.	5.2	28
29	Frontispiece: Polymer Binders Constructed through Dynamic Noncovalent Bonds for High-Capacity Silicon-Based Anodes. <i>Chemistry - A European Journal</i> , 2019, 25, .	3.3	0
30	What dielectric spectroscopy can tell us about supramolecular networks†. <i>European Physical Journal E</i> , 2019, 42, 133.	1.6	30
31	Rational Design of a Multifunctional Binder for High-Capacity Silicon-Based Anodes. <i>ACS Energy Letters</i> , 2019, 4, 1171-1180.	17.4	108
32	Polymer Binders Constructed through Dynamic Noncovalent Bonds for High-Capacity Silicon-Based Anodes. <i>Chemistry - A European Journal</i> , 2019, 25, 10976-10994.	3.3	42
33	Demonstration of self-healing barrier films for vacuum insulation panels. <i>Vacuum</i> , 2019, 164, 132-139.	3.5	8
34	3D Printed Multifunctional, Hyperelastic Silicone Rubber Foam. <i>Advanced Functional Materials</i> , 2019, 29, 1900469.	14.9	122
35	Continuous Flow Fabrication of Block Copolymer-Grafted Silica Micro-Particles in Environmentally Friendly Water/Ethanol Media. <i>Macromolecular Materials and Engineering</i> , 2019, 304, 1800451.	3.6	5
36	Elastic Single-Ion Conducting Polymer Electrolyte. <i>ECS Meeting Abstracts</i> , 2019, .	0.0	0

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37	The Impact of Selectively Plasticized Poly (ethylene oxide) (PEO) Block in Nanostructured Polystyrene- <i>b</i> -PEO- <i>b</i> -Polystyrene Triblock Copolymer Electrolytes. ECS Meeting Abstracts, 2019, , .	0.0	0
38	Superstretchable, Self-Healing Polymeric Elastomers with Tunable Properties. Advanced Functional Materials, 2018, 28, 1800741.	14.9	162
39	Mechanically Robust, Ultraelastic Hierarchical Foam with Tunable Properties via 3D Printing. Advanced Functional Materials, 2018, 28, 1800631.	14.9	128
40	Hydrogen-bond strength changes network dynamics in associating telechelic PDMS. Soft Matter, 2018, 14, 1235-1246.	2.7	43
41	Highly Permeable Oligo(ethylene oxide)- <i>b</i> -poly(dimethylsiloxane) Membranes for Carbon Dioxide Separation. Advanced Sustainable Systems, 2018, 2, 1700113.	5.3	6
42	Effect of Binder Architecture on the Performance of Silicon/Graphite Composite Anodes for Lithium Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 3470-3478.	8.0	77
43	Polymer Nanosheet Containing Star-Like Copolymers: A Novel Scalable Controlled Release System. Small, 2018, 14, e1800115.	10.0	5
44	The Role of Chain-End Association Lifetime in Segmental and Chain Dynamics of Telechelic Polymers. Macromolecules, 2018, 51, 8561-8573.	4.8	42
45	Plasmonic Retrofitting of Membrane Materials: Shifting from Self-Regulation to On-Command Control of Fluid Flow. Advanced Materials, 2018, 30, 1707598.	21.0	10
46	Synthesizing a Trefoil Knotted Block Copolymer via Ring-Expansion Strategy. Macromolecules, 2017, 50, 1473-1481.	4.8	15
47	Highly efficient reversible addition-fragmentation chain-transfer polymerization in ethanol/water via flow chemistry. Polymer International, 2017, 66, 1252-1258.	3.1	8
48	Big Effect of Small Nanoparticles: A Shift in Paradigm for Polymer Nanocomposites. ACS Nano, 2017, 11, 752-759.	14.6	177
49	Robust and Elastic Polymer Membranes with Tunable Properties for Gas Separation. ACS Applied Materials & Interfaces, 2017, 9, 26483-26491.	8.0	32
50	A star-shaped single lithium-ion conducting copolymer by grafting a POSS nanoparticle. Polymer, 2017, 124, 117-127.	3.8	45
51	Influence of Chain Rigidity and Dielectric Constant on the Glass Transition Temperature in Polymerized Ionic Liquids. Journal of Physical Chemistry B, 2017, 121, 11511-11519.	2.6	82
52	Photoreduction of Graphene Oxide and Photochemical Synthesis of Graphene-Metal Nanoparticle Hybrids by Ketyl Radicals. ACS Applied Materials & Interfaces, 2017, 9, 24887-24898.	8.0	32
53	Utilizing Viral Nanoparticle/Dendron Hybrid Conjugates in Photodynamic Therapy for Dual Delivery to Macrophages and Cancer Cells. Bioconjugate Chemistry, 2016, 27, 1227-1235.	3.6	53
54	Star-like copolymer stabilized noble-metal nanoparticle powders. Nanoscale, 2016, 8, 7435-7442.	5.6	14

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55	Catenated Poly(μ -caprolactone) and Poly(ϵ -caprolactone) via Ring-Expansion Strategy. <i>Macromolecules</i> , 2015, 48, 3825-3833.	4.8	25
56	Photoswitchable Nanocarrier with Reversible Encapsulation Properties. <i>ACS Macro Letters</i> , 2015, 4, 58-62.	4.8	19
57	Smart cements and cement additives for oil and gas operations. <i>Journal of Petroleum Science and Engineering</i> , 2015, 129, 63-76.	4.2	84
58	A Trefoil Knotted Polymer Produced through Ring Expansion. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 5127-5131.	13.8	31
59	Grafted Carbazole-Assisted Electrodeposition of Graphene Oxide. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 10266-10274.	8.0	30
60	A Supramolecular Polyethylenimine-Cored Carbazole Dendritic Polymer with Dual Applications. <i>Macromolecules</i> , 2015, 48, 6801-6809.	4.8	19
61	Living Radical Polymerization from Colloidally-Templated Nanopatterned Surface. <i>ACS Symposium Series</i> , 2015, , 169-185.	0.5	1
62	Stimuli-Responsive Polymers and their Potential Applications in Oil-Gas Industry. <i>Polymer Reviews</i> , 2015, 55, 706-733.	10.9	60
63	On the Formation and Electropolymerization of a Star Copolymer With Peripheral Carbazoles. <i>Macromolecular Chemistry and Physics</i> , 2013, 214, 386-395.	2.2	8
64	A supramolecularly templated catenane initiator and a controlled ring expansion strategy. <i>Chemical Communications</i> , 2012, 48, 12094.	4.1	20
65	Covalently stabilized vesicles derived from amphiphilic multiarm star polymers: Preparation, characterization, and their capability of hosting different polarity of guests. <i>Journal of Polymer Science Part A</i> , 2012, 50, 227-236.	2.3	17
66	Modulating the guest encapsulation and release properties of multiarm star polyethylenimine- ϵ -caprolactone block copolymer. <i>Journal of Polymer Science Part A</i> , 2009, 47, 5184-5193. ^{2,3}		37
67	Core-shell type multiarm star poly(μ -caprolactone) with high molecular weight hyperbranched polyethylenimine as core: Synthesis, characterization and encapsulation properties. <i>European Polymer Journal</i> , 2008, 44, 1060-1070.	5.4	56