

Xiaoming Yan

List of Publications by Year in descending order

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102
papers

3,929
citations

87401

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times ranked

2517
citing authors

#	ARTICLE	IF	CITATIONS
1	A Covalent Organic Framework Membrane with Homo Hierarchical Pores for Confined Reactive Crystallization. ACS Applied Materials & Interfaces, 2022, , .	4.0	4
2	Low boiling point solvent-soluble, highly conductive and stable poly (ether phenylene piperidinium) anion exchange membrane. Journal of Membrane Science, 2022, 644, 120185.	4.1	20
3	Stable alkoxy chain enhanced anion exchange membrane and its fuel cell. Journal of Membrane Science, 2022, 644, 120179.	4.1	13
4	Enabling high Anion-selective conductivity in membrane for High-performance neutral organic based aqueous redox flow battery by microstructure design. Chemical Engineering Journal, 2022, 432, 134268.	6.6	7
5	Hollow COF Selective Layer Based Flexible Composite Membranes Constructed by an Integrated "Casting-Precipitation-Evaporation" Strategy. Advanced Functional Materials, 2022, 32, .	7.8	20
6	Construction of hierarchical proton sieving-conductive channels in sulfated UIO-66 grafted polybenzimidazole ion conductive membrane for vanadium redox flow battery. Journal of Power Sources, 2022, 526, 231132.	4.0	19
7	Membrane-Assisted Cooling Crystallization for Interfacial Nucleation Induction and Self-Seeding Control. Industrial & Engineering Chemistry Research, 2022, 61, 765-776.	1.8	9
8	Hydrophilic-Hydrophobic Bulky Units Modified Anion Exchange Membranes for Fuel Cell Application. ACS Sustainable Chemistry and Engineering, 2022, 10, 5748-5757.	3.2	19
9	Advanced anion-selective membranes with pendant quaternary ammonium for neutral aqueous supporting redox flow battery. Journal of Membrane Science, 2022, 659, 120748.	4.1	7
10	Prestructured MXene fillers with uniform channels to enhance CO ₂ selective permeation in mixed matrix membranes. Journal of Applied Polymer Science, 2021, 138, 49895.	1.3	31
11	Ion/Molecule-selective transport nanochannels of membranes for redox flow batteries. Energy Storage Materials, 2021, 34, 648-668.	9.5	37
12	Ultra-thin quaternized polybenzimidazole anion exchange membranes with throughout OH ⁻ conductive highway networks for high-performance fuel cells. Journal of Materials Chemistry A, 2021, 9, 7522-7530.	5.2	47
13	Electron-Donating C-NH ₂ Link Backbone for Highly Alkaline and Mechanical Stable Anion Exchange Membranes. ACS Applied Materials & Interfaces, 2021, 13, 10490-10499.	4.0	22
14	A rod-coil grafts strategy for N-spirocyclic functionalized anion exchange membranes with high fuel cell power density. Journal of Power Sources, 2021, 490, 229544.	4.0	27
15	Two-dimensional MoS ₂ nanosheets constructing highly ion-selective composite membrane for vanadium redox flow battery. Journal of Membrane Science, 2021, 623, 119051.	4.1	25
16	Side-chain manipulation of poly (phenylene oxide) based anion exchange membrane: Alkoxy extender integrated with flexible spacer. Journal of Membrane Science, 2021, 624, 119088.	4.1	47
17	Branched, Side-Chain Grafted Polyarylpiperidine Anion Exchange Membranes for Fuel Cell Application. ACS Applied Energy Materials, 2021, 4, 6957-6967.	2.5	50
18	Dual-Side-Chain-Grafted Poly(phenylene oxide) Anion Exchange Membranes for Fuel-Cell and Electrodialysis Applications. ACS Sustainable Chemistry and Engineering, 2021, 9, 8611-8622.	3.2	23

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19	Movable membrane-based separation system with high SF ₆ retention for large-scale gas-insulated transmission lines during maintenance. <i>Separation and Purification Technology</i> , 2021, 264, 118438.	3.9	3
20	Vesicles-shaped MOF-based mixed matrix membranes with intensified interfacial affinity and CO ₂ transport freeway. <i>Chemical Engineering Journal</i> , 2021, 414, 128807.	6.6	36
21	Facilitating ionic conduction for anion exchange membrane via employing star-shaped block copolymer. <i>Journal of Membrane Science</i> , 2021, 630, 119290.	4.1	31
22	Octopus-like side chain grafted poly(arylene piperidinium) membranes for fuel cell application. <i>Journal of Membrane Science</i> , 2021, 636, 119529.	4.1	34
23	Amphiphilic cone-shaped cationic calix[4]arene composite anion exchange membranes with continuous ionic channels. <i>Journal of Membrane Science</i> , 2021, 640, 119815.	4.1	12
24	Amino-functional ZIF-8 nanocrystals by microemulsion based mixed linker strategy and the enhanced CO ₂ /N ₂ separation. <i>Separation and Purification Technology</i> , 2020, 236, 116209.	3.9	65
25	A highly proton-conductive and vanadium-rejected long-side-chain sulfonated polybenzimidazole membrane for redox flow battery. <i>Journal of Membrane Science</i> , 2020, 596, 117616.	4.1	68
26	Ether spaced N-spirocyclic quaternary ammonium functionalized crosslinked polysulfone for high alkaline stable anion exchange membranes. <i>Journal of Membrane Science</i> , 2020, 598, 117650.	4.1	55
27	Flexibly crosslinked and post-morpholinium-functionalized poly(2,6-dimethyl-1,4-phenylene oxide) anion exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 29681-29689.	3.8	18
28	Tuning hydrogen bond and flexibility of N-spirocyclic cationic spacer for high performance anion exchange membranes. <i>Journal of Membrane Science</i> , 2020, 613, 118507.	4.1	39
29	Bioinspired Hybrid Micro/Nanostructure Compositized Membrane with Intensified Mass Transfer and Antifouling for High Saline Water Membrane Distillation. <i>ACS Nano</i> , 2020, 14, 17376-17386.	7.3	64
30	Covalent/ionic co-crosslinking constructing ultra-densely functionalized ether-free poly(biphenylene) Tj ETQqO O O rgBT /Overlock 10 Tf 359, 136879.	2.6	12
31	Twisted ether-free polymer based alkaline membrane for high-performance water electrolysis. <i>Journal of Power Sources</i> , 2020, 480, 228805.	4.0	46
32	Nanoscale Solid Superacid-Coupled Polybenzimidazole Membrane with High Ion Selectivity for Flow Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 16493-16502.	3.2	11
33	High-Performance Anion Exchange Membranes with Para-Type Cations on Electron-Withdrawing Câ•O Links Free Backbone. <i>Macromolecules</i> , 2020, 53, 10988-10997.	2.2	36
34	Membrane-Assisted Antisolvent Crystallization: Interfacial Mass-Transfer Simulation and Multistage Process Control. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 10160-10171.	1.8	13
35	Interfacial microdroplet evaporative crystallization on 3D printed regular matrix platform. <i>AIChE Journal</i> , 2020, 66, e16280.	1.8	6
36	A new long-side-chain sulfonated poly(2,6-dimethyl-1,4-phenylene oxide) (PPO) /polybenzimidazole (PBI) amphoteric membrane for vanadium redox flow battery. <i>Chinese Journal of Chemical Engineering</i> , 2020, 28, 1918-1924.	1.7	11

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37	Covalent organic framework (COF) constructed proton permselective membranes for acid supporting redox flow batteries. <i>Chemical Engineering Journal</i> , 2020, 399, 125833.	6.6	68
38	Self-organization behavior tuning nanophase separation morphology of sulfonated nonfluorinated aromatic polymer membrane and its mechanism. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 17893-17901.	3.8	9
39	The synergistic effect of protonated imidazole-hydroxyl-quaternary ammonium on improving performances of anion exchange membrane assembled flow batteries. <i>Journal of Membrane Science</i> , 2020, 603, 118011.	4.1	39
40	Pre-removal of polybenzimidazole anion to improve flexibility of grafted quaternized side chains for high performance anion exchange membranes. <i>Journal of Power Sources</i> , 2020, 451, 227813.	4.0	45
41	Hydrophilic/hydrophobic-bi-comb-shaped amphoteric membrane for vanadium redox flow battery. <i>Journal of Membrane Science</i> , 2020, 608, 118179.	4.1	26
42	Ionic liquid tuning nanocage size of MOFs through a two-step adsorption/infiltration strategy for enhanced gas screening of mixed-matrix membranes. <i>Journal of Membrane Science</i> , 2020, 605, 118101.	4.1	59
43	"Fishnet-like" ion-selective nanochannels in advanced membranes for flow batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 21112-21119.	5.2	50
44	SnO ₂ nanorods arrays functionalized TiO ₂ nanoparticles based UV photodetector with high and fast response. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 13099-13107.	1.1	3
45	Branched poly(ether ether ketone) based anion exchange membrane for H ₂ /O ₂ fuel cell. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 23750-23761.	3.8	31
46	Comb-shaped ether-free poly(biphenyl indole) based alkaline membrane. <i>Journal of Membrane Science</i> , 2019, 588, 117216.	4.1	44
47	An interface-strengthened cross-linked graphene oxide/Nafion212 composite membrane for vanadium flow batteries. <i>Journal of Membrane Science</i> , 2019, 587, 117189.	4.1	34
48	Amphoteric-Side-Chain-Functionalized "Ether-Free" Poly(arylene piperidinium) Membrane for Advanced Redox Flow Battery. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 44315-44324.	4.0	58
49	Anion exchange membranes with "rigid-side-chain" symmetric piperazinium structures for fuel cell exceeding 1.2 W cm ⁻² at 60 °C. <i>Journal of Power Sources</i> , 2019, 438, 227021.	4.0	29
50	Fabrication of defect-free Matrimid® asymmetric membranes and the elevated temperature application for N ₂ /SF ₆ separation. <i>Journal of Membrane Science</i> , 2019, 577, 258-265.	4.1	17
51	Proton delivery through a dynamic 3D H-bond network constructed from dense hydroxyls for advanced ion-selective membranes. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15137-15144.	5.2	50
52	Fabrication and characterization of sulfonated polybenzimidazole/sulfonated imidized graphene oxide hybrid membranes for high temperature proton exchange membrane fuel cells. <i>Journal of Applied Polymer Science</i> , 2019, 136, 47892.	1.3	29
53	Electrospinning fiberization of carbon nanotube hybrid sulfonated poly(ether ether ketone) ion conductive membranes for a vanadium redox flow battery. <i>Journal of Membrane Science</i> , 2019, 583, 93-102.	4.1	42
54	Superhydrophobic polypropylene membrane with fabricated antifouling interface for vacuum membrane distillation treating high concentration sodium/magnesium saline water. <i>Journal of Membrane Science</i> , 2019, 579, 240-252.	4.1	66

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55	Novel piperidinium functionalized anionic membrane for alkaline polymer electrolysis with excellent electrochemical properties. <i>Journal of Membrane Science</i> , 2019, 581, 283-292.	4.1	55
56	Novel Triple Tertiary Amine Polymer-Based Hydrogen Bond Network Inducing Highly Efficient Proton-Conducting Channels of Amphoteric Membranes for High-Performance Vanadium Redox Flow Battery. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 5003-5014.	4.0	91
57	Friedel-Crafts alkylation route for preparation of pendent side chain imidazolium-functionalized polysulfone anion exchange membranes for fuel cells. <i>Journal of Membrane Science</i> , 2019, 573, 157-166.	4.1	29
58	ZIF-8 heterogeneous nucleation and growth mechanism on Zn(II)-doped polydopamine for composite membrane fabrication. <i>Separation and Purification Technology</i> , 2019, 214, 95-103.	3.9	22
59	ZIF-8 nanoparticles with tunable size for enhanced CO ₂ capture of Pebax based MMMs. <i>Separation and Purification Technology</i> , 2019, 214, 111-119.	3.9	109
60	Graphic synthesis method for multi-technique integration separation sequences of multi-input refinery gases. <i>Separation and Purification Technology</i> , 2019, 214, 187-195.	3.9	12
61	Novel Electron-Rich and Sterically Hindered Phosphonium as a Highly Efficient and Recyclable Heterogeneous Catalyst for CO ₂ Cycloaddition. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 3195-3203.	1.8	14
62	Hydrophilic side chain assisting continuous ion-conducting channels for anion exchange membranes. <i>Journal of Membrane Science</i> , 2018, 552, 286-294.	4.1	71
63	A novel long-side-chain sulfonated poly(2,6-dimethyl-1,4-phenylene oxide) membrane for vanadium redox flow battery. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 301-310.	3.8	43
64	Highly efficient tetrafluoroethylene recovery for batch polymerization system: Membrane preparation and process development. <i>Journal of Membrane Science</i> , 2018, 549, 403-410.	4.1	2
65	Polybenzimidazole membranes with nanophase-separated structure induced by non-ionic hydrophilic side chains for vanadium flow batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 3895-3905.	5.2	88
66	Electrospun imidazolium functionalized multiwalled carbon nanotube/ polysulfone inorganic-organic nanofibers for reinforced anion exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 21547-21559.	3.8	34
67	Amphiprotic Side-Chain Functionalization Constructing Highly Proton/Vanadium-Selective Transport Channels for High-Performance Membranes in Vanadium Redox Flow Batteries. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 32247-32255.	4.0	80
68	Simultaneous enhancement of proton conductivity and methanol resistance of sulfonated poly(phthalazinone ether sulfone ketone)/superacid sulfated zirconia composite membranes for direct methanol fuel cells. <i>Journal of Applied Polymer Science</i> , 2018, 135, 46758.	1.3	12
69	Tailoring the nanophase-separated morphology of anion exchange membrane by embedding aliphatic chains of different lengths into aromatic main chains. <i>Journal of Membrane Science</i> , 2018, 564, 436-443.	4.1	28
70	Poly (ether ether ketone ketone) based imidazolium as anion exchange membranes for alkaline fuel cells. <i>Chinese Journal of Chemical Engineering</i> , 2018, 26, 2130-2138.	1.7	12
71	Thin skinned asymmetric polybenzimidazole membranes with readily tunable morphologies for high-performance vanadium flow batteries. <i>RSC Advances</i> , 2017, 7, 1852-1862.	1.7	50
72	A novel strategy for constructing a highly conductive and swelling-resistant semi-flexible aromatic polymer based anion exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 10228-10237.	3.8	15

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73	Polyethyleneimine-grafted membranes for simultaneously adsorbing heavy metal ions and rejecting suspended particles in wastewater. <i>AICHE Journal</i> , 2017, 63, 4541-4548.	1.8	28
74	Quaternary-ammonium-immobilized polystyrenes as efficient and reusable heterogeneous catalysts for synthesis of cyclic carbonate: Effects of linking chains and pendent hydroxyl group. <i>Chinese Journal of Catalysis</i> , 2017, 38, 862-871.	6.9	13
75	Dimensionally stable hexamethylenetetramine functionalized polysulfone anion exchange membranes. <i>Journal of Materials Chemistry A</i> , 2017, 5, 15038-15047.	5.2	47
76	Thermoplastic interpenetrating polymer networks based on polybenzimidazole and poly (1,3,5-triazole). <i>Journal of Membrane Science</i> , 2017, 541, 101-107.	2.6	33
77	A novel imidazolium-based amphoteric membrane for high-performance vanadium redox flow battery. <i>Journal of Membrane Science</i> , 2017, 544, 98-107.	4.1	96
78	Enhancing mechanical stability and uniformity of 2-D continuous ZIF-8 membranes by Zn(II)-doped polydopamine modification. <i>Journal of Membrane Science</i> , 2017, 541, 101-107.	4.1	21
79	Design of pendent imidazolium side chain with flexible ether-containing spacer for alkaline anion exchange membrane. <i>Journal of Membrane Science</i> , 2017, 523, 216-224.	4.1	88
80	Constructing a rigid crosslinked structure for enhanced conductivity of imidazolium functionalized polysulfone hydroxide exchange membrane. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 10923-10934.	3.8	36
81	Tri-quaternized poly (ether sulfone) anion exchange membranes with improved hydroxide conductivity. <i>Journal of Membrane Science</i> , 2016, 514, 613-621.	4.1	56
82	A H ₃ PO ₄ preswelling strategy to enhance the proton conductivity of a H ₂ SO ₄ -doped polybenzimidazole membrane for vanadium flow batteries. <i>RSC Advances</i> , 2016, 6, 23479-23488.	1.7	78
83	Enhanced hydroxide conductivity of imidazolium functionalized polysulfone anion exchange membrane by doping imidazolium surface-functionalized nanocomposites. <i>RSC Advances</i> , 2016, 6, 58380-58386.	1.7	23
84	Poly(2,6-dimethyl-1,4-phenylene oxide) containing imidazolium-terminated long side chains as hydroxide exchange membranes with improved conductivity. <i>Journal of Membrane Science</i> , 2016, 518, 159-167.	4.1	48
85	Long-spacer-chain imidazolium functionalized poly(ether ether ketone) as hydroxide exchange membrane for fuel cell. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 14982-14990.	3.8	40
86	Effective reclamation of vent gas in ethylbenzene dehydrogenation by coupling multi-stage circle absorption and membrane units. <i>Separation and Purification Technology</i> , 2016, 168, 265-274.	3.9	12
87	The control and optimization of macro/micro-structure of ion conductive membranes for energy conversion and storage. <i>Chinese Journal of Chemical Engineering</i> , 2016, 24, 558-571.	1.7	19
88	Bis-ammonium immobilized polystyrenes with co-catalyzing functional end groups as efficient and reusable heterogeneous catalysts for synthesis of cyclic carbonate from CO ₂ and epoxides. <i>RSC Advances</i> , 2016, 6, 2217-2224.	1.7	25
89	Proton conductivity enhancement of SPEEK membrane through n-BuOH assisted self-organization. <i>Journal of Membrane Science</i> , 2015, 479, 46-54.	4.1	42
90	An integrally thin skinned asymmetric architecture design for advanced anion exchange membranes for vanadium flow batteries. <i>Journal of Materials Chemistry A</i> , 2015, 3, 16948-16952.	5.2	59

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91	Electrospun nanofiber enhanced imidazolium-functionalized polysulfone composite anion exchange membranes. RSC Advances, 2015, 5, 95118-95125.	1.7	30
92	A methanesulfonic acid/sulfuric acid-based route for easily controllable chloromethylation of poly(ether ether ketone). Journal of Applied Polymer Science, 2015, 132, .	1.3	4
93	Modification of hydrophilic channels in Nafion membranes by DMBA: Mechanism and effects on proton conductivity. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 1107-1117.	2.4	26
94	Imidazolium-functionalized poly(ether ether ketone) as membrane and electrode ionomer for low-temperature alkaline membrane direct methanol fuel cell. Journal of Power Sources, 2014, 250, 90-97.	4.0	112
95	Quaternary phosphonium-functionalized poly(ether ether ketone) as highly conductive and alkali-stable hydroxide exchange membrane for fuel cells. Journal of Membrane Science, 2014, 466, 220-228.	4.1	63
96	Enhancement of hydroxide conductivity by the di-quaternization strategy for poly(ether ether ketone) based anion exchange membranes. Journal of Materials Chemistry A, 2014, 2, 12222.	5.2	71
97	Crosslinked poly(ether ether ketone) hydroxide exchange membranes with improved conductivity. Journal of Membrane Science, 2014, 459, 86-95.	4.1	59
98	Ion and water transport in functionalized PEEK membranes. Journal of Membrane Science, 2013, 429, 13-22.	4.1	34
99	SPEEK proton exchange membranes modified with silica sulfuric acid nanoparticles. International Journal of Hydrogen Energy, 2012, 37, 11853-11861.	3.8	91
100	Imidazolium-functionalized polysulfone hydroxide exchange membranes for potential applications in alkaline membrane direct alcohol fuel cells. International Journal of Hydrogen Energy, 2012, 37, 5216-5224.	3.8	102
101	Quaternized poly(ether ether ketone) hydroxide exchange membranes for fuel cells. Journal of Membrane Science, 2011, 375, 204-211.	4.1	115
102	Nanocage-oriented induction for highly ion-selective sub-1-nanometer channels of membranes. Journal of Materials Chemistry A, 0, , .	5.2	5