

# Meirong Cai

## List of Publications by Year in descending order

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97  
papers

3,942  
citations

101496

36  
h-index

143943

57  
g-index

97  
all docs

97  
docs citations

97  
times ranked

2492  
citing authors

#	ARTICLE	IF	CITATIONS
1	Stable dispersibility of bentonite-type additive with gemini ionic liquid intercalation structure for oil-based drilling. <i>Friction</i> , 2023, 11, 201-215.	3.4	6
2	Fibers reinforced composite hydrogels with improved lubrication and load-bearing capacity. <i>Friction</i> , 2022, 10, 54-67.	3.4	24
3	Constructing a biomimetic robust bi-layered hydrophilic lubrication coating on surface of silicone elastomer. <i>Friction</i> , 2022, 10, 1046-1060.	3.4	21
4	Dynamic oil gels constructed by 1,2-dithiolane-containing telechelic polymers: An efficient and versatile platform for fabricating polymer-inorganic composites toward tribological applications. <i>Chemical Engineering Journal</i> , 2022, 430, 133097.	6.6	12
5	A Universal Strategy for Growing a Tenacious Hydrogel Coating from a Sticky Initiation Layer. <i>Advanced Materials</i> , 2022, 34, e2108889.	11.1	45
6	Modulus adaptive lubricating prototype inspired by instant muscle hardening mechanism of catfish skin. <i>Nature Communications</i> , 2022, 13, 377.	5.8	47
7	Continuously growing multi-layered hydrogel structures with seamless interlocked interface. <i>Matter</i> , 2022, 5, 634-653.	5.0	32
8	Novel Phosphate Organic Guanidine Salt Water-Based Additive with Integrated Anti-Friction, Anti-Wear and Anti-Corrosion Properties. <i>Tribology Letters</i> , 2022, 70, 1.	1.2	5
9	Reversing Hydrogel Adhesion Property via Firmly Anchoring Thin Adhesive Coatings. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	36
10	“Brush-like” Amphiphilic Polymer for Environmental Adaptive Coating. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 18901-18909.	4.0	8
11	Synthesis and tribological properties of bio-inspired green dopamine oil soluble additive. <i>Tribology International</i> , 2022, 174, 107697.	3.0	3
12	Lignin composite ionic liquid lubricating material as a water-based lubricating fluid additive with excellent lubricating, anti-wear and anti-corrosion properties. <i>Tribology International</i> , 2022, 174, 107742.	3.0	14
13	Physicochemical and tribological properties of gemini-type halogen-free dicationic ionic liquids. <i>Friction</i> , 2021, 9, 344-355.	3.4	24
14	Amino acid ionic liquids as anticorrosive and lubricating additives for water and their environmental impact. <i>Tribology International</i> , 2021, 153, 106663.	3.0	32
15	Significantly enhancing lubricity and anti-wear performances of glycerol lubricant with urea-functionalized imidazolium-organophosphate ionic liquid as additive. <i>Tribology International</i> , 2021, 153, 106602.	3.0	18
16	Comparing tribology properties of halogen-free ionic liquid, halogen-containing ionic liquid, and PAO 10 lubricants for steel-steel friction contact at room temperature and high temperature. <i>Journal of Molecular Liquids</i> , 2021, 323, 115041.	2.3	9
17	Gelation mechanism and tribological performances of two-component cholesterol-based supramolecular gel lubricant. <i>Tribology International</i> , 2021, 155, 106777.	3.0	10
18	Supramolecular PFPE gel lubricant with anti-creep capability under irradiation conditions at high vacuum. <i>Chemical Engineering Journal</i> , 2021, 409, 128120.	6.6	21

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19	Robust Hybrid Omniphobic Surface for Stain Resistance. ACS Applied Materials & Interfaces, 2021, 13, 14562-14568.	4.0	19
20	Geckoâ€™s Feet-Inspired Self-Peeling Switchable Dry/Wet Adhesive. Chemistry of Materials, 2021, 33, 2785-2795.	3.2	48
21	Corrosion and lubrication properties of a halogen-free Gemini room-temperature ionic liquid for titanium alloys. Tribology International, 2021, 156, 106850.	3.0	11
22	Interactions between ZDDP and an oil-soluble ionic liquid additive. Tribology International, 2021, 158, 106938.	3.0	13
23	Hydrogen bonding induced enhancement for constructing anisotropic sugarcane composite hydrogels. Journal of Applied Polymer Science, 2021, 138, 51374.	1.3	6
24	Synthesis of charged chitosan nanoparticles as functional biolubricant. Colloids and Surfaces B: Biointerfaces, 2021, 206, 111973.	2.5	18
25	Effect of two halogen-free ionic liquids with different anions on the tribological properties of TC4. Journal of Molecular Liquids, 2021, 343, 117627.	2.3	6
26	Functionalized phosphate ionic liquids as additives in PEG with excellent tribological properties for boundary/mixed/elastohydrodynamic lubrication. Tribology International, 2021, 164, 107242.	3.0	8
27	Transparent Janus Hydrogel Wet Adhesive for Underwater Self-Cleaning. ACS Applied Materials & Interfaces, 2021, 13, 50505-50515.	4.0	30
28	Esophagusâ€™-Inspired Actuator for Solid Transportation via the Synergy of Lubrication and Contractile Deformation. Advanced Science, 2021, 8, e2102800.	5.6	10
29	MoS <sub>2</sub> Lubricating Film Meets Supramolecular Gel: A Novel Composite Lubricating System for Space Applications. ACS Applied Materials & Interfaces, 2021, 13, 58036-58047.	4.0	24
30	Towards superior lubricity and anticorrosion performances of proton-type ionic liquids additives for water-based lubricating fluids. Chemical Engineering Journal, 2020, 383, 123201.	6.6	88
31	Effective sugar-derived organic gelator for three different types of lubricant oils to improve tribological performance. Friction, 2020, 8, 1025-1038.	3.4	21
32	Significantly Reducing Friction and Wear of Waterâ€™Based Fluids with Shear Thinning Bicomponent Supramolecular Hydrogels. Advanced Materials Interfaces, 2020, 7, 2001084.	1.9	10
33	High Lubricity Meets Load Capacity: Cartilage Mimicking Bilayer Structure by Brushing Up Stiff Hydrogels from Subsurface. Advanced Functional Materials, 2020, 30, 2004062.	7.8	118
34	Effect of Electric Potential and Chain Length on Tribological Performances of Ionic Liquids as Additives for Aqueous Systems and Molecular Dynamics Simulations. ACS Applied Materials & Interfaces, 2020, 12, 39910-39919.	4.0	48
35	Layered Hydrogel with Controllable Surface Dissociation for Durable Lubrication. Chemistry of Materials, 2020, 32, 7805-7813.	3.2	36
36	Natural Product Inspired Environmentally Friendly Strategy Based on Dopamine Chemistry toward Sustainable Marine Antifouling. ACS Omega, 2020, 5, 21524-21530.	1.6	7

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37	Cartilage Mimics Adaptive Lubrication. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 51114-51121.	4.0	28
38	Embedded polyzwitterionic brush-modified nanofibrous membrane through subsurface-initiated polymerization for highly efficient and durable oil/water separation. <i>Journal of Colloid and Interface Science</i> , 2020, 575, 388-398.	5.0	41
39	Polystyrene Nanospheres Modified with a Hydrophilic Polymer Brush through Subsurface-Initiated Atom Transfer Radical Polymerization as Biolubricating Additive. <i>Macromolecular Materials and Engineering</i> , 2020, 305, 2000135.	1.7	15
40	Ionic liquid lubricants: when chemistry meets tribology. <i>Chemical Society Reviews</i> , 2020, 49, 7753-7818.	18.7	220
41	Physicochemical and Tribological Performance of Bi-Component Supramolecular Gel Lubricants. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801391.	1.9	18
42	Insight into the lubricating mechanism for alkylimidazolium phosphate ionic liquids with different alkyl chain length. <i>Tribology International</i> , 2019, 140, 105886.	3.0	24
43	Simultaneous Surface Covalent Bonding and Radical Polymerization for Constructing Robust Soft Actuators with Fast Underwater Response. <i>Chemistry of Materials</i> , 2019, 31, 9504-9512.	3.2	36
44	Fabrication of Asymmetric Tubular Hydrogels through Polymerization-Assisted Welding for Thermal Flow Actuated Artificial Muscles. <i>Chemistry of Materials</i> , 2019, 31, 4469-4478.	3.2	39
45	Polymerization induced phase separation as a generalized methodology for multi-layered hydrogel tubes. <i>Journal of Materials Chemistry B</i> , 2019, 7, 3505-3511.	2.9	6
46	Soft-nanocomposite lubricants of supramolecular gel with carbon nanotubes. <i>Journal of Materials Chemistry A</i> , 2019, 7, 7654-7663.	5.2	37
47	Direct ink writing with high-strength and swelling-resistant biocompatible physically crosslinked hydrogels. <i>Biomaterials Science</i> , 2019, 7, 1805-1814.	2.6	90
48	3D Printing of Hydrogel Architectures with Complex and Controllable Shape Deformation. <i>Advanced Materials Technologies</i> , 2019, 4, 1800713.	3.0	71
49	Novel N , P-containing oil-soluble ionic liquids with excellent tribological and anti-corrosion performance. <i>Tribology International</i> , 2019, 132, 118-129.	3.0	60
50	Oil-soluble ionic liquids as antiwear and extreme pressure additives in poly- $\alpha$ -olefin for steel/steel contacts. <i>Friction</i> , 2019, 7, 18-31.	3.4	53
51	A facile and effective method to improve the dispersibility of WS2 nanosheets in PAO8 for the tribological performances. <i>Tribology International</i> , 2018, 118, 60-70.	3.0	29
52	Self-Constraint Gel Lubricants with High Phase Transition Temperature. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 15801-15810.	3.2	16
53	Continuous Surface Polymerization via Fe(II)-Mediated Redox Reaction for Thick Hydrogel Coatings on Versatile Substrates. <i>Advanced Materials</i> , 2018, 30, e1803371.	11.1	84
54	Halide-free PN ionic liquids surfactants as additives for enhancing tribological performance of water-based liquid. <i>Tribology International</i> , 2018, 128, 190-196.	3.0	40

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55	Task-specific Oil-miscible Ionic Liquids Lubricate Steel/Light Metal Alloy: A Tribochemistry Study. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800791.	1.9	34
56	Fluorinated Candle Soot as the Lubricant Additive of Perfluoropolyether. <i>Tribology Letters</i> , 2017, 65, 1.	1.2	19
57	Tuning the Hydration and Lubrication of the Embedded Load-Bearing Hydrogel Fibers. <i>Langmuir</i> , 2017, 33, 2069-2075.	1.6	16
58	Investigation of the lubricity and antiwear behavior of guanidinium ionic liquids at high temperature. <i>Tribology International</i> , 2017, 114, 65-76.	3.0	35
59	Significant enhancement of anti-friction capability of cationic surfactant by phosphonate functionality as additive in water. <i>Tribology International</i> , 2017, 112, 86-93.	3.0	31
60	Ibuprofen-Based Ionic Liquids as Additives for Enhancing the Lubricity and Antiwear of Water-based Ethylene Glycol Liquid. <i>Tribology Letters</i> , 2017, 65, 1.	1.2	45
61	Simultaneous superior lubrication and high load bearing by the dynamic weak interaction of a lubricant with mechanically strong bilayer porous hydrogels. <i>Polymer Chemistry</i> , 2017, 8, 7102-7107.	1.9	17
62	Tribological behavior of laser textured steel impregnated with supramolecular gel lubricant. <i>Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology</i> , 2017, 231, 1151-1159.	1.0	3
63	Physicochemistry aspects on frictional interfaces. <i>Friction</i> , 2017, 5, 361-382.	3.4	36
64	Controlling the Accumulation of Water at Oil-Solid Interfaces with Gradient Coating. <i>Journal of Physical Chemistry B</i> , 2017, 121, 6766-6772.	1.2	6
65	Synergy of lithium salt and non-ionic surfactant for significantly improved tribological properties of water-based fluids. <i>Tribology International</i> , 2017, 113, 58-64.	3.0	31
66	Supramolecular ionogel lubricants with imidazolium-based ionic liquids bearing the urea group as gelator. <i>Journal of Colloid and Interface Science</i> , 2017, 487, 130-140.	5.0	55
67	Probing the lubricating mechanism of oil-soluble ionic liquids additives. <i>Tribology International</i> , 2017, 107, 152-162.	3.0	89
68	Articular Cartilage Inspired Bilayer Tough Hydrogel Prepared by Interfacial Modulated Polymerization Showing Excellent Combination of High Load-Bearing and Low Friction Performance. <i>ACS Macro Letters</i> , 2016, 5, 1191-1195.	2.3	95
69	The electrostatic self-assembly of microgels on polymer brushes and its effects on interfacial friction. <i>Journal of Applied Polymer Science</i> , 2016, 133, .	1.3	2
70	Highlighting the Effect of Interfacial Interaction on Tribological Properties of Supramolecular Gel Lubricants. <i>Advanced Materials Interfaces</i> , 2016, 3, 1500489.	1.9	30
71	Supramolecular Gel Lubricants Based on Amino Acid Derivative Gelators. <i>Tribology Letters</i> , 2016, 61, 1.	1.2	41
72	Magnetite-Loaded Thermosensitive Nanogels for Bioinspired Lubrication and Multimodal Friction Control. <i>ACS Macro Letters</i> , 2016, 5, 144-148.	2.3	33

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73	In situ zwitterionic supramolecular gel lubricants for significantly improved tribological properties. <i>Tribology International</i> , 2016, 95, 55-65.	3.0	47
74	Photothermally actuated interfacial hydration for fast friction switch on hydrophilic polymer brush modified PDMS sheet incorporated with Fe <sub>3</sub> O <sub>4</sub> nanoparticles. <i>Chemical Communications</i> , 2016, 52, 3681-3683.	2.2	25
75	Friction: Interfacial Friction Control ( <i>Adv. Mater. Interfaces</i> 2/2015). <i>Advanced Materials Interfaces</i> , 2015, 2, .	1.9	2
76	Green Ionic Liquid Lubricants Prepared from Anti-Inflammatory Drug. <i>Tribology Letters</i> , 2015, 60, 1.	1.2	19
77	Interfacial Friction Control. <i>Advanced Materials Interfaces</i> , 2015, 2, 1400392.	1.9	79
78	Surface Modification of Diamond-Like Carbon Film with Polymer Brushes Using a Bio-Inspired Catechol Anchor for Excellent Biological Lubrication. <i>Advanced Materials Interfaces</i> , 2014, 1, 1400035.	1.9	54
79	Candle Soot as Particular Lubricant Additives. <i>Tribology Letters</i> , 2014, 53, 521-531.	1.2	44
80	Core-Shell-Corona-Structured Polyelectrolyte Brushes-Grafting Magnetic Nanoparticles for Water Harvesting. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 11625-11632.	4.0	64
81	Thermoreversible Gel Lubricants through Universal Supramolecular Assembly of a Nonionic Surfactant in a Variety of Base Lubricating Liquids. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 15783-15794.	4.0	71
82	Adhesion-Regulated Switchable Fluid Slippage on Superhydrophobic Surfaces. <i>Journal of Physical Chemistry C</i> , 2014, 118, 2564-2569.	1.5	50
83	Charged Polymer Brushes-Grafted Hollow Silica Nanoparticles as a Novel Promising Material for Simultaneous Joint Lubrication and Treatment. <i>Journal of Physical Chemistry B</i> , 2014, 118, 4920-4931.	1.2	78
84	Slip flow of diverse liquids on robust superomniphobic surfaces. <i>Journal of Colloid and Interface Science</i> , 2014, 414, 9-13.	5.0	28
85	Switching Friction with Thermal-Responsive Gels. <i>Macromolecular Rapid Communications</i> , 2013, 34, 1785-1790.	2.0	37
86	Lubricating a bright future: Lubrication contribution to energy saving and low carbon emission. <i>Science China Technological Sciences</i> , 2013, 56, 2888-2913.	2.0	84
87	In situ preparation of anti-corrosion ionic liquids as the lubricant additives in multiply-alkylated cyclopentanes. <i>RSC Advances</i> , 2013, 3, 21715.	1.7	23
88	A novel imidazolium salt with antioxidation and anticorrosion dual functionalities as the additive in poly(ethylene glycol) for steel/steel contacts. <i>Wear</i> , 2013, 306, 197-208.	1.5	92
89	Dramatically Tuning Friction Using Responsive Polyelectrolyte Brushes. <i>Macromolecules</i> , 2013, 46, 9368-9379.	2.2	159
90	Anticorrosion imidazolium ionic liquids as the additive in poly(ethylene glycol) for steel/Cu-Sn alloy contacts. <i>Faraday Discussions</i> , 2012, 156, 147.	1.6	61

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91	Ionic Liquids as Lubricants. , 2012, , 203-233.		4
92	Photo-regulated stick-slip switch of water droplet mobility. <i>Soft Matter</i> , 2011, 7, 3331.	1.2	36
93	Functional ionic gels formed by supramolecular assembly of a novel low molecular weight anticorrosive/antioxidative gelator. <i>Journal of Materials Chemistry</i> , 2011, 21, 13399.	6.7	71
94	Tribological Properties of Novel Imidazolium Ionic Liquids Bearing Benzotriazole Group as the Antiwear/Anticorrosion Additive in Poly(ethylene glycol) and Polyurea Grease for Steel/Steel Contacts. <i>ACS Applied Materials &amp; Interfaces</i> , 2011, 3, 4580-4592.	4.0	118
95	Excellent lubrication performance and superior corrosion resistance of vinyl functionalized ionic liquid lubricants at elevated temperature. <i>Tribology International</i> , 2011, 44, 1111-1117.	3.0	28
96	Alkyl Imidazolium Ionic Liquids as Friction Reduction and Anti-Wear Additive in Polyurea Grease for Steel/Steel Contacts. <i>Tribology Letters</i> , 2010, 40, 215-224.	1.2	85
97	Imidazolium Ionic Liquids As Antiwear and Antioxidant Additive in Poly(ethylene glycol) for Steel/Steel Contacts. <i>ACS Applied Materials &amp; Interfaces</i> , 2010, 2, 870-876.	4.0	170