

Hydrocarbon-Based Polymer Electrolyte Membranes: Ion Transport and Membrane Stability

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Performance dependence of swelling-filling treated Nafion membrane on nano-structure of macromolecular filler. <i>Journal of Membrane Science</i> , 2017, 534, 68-72.	4.1	24
2	New sulfonated copoly(triazole imide)s synthesized by a click chemistry reaction with improved oxidative stability. <i>New Journal of Chemistry</i> , 2017, 41, 6849-6856.	1.4	12
3	Hydrophilic-hydrophobic diblock copolymers based on polyphenylenes for cathode ionomers of fuel cells. <i>Sustainable Energy and Fuels</i> , 2017, 1, 1299-1302.	2.5	5
4	Facile synthesis of fluorinated poly(arylene ether)s with pendant sulfonic acid groups for proton exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 27100-27110.	3.8	13
5	Silica-embedded hydrogel nanofiller for enhancing low humidity proton conduction of a hydrocarbon-based polymer electrolyte membrane. <i>Journal of Membrane Science</i> , 2017, 543, 106-113.	4.1	12
6	Structured Ionomer Thin Films at Water Interface: Molecular Dynamics Simulation Insight. <i>Langmuir</i> , 2017, 33, 11070-11076.	1.6	8
7	Non-fluorinated pre-irradiation-grafted (peroxidated) LDPE-based anion-exchange membranes with high performance and stability. <i>Energy and Environmental Science</i> , 2017, 10, 2154-2167.	15.6	159
8	Proton exchange membranes derived from sulfonated polybenzothiazoles containing naphthalene units. <i>Journal of Membrane Science</i> , 2017, 542, 159-167.	4.1	36
9	One-pot synthesis of silica-titania binary nanoparticles with acid-base pairs via biomimetic mineralization to fabricate highly proton-conductive membranes. <i>Journal of Materials Chemistry A</i> , 2017, 5, 18585-18593.	5.2	24
10	Anion Exchange Membranes: Enhancement by Addition of Unfunctionalized Triptycene Poly(Ether) Tj ETQq1 1 0.784314 rgBT /Overlock	4.0	60
11	Heterogeneous hybrid of propyl amino functionalized MCM-41 and 1,2,4-triazole for high efficient intermediate temperature proton conductor. <i>RSC Advances</i> , 2017, 7, 52321-52326.	1.7	4
12	Synthesis and dynamic de-wetting properties of poly(arylene ether sulfone)-graft-poly(dimethyl) Tj ETQq1 1 0.784314 rgBT /Overlock	1.8	23
13	Highly tuneable proton-conducting coordination polymers derived from a sulfonate-based ligand. <i>CrystEngComm</i> , 2017, 19, 7050-7056.	1.3	28
14	Poly(arylene ether sulfone)s with different positions of pyridyl groups: Synthesis of the basic diphenyl sulfone dihalide monomers in lithiation and the optimal polymerization in condensation. <i>Polymer</i> , 2017, 131, 73-83.	1.8	1
15	A sulfonated poly(arylene ether sulfone)/polyimide nanofiber composite proton exchange membrane for microbial electrolysis cell application under the coexistence of diverse competitive cations and protons. <i>Journal of Membrane Science</i> , 2017, 540, 165-173.	4.1	52
16	Structure-property relationship study of Nafion XL membrane for high-rate, long-lifespan, and all-temperature vanadium flow batteries. <i>RSC Advances</i> , 2017, 7, 31164-31172.	1.7	21
17	High-Performance Semicrystalline Poly(ether ketone)-Based Proton Exchange Membrane. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 24527-24537.	4.0	60
18	The Critical Role of Supporting Electrolyte Selection on Flow Battery Cost. <i>Journal of the Electrochemical Society</i> , 2017, 164, A3883-A3895.	1.3	36

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19	Electrospun polyacrylonitrile nanofiber mat protected membranes for vanadium flow batteries. RSC Advances, 2017, 7, 54644-54650.	1.7	3
20	Poly(arylene ether ketone) Copolymer Grafted with Amine Groups Containing a Long Alkyl Chain by Chloroacetylation for Improved Alkaline Stability and Conductivity of Anion Exchange Membrane. ACS Applied Energy Materials, 2018, 1, 1175-1182.	2.5	59
21	Sulfonated Phenylene/Quinquephenylene/Perfluoroalkylene Terpolymers as Proton Exchange Membranes for Fuel Cells. ACS Applied Energy Materials, 2018, 1, 1008-1015.	2.5	33
22	Remarkable Reinforcement Effect in Sulfonated Aromatic Polymers as Fuel Cell Membrane. ACS Applied Energy Materials, 2018, 1, 1233-1238.	2.5	39
23	A Simple Self-Cross-Linking Strategy for Double-Layered Proton Exchange Membranes with Improved Methanol Resistance and Good Electrochemical Properties for Passive Direct Methanol Fuel Cells. ACS Applied Energy Materials, 2018, 1, 941-947.	2.5	16
24	High-Performing Hydroxide Exchange Membranes with Flexible Tetra-Piperidinium Side Chains Linked by Alkyl Spacers. ACS Applied Energy Materials, 2018, 1, 2222-2231.	2.5	80
25	High Proton Conduction of Organized Sulfonated Polyimide Thin Films with Planar and Bent Backbones. Macromolecules, 2018, 51, 3351-3359.	2.2	27
26	Structurally Well-Defined Anion Conductive Aromatic Copolymers: Effect of the Side-Chain Length. Macromolecules, 2018, 51, 3394-3404.	2.2	40
27	Novel Sulfonated Co-poly(ether imide)s Containing Trifluoromethyl, Fluorenyl and Hydroxyl Groups for Enhanced Proton Exchange Membrane Properties: Application in Microbial Fuel Cell. ACS Applied Materials & Interfaces, 2018, 10, 14803-14817.	4.0	53
28	Rational design of sulfonated poly(ether ether ketone) grafted graphene oxide-based composites for proton exchange membranes with enhanced performance. Polymer, 2018, 144, 7-17.	1.8	43
29	Toward Cheaper Vanadium Flow Batteries: Porous Polyethylene Reinforced Membrane with Superior Durability. ACS Applied Energy Materials, 2018, 1, 1641-1648.	2.5	27
30	Phosphorylated graphene monoliths with high mixed proton/electron conductivity. Journal of Materials Chemistry A, 2018, 6, 8499-8506.	5.2	12
31	Synthesis of Alkaline Anion Exchange Membranes with Chemically Stable Imidazolium Cations: Unexpected Cross-Linked Macrocycles from Ring-Fused ROMP Monomers. Macromolecules, 2018, 51, 3212-3218.	2.2	96
32	Acid resistant sulphonated poly(vinylidene fluoride- co -hexafluoropropylene)/graphene oxide composite cation exchange for water splitting by iodine-sulfur bunsen process for hydrogen production. Journal of Membrane Science, 2018, 552, 377-386.	4.1	21
33	Effect of nano-size of functionalized silica on overall performance of swelling-filling modified Nafion membrane for direct methanol fuel cell application. Applied Energy, 2018, 213, 408-414.	5.1	73
34	Crosslinked high-performance anion exchange membranes based on poly(styrene- <i>b</i> -(ethylene-co-butylene)- <i>b</i> -styrene). Journal of Membrane Science, 2018, 551, 66-75.	4.1	106
35	Imidazolium functionalized block copolymer anion exchange membrane with enhanced hydroxide conductivity and alkaline stability via tailoring side chains. International Journal of Hydrogen Energy, 2018, 43, 3716-3730.	3.8	21
36	Layered-structure microporous poly(benzimidazole)-loaded imidazole for non-aqueous proton conduction. New Journal of Chemistry, 2018, 42, 1604-1607.	1.4	14

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37	Beyond catalysis and membranes: visualizing and solving the challenge of electrode water accumulation and flooding in AEMFCs. <i>Energy and Environmental Science</i> , 2018, 11, 551-558.	15.6	229
38	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
39	A thermally crosslinked multiblock sulfonated poly(arylene ether ketone nitrile) copolymer with a 1,2,3-triazole pendant for proton conducting membranes. <i>Journal of Materials Chemistry A</i> , 2018, 6, 3560-3570.	5.2	27
40	Morphology of Anion-Conducting Ionenes Investigated by X-ray Scattering and Simulation. <i>Journal of Physical Chemistry B</i> , 2018, 122, 1730-1737.	1.2	13
41	Analysis of cerium-composite polymer-electrolyte membranes during and after accelerated oxidative-stability test. <i>Journal of Power Sources</i> , 2018, 378, 468-474.	4.0	23
42	Cationic Metallo-Polyelectrolytes for Robust Alkaline Anion-Exchange Membranes. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 2388-2392.	7.2	163
43	Cationic Metallo-Polyelectrolytes for Robust Alkaline Anion-Exchange Membranes. <i>Angewandte Chemie</i> , 2018, 130, 2412-2416.	1.6	20
44	CNT@polydopamine embedded mixed matrix membranes for high-rate and long-life vanadium flow batteries. <i>Journal of Membrane Science</i> , 2018, 549, 411-419.	4.1	60
45	Bent-twisted block copolymer anion exchange membrane with improved conductivity. <i>Journal of Membrane Science</i> , 2018, 550, 59-71.	4.1	64
46	Nanostructured composite membrane with cross-linked sulfonated poly(arylene ether ketone)/silica for high-performance polymer electrolyte membrane fuel cells under low relative humidity. <i>Journal of Membrane Science</i> , 2018, 549, 567-574.	4.1	20
47	Tailoring nonsolvent-thermally induced phase separation (N-TIPS) effect using triple spinneret to fabricate high performance PVDF hollow fiber membranes. <i>Journal of Membrane Science</i> , 2018, 559, 117-126.	4.1	87
48	Simultaneously enhancing ionic conduction and mechanical strength of poly(ether) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 312 high temperature proton exchange membrane fuel cell application. <i>Journal of Membrane Science</i> , 2018, 558, 26-33.	4.1	77
49	New crosslinked sulfonated polytriazoles: Proton exchange properties and microbial fuel cell performance. <i>European Polymer Journal</i> , 2018, 103, 322-334.	2.6	18
50	Partially Fluorinated Multiblock Poly(arylene ether sulfone) Membranes for Fuel Cell Applications. <i>Macromolecular Materials and Engineering</i> , 2018, 303, 1700650.	1.7	7
51	A compact and scalable fabrication method for robust thin film composite membranes. <i>Green Chemistry</i> , 2018, 20, 1887-1898.	4.6	31
52	Densely quaternized poly(arylene ether)s with distinct phase separation for highly anion-conductive membranes. <i>Journal of Power Sources</i> , 2018, 387, 33-42.	4.0	29
53	Investigating the nanostructures and proton transfer properties of Nafion-GO hybrid membranes. <i>Journal of Membrane Science</i> , 2018, 555, 327-336.	4.1	51
54	Computational Study of Microhydration in Sulfonated Diels-Alder Poly(phenylene) Polymers. <i>Journal of Physical Chemistry A</i> , 2018, 122, 3927-3938.	1.1	6

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55	Molecular-Level Hybridization of Nafion with Quantum Dots for Highly Enhanced Proton Conduction. <i>Advanced Materials</i> , 2018, 30, e1707516.	11.1	122
56	Comb-shaped polysulfones containing sulfonated polytriazole side chains for proton exchange membranes. <i>Journal of Membrane Science</i> , 2018, 554, 232-243.	4.1	41
57	Imidazole microcapsules toward enhanced phosphoric acid loading of polymer electrolyte membrane for anhydrous proton conduction. <i>Journal of Membrane Science</i> , 2018, 545, 88-98.	4.1	56
58	Electrodialytic concentrating lithium salt from primary resource. <i>Desalination</i> , 2018, 425, 30-36.	4.0	45
59	Predictive simulation of non-steady-state transport of gases through rubbery polymer membranes. <i>Polymer</i> , 2018, 134, 125-142.	1.8	12
60	Synthesis and properties of poly(phenylene-co-arylene ether ketone)s with five quaternary ammonium groups on a phenyl unit for anion-exchange membranes. <i>Solid State Ionics</i> , 2018, 314, 187-194.	1.3	6
61	Partially fluorinated poly(arylene ether)s bearing long alkyl sulfonate side chains for stable and highly conductive proton exchange membranes. <i>Journal of Membrane Science</i> , 2018, 549, 12-22.	4.1	56
62	Preparation of high-conductivity QPPO (quaternary-aminated poly (2,6-dimethyl-1,4-phenyleneoxide)) membranes by electrical treatment. <i>Journal of Membrane Science</i> , 2018, 553, 82-89.	4.1	16
63	Synthesis and Bonding Performance of Conductive Polymer Containing Rare Earth Oxides. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2018, 28, 746-750.	1.9	6
64	Sulfonated aromatic polymers containing hexafluoroisopropylidene groups: a simple but effective structure for fuel cell membranes. <i>Journal of Materials Chemistry A</i> , 2018, 6, 24625-24632.	5.2	33
65	Synergistic Improvement in Thermal Conductivity of Polyimide Nanocomposite Films Using Boron Nitride Coated Copper Nanoparticles and Nanowires. <i>Polymers</i> , 2018, 10, 1412.	2.0	21
66	Preparation and characterization of sulfonated semi-crystalline poly(arylene ether)s containing 1,4-FBB moiety as proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 23004-23013.	3.8	4
67	Breaking through the Cracks: On the Mechanism of Phosphoric Acid Migration in High Temperature Polymer Electrolyte Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2018, 165, F1176-F1183.	1.3	28
68	Semi-Interpenetrating Polymer Network Membranes from SPEEK and BPPO for High Concentration DMFC. <i>ACS Applied Energy Materials</i> , 0, , .	2.5	4
69	Sulfophenylated Terphenylene Copolymer Membranes and Ionomers. <i>ChemSusChem</i> , 2018, 11, 4033-4043.	3.6	39
70	Graphene Oxide-Based Solid Electrolytes with 3D Prepercolating Pathways for Efficient Proton Transport. <i>Advanced Functional Materials</i> , 2018, 28, 1804944.	7.8	48
71	Poly(2,6-dimethyl-1,4-phenylene oxide)s with Various Head Groups: Effect of Head Groups on the Properties of Anion Exchange Membranes. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 41279-41292.	4.0	59
72	Introduction: Low-Temperature Fuel Cells. , 2018, , 1-49.		3

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73	Improved All-Vanadium Redox Flow Batteries using Catholyte Additive and a Cross-linked Methylated Polybenzimidazole Membrane. <i>ACS Applied Energy Materials</i> , 2018, 1, 6047-6055.	2.5	32
74	Metallo-polyelectrolytes as a class of ionic macromolecules for functional materials. <i>Nature Communications</i> , 2018, 9, 4329.	5.8	83
75	Imidazolium-functionalized poly (arylene ether ketone) cross-linked anion exchange membranes. <i>Journal of Membrane Science</i> , 2018, 566, 205-212.	4.1	59
76	Understanding of imidazolium group hydration and polymer structure for hydroxide anion conduction in hydrated imidazolium-g-PPO membrane by molecular dynamics simulations. <i>Chemical Engineering Science</i> , 2018, 192, 1167-1176.	1.9	40
77	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
78	Effect of a Sulfonated Benzothiadiazole Unit on the Morphology and Ion Conduction Behavior of a Polymer Electrolyte Membrane. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 16095-16102.	1.8	7
79	Zwitterion threaded metal-organic framework membranes for direct methanol fuel cells. <i>Journal of Materials Chemistry A</i> , 2018, 6, 19547-19554.	5.2	32
80	Increasing the Durability of Polymer Electrolyte Membranes Using Organic Additives. <i>ACS Omega</i> , 2018, 3, 11262-11269.	1.6	27
81	Can the electrochemical performance of heterogeneous ion-exchange membranes be better than that of homogeneous membranes?. <i>Journal of Membrane Science</i> , 2018, 566, 54-68.	4.1	73
82	End-group cross-linked sulfonated poly(arylene ether sulfone) via thiol-ene click reaction for high-performance proton exchange membrane. <i>Journal of Power Sources</i> , 2018, 401, 20-28.	4.0	39
83	Semi-interpenetrating polymer networks by azide-alkyne cycloaddition as novel anion exchange membranes. <i>Journal of Materials Chemistry A</i> , 2018, 6, 11317-11326.	5.2	67
84	Molecular engineering of organic-inorganic interface towards high-performance polyelectrolyte membrane via amphiphilic block copolymer. <i>Journal of Membrane Science</i> , 2018, 563, 1-9.	4.1	10
85	Protic ionic liquid/functionalized graphene oxide hybrid membranes for high temperature proton exchange membrane fuel cell applications. <i>Applied Surface Science</i> , 2018, 455, 295-301.	3.1	72
86	Synthesis of titania nanoparticle-dispersed hybrid membranes from allyloxytitanium and phosphonic acid derivatives for fuel cell. <i>Journal of Membrane Science</i> , 2018, 563, 221-228.	4.1	4
87	Imidazolium functionalized poly(aryl ether ketone) anion exchange membranes having star main chains or side chains. <i>Renewable Energy</i> , 2018, 127, 910-919.	4.3	43
88	Quaternary Ti3C2Tx enhanced ionic conduction in quaternized polysulfone membrane for alkaline anion exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2018, 563, 882-887.	4.1	42
89	Sulfonated poly(arylene ether nitrile)-based hybrid membranes containing amine-functionalized GO for constructing long-range ionic nanochannels. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 11214-11222.	3.8	27
90	Highly ion selective hydrocarbon-based membranes containing sulfonated hypercrosslinked polystyrene nanoparticles for vanadium redox flow batteries. <i>Journal of Membrane Science</i> , 2018, 563, 552-560.	4.1	26

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91	Highly conductive flexible alkylsulfonated side chains poly(phthalazinone ether ketone)s for proton exchange membranes. <i>Polymer</i> , 2018, 148, 269-277.	1.8	33
92	Effect of phosphotungstic acid blending on properties of sulfonated poly(ether ether) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 707 46667.	1.3	6
93	Mid-block quaternized polystyrene-b-polybutadiene-b-polystyrene triblock copolymers as anion exchange membranes. <i>Journal of Membrane Science</i> , 2018, 564, 428-435.	4.1	42
94	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
95	Sulfonated Poly(Arylene Ether Sulfone) and Perfluorosulfonic Acid Composite Membranes Containing Perfluoropolyether Grafted Graphene Oxide for Polymer Electrolyte Membrane Fuel Cell Applications. <i>Polymers</i> , 2018, 10, 569.	2.0	15
96	Comprehensive Analysis of Trends and Emerging Technologies in All Types of Fuel Cells Based on a Computational Method. <i>Sustainability</i> , 2018, 10, 458.	1.6	32
97	Multi-block sulfonated poly(arylene ether nitrile) polymers bearing oligomeric benzotriazole pendants with exceptionally high H ₂ /O ₂ fuel cell performance. <i>Journal of Membrane Science</i> , 2018, 564, 342-351.	4.1	22
98	Mesoscale modeling of sulfonated polyimides copolymer membranes: Effect of sequence distributions. <i>Journal of Membrane Science</i> , 2018, 564, 146-158.	4.1	16
99	Solidâ€‘State Rechargeable Zincâ€‘Air Battery with Long Shelf Life Based on Nanoengineered Polymer Electrolyte. <i>ChemSusChem</i> , 2018, 11, 3215-3224.	3.6	55
100	Crosslinked poly (2,6-dimethyl-1,4-phenylene oxide) polyelectrolyte enhanced with poly (styrene-b-(ethylene-co-butylene)-b-styrene) for anion exchange membrane applications. <i>Journal of Membrane Science</i> , 2018, 564, 492-500.	4.1	56
101	Anion Conductive Triblock Copolymer Membranes with Flexible Multication Side Chain. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 18327-18337.	4.0	80
102	High-Strength Internal Cross-Linking Bacterial Cellulose-Network-Based Gel Polymer Electrolyte for Dendrite-Suppressing and High-Rate Lithium Batteries. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 17809-17819.	4.0	121
103	Porous polyetherimide membranes with tunable morphology for lithium-ion battery. <i>Journal of Membrane Science</i> , 2018, 565, 42-49.	4.1	52
104	Significant improvement of ionic conductivity of high-graphene oxide-loading ice-templated poly (ionic liquid) nanocomposite electrolytes. <i>Polymer</i> , 2018, 153, 438-444.	1.8	17
105	Electrophoretic fabrication of proton exchange membranes in fuel cells. <i>Journal of Membrane Science</i> , 2018, 565, 179-185.	4.1	8
106	Metal-organic framework anchored sulfonated poly(ether sulfone) as a high temperature proton exchange membrane for fuel cells. <i>Journal of Membrane Science</i> , 2018, 565, 281-292.	4.1	94
107	Mussel-inspired strategy towards functionalized reduced graphene oxide-crosslinked polysulfone-based anion exchange membranes with enhanced properties. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 17461-17474.	3.8	23
108	Fuel Cell Catalyst Layers and Membrane-Electrode Assemblies Containing Multiblock Poly(arylene) Tj ETQq1 1 0.784314 rgBT /Overlock 1.3 9 2018, 165, F891-F897.	1.3	9

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109	Synthesis of precision polymers with regularly placed perfluoroalkyl segments and sulfonic acid groups via ADMET polymerization and internal alkene modification. <i>Polymer</i> , 2018, 153, 123-130.	1.8	6
110	Proton Conduction in Tröger's Base-Linked Poly(crown ether)s. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 25303-25310.	4.0	27
111	Polystyrene-based anion exchange membranes via click chemistry: improved properties and AEM performance. <i>Polymer International</i> , 2018, 67, 1302-1312.	1.6	19
112	Cross-Linked Sulfonated Poly(arylene ether sulfone) Containing a Flexible and Hydrophobic Bishydroxy Perfluoropolyether Cross-Linker for High-Performance Proton Exchange Membrane. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 21788-21793.	4.0	43
113	Anion Exchange Membranes™ Evolution toward High Hydroxide Ion Conductivity and Alkaline Resiliency. <i>ACS Applied Energy Materials</i> , 2018, 1, 2991-3012.	2.5	211
114	Preparation of Graft Poly(Arylene Ether Sulfone)s-Based Copolymer with Enhanced Phase-Separated Morphology as Proton Exchange Membranes via Atom Transfer Radical Polymerization. <i>Polymers</i> , 2019, 11, 1297.	2.0	11
115	Do acid-base interactions really improve the ion conduction in a proton exchange membrane? – a study on the effect of basic groups. <i>Journal of Materials Chemistry A</i> , 2019, 7, 19820-19830.	5.2	27
116	Synthesis and property of novel anion exchange membrane based on poly(aryl ether sulfone)s bearing piperidinium moieties. <i>Journal of Membrane Science</i> , 2019, 591, 117334.	4.1	33
117	“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
118	Facile preparation of novel cardo Poly(oxindolebiphenylene) with pendent quaternary ammonium by superacid-catalysed polyhydroxyalkylation reaction for anion exchange membranes. <i>Journal of Membrane Science</i> , 2019, 591, 117320.	4.1	37
119	Composite Membranes for High Temperature PEM Fuel Cells and Electrolysers: A Critical Review. <i>Membranes</i> , 2019, 9, 83.	1.4	114
120	Anion conductive membrane performance facilitation via tethering flexible with rigid backbones using oscillational chain. <i>Journal of Power Sources</i> , 2019, 436, 226856.	4.0	28
121	A high-performance anion exchange membrane based on poly(arylene ether sulfone) with a high concentration of quaternization units. <i>Journal of Membrane Science</i> , 2019, 589, 117266.	4.1	27
122	Enhanced Proton Conductivity of Sulfonated Polysulfone Membranes under Low Humidity via the Incorporation of Multifunctional Graphene Oxide. <i>ACS Applied Nano Materials</i> , 2019, 2, 4734-4743.	2.4	46
123	Improved conductivity and stability of anion exchange membranes by introducing steric hindrance and crosslinked structure. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 22129-22136.	3.8	13
124	Superionic conduction along ordered hydroxyl networks in molecular-thin nanosheets. <i>Materials Horizons</i> , 2019, 6, 2087-2093.	6.4	22
125	Synthetic approaches for advanced multi-block anion exchange membranes. <i>RSC Advances</i> , 2019, 9, 21106-21115.	1.7	10
126	Supramolecular hydrogen-bonded organic networks through acid-base pairs as efficient proton-conducting electrolytes. <i>CrystEngComm</i> , 2019, 21, 4996-5001.	1.3	17

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127	Controllable physical-crosslinking poly(arylene 6-azaspiro[5.5] undecanium) for long-lifetime anion exchange membrane applications. <i>Journal of Membrane Science</i> , 2019, 590, 117307.	4.1	52
128	Construction of crosslinked polybenzimidazole-based anion exchange membranes with ether-bond-free backbone. <i>Journal of Membrane Science</i> , 2019, 590, 117303.	4.1	38
129	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
130	Mechanically robust and highly methanol-resistant sulfonated poly(ether ether) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 627 Td <i>Journal of Membrane Science</i> , 2019, 591, 117321.	4.1	73
131	Polyhedral Oligomeric Silsesquioxane Hybrid Polymers: Well-Defined Architectural Design and Potential Functional Applications. <i>Macromolecular Rapid Communications</i> , 2019, 40, e1900101.	2.0	80
132	Comb-shaped ether-free poly(biphenyl indole) based alkaline membrane. <i>Journal of Membrane Science</i> , 2019, 588, 117216.	4.1	44
133	Polyurethane ionomers based on amino ethers of <i>ortho</i> -phosphoric acid. <i>RSC Advances</i> , 2019, 9, 18599-18608.	1.7	8
134	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
135	Synthesis and properties of novel poly(arylene ether)s with densely sulfonated units based on carbazole derivative. <i>Journal of Membrane Science</i> , 2019, 589, 117230.	4.1	27
136	Large-Area Aminated Graphdiyne Thin Films for Direct Methanol Fuel Cells. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 15010-15015.	7.2	88
137	Synthesis and Properties of Novel Side-Chain Sulfonated Poly(Arylene Ether Sulfone)s for Proton Exchange Membranes. <i>Journal of Polymer Science Part A</i> , 2019, 57, 2304-2313.	2.5	15
138	Stable and Highly Ion-Selective Membrane Made from Cellulose Nanocrystals for Aqueous Redox Flow Batteries. <i>Nano Letters</i> , 2019, 19, 8979-8989.	4.5	38
139	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
140	Poly(phthalazinone ether ketone) Amphoteric Ion Exchange Membranes with Low Water Transport and Vanadium Permeability for Vanadium Redox Flow Battery Application. <i>ACS Applied Energy Materials</i> , 2019, 2, 8207-8218.	2.5	18
141	Assessment of Severe Accident Management for Small IPWR under an ESBO Scenario. <i>Science and Technology of Nuclear Installations</i> , 2019, 2019, 1-10.	0.3	3
142	<p></p>Serum circSETDB1 is a promising biomarker for predicting response to platinum-taxane-combined chemotherapy and relapse in high-grade serous ovarian cancer</p><p></p>OncoTargets and Therapy, 2019, Volume 12, 7451-7457.	1.0	42
143	Large-Area Aminated Graphdiyne Thin Films for Direct Methanol Fuel Cells. <i>Angewandte Chemie</i> , 2019, 131, 15152-15157.	1.6	23
144	Amphoteric Membranes Based on Sulfonated Polyether Ether Ketone and Imidazolium-Functionalized Polyphenylene Oxide for Vanadium Redox Flow Battery Applications. <i>ChemElectroChem</i> , 2019, 6, 5041-5050.	1.7	24

#	ARTICLE	IF	CITATIONS
145	High temperature polymer electrolyte membrane achieved by grafting poly(1-vinylimidazole) on polysulfone for fuel cells application. <i>Journal of Membrane Science</i> , 2019, 592, 117395.	4.1	45
146	Localized Electrochemical Impedance Measurements on Nafion Membranes: Observation and Analysis of Spatially Diverse Proton Transport Using Atomic Force Microscopy. <i>Analytical Chemistry</i> , 2019, 91, 11678-11686.	3.2	13
147	Chitosan/CaCO ₃ solvent-free nanofluid composite membranes for direct methanol fuel cells. <i>Polymer Engineering and Science</i> , 2019, 59, 2128-2135.	1.5	6
148	An enhanced proton conductivity and reduced methanol permeability composite membrane prepared by sulfonated covalent organic nanosheets/Nafion. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 24985-24996.	3.8	35
149	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
150	Polyaromatic Perfluorophenylsulfonic Acids with High Radical Resistance and Proton Conductivity. <i>ACS Macro Letters</i> , 2019, 8, 1247-1251.	2.3	40
151	Three-Dimensional Stable Cation-Exchange Membrane with Enhanced Mechanical, Electrochemical, and Antibacterial Performance by in Situ Synthesis of Silver Nanoparticles. <i>ACS Omega</i> , 2019, 4, 16619-16628.	1.6	9
152	A facile and versatile route to functional poly(propylene) surfaces via UV-curable coatings. <i>Reactive and Functional Polymers</i> , 2019, 144, 104366.	2.0	11
153	Recent advances in nanostructured electrode-electrolyte design for safe and next-generation electrochemical energy storage. <i>Materials Today Nano</i> , 2019, 8, 100057.	2.3	31
154	Energy material - the role of silicotungstic acid and fly ash in sulfonated poly (ether sulfone) composites for PEMFC applications. <i>Journal of Macromolecular Science - Pure and Applied Chemistry</i> , 2019, 56, 146-152.	1.2	11
155	Constructing interconnected ionic cluster network in polyelectrolyte membranes for enhanced CO ₂ permeation. <i>Chemical Engineering Science</i> , 2019, 199, 275-284.	1.9	24
156	Identifying the Prevalence of Dysphagia among Patients Diagnosed with Unilateral Vocal Fold Immobility. <i>Otolaryngology - Head and Neck Surgery</i> , 2019, 160, 955-964.	1.1	15
157	Novel sulfonated poly(ether ether ketone)/triphenylamine hybrid membrane for vanadium redox flow battery applications. <i>RSC Advances</i> , 2019, 9, 3838-3846.	1.7	33
158	Selectivity enhancement of quaternized poly(arylene ether ketone) membranes by ion segregation for vanadium redox flow batteries. <i>Science China Chemistry</i> , 2019, 62, 479-490.	4.2	20
159	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
160	Trifluoromethyl and benzyl ether side groups containing novel sulfonated co-poly(ether imide)s: Application in microbial fuel cell. <i>European Polymer Journal</i> , 2019, 118, 451-464.	2.6	12
161	Fuel cell electrolyte membranes based on copolymers of protic ionic liquid [HSO ₃ -BVI _m][TfO] with MMA and hPFSVE. <i>Polymer</i> , 2019, 179, 121583.	1.8	21
162	Deep insight into ionic transport in polyampholyte gel electrolytes towards high performance solid supercapacitors. <i>Journal of Materials Chemistry A</i> , 2019, 7, 16414-16424.	5.2	20

#	ARTICLE	IF	CITATIONS
163	Enhancement of Hydroxide Conduction by Incorporation of Metal-Organic Frameworks into a Semi-Interpenetrating Network. <i>Energy & Fuels</i> , 2019, 33, 5749-5760.	2.5	21
164	Design of sepiolite-supported ionogel-embedded composite membranes without proton carrier wastage for wide-temperature-range operation of proton exchange membrane fuel cells. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15288-15301.	5.2	54
165	Simultaneously enhanced hydroxide conductivity and mechanical properties of quaternized chitosan/functionalized carbon nanotubes composite anion exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 18134-18144.	3.8	24
166	Understanding of Nanophase Separation and Hydrophilic Morphology in Nafion and SPEEK Membranes: A Combined Experimental and Theoretical Studies. <i>Nanomaterials</i> , 2019, 9, 869.	1.9	20
167	Porous Nafion nanofiber composite membrane with vertical pathways for efficient through-plane proton conduction. <i>Journal of Membrane Science</i> , 2019, 585, 157-165.	4.1	58
168	Tunable multi-cations-crosslinked poly(arylene piperidinium)-based alkaline membranes with high ion conductivity and durability. <i>Journal of Membrane Science</i> , 2019, 588, 117120.	4.1	87
169	Effect of Sulfonation Degree and PVDF Content on the Structure and Transport Properties of SPEEK/PVDF Blend Membranes. <i>Polymers</i> , 2019, 11, 676.	2.0	9
170	Hydrophobic side chains to enhance hydroxide conductivity and physicochemical stabilities of side-chain-type polymer AEMs. <i>Journal of Membrane Science</i> , 2019, 585, 90-98.	4.1	53
171	Comb-shaped anion exchange membrane with densely grafted short chains or loosely grafted long chains?. <i>Journal of Membrane Science</i> , 2019, 585, 150-156.	4.1	52
172	Engineered Membrane-Electrode Interface for Hydrocarbon-Based Polymer-Electrolyte-Membrane Fuel Cells via Solvent-Vapor-Annealed Deposition. <i>ACS Applied Nano Materials</i> , 2019, 2, 3857-3863.	2.4	17
173	Selective ion transport for a vanadium redox flow battery (VRFB) in nano-crack regulated proton exchange membranes. <i>Journal of Membrane Science</i> , 2019, 583, 16-22.	4.1	46
174	High-performance membrane for vanadium redox flow batteries: Cross-linked poly(ether ether ketone) grafted with sulfonic acid groups via the spacer. <i>Journal of Membrane Science</i> , 2019, 583, 1-8.	4.1	53
175	Bis-imidazolium based poly(phenylene oxide) anion exchange membranes for fuel cells: the effect of cross-linking. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13275-13283.	5.2	112
176	Highly conductive and chemically stable alkaline anion exchange membranes via ROMP of <i>trans</i> -cyclooctene derivatives. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 9729-9734.	3.3	118
177	Facile one-pot construction of Polyoxometalate-based lanthanide-amino acid coordination polymers for proton conduction. <i>Inorganic Chemistry Communication</i> , 2019, 105, 147-150.	1.8	7
178	Nafion-sulfonated silica composite membrane for proton exchange membrane fuel cells under operating low humidity condition. <i>Journal of Membrane Science</i> , 2019, 583, 103-109.	4.1	100
179	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
180	Angioplasty mimetic stented ion transport channels construct durable high-performance membranes. <i>Journal of Materials Chemistry A</i> , 2019, 7, 10030-10040.	5.2	12

#	ARTICLE	IF	CITATIONS
181	Effect of functionality of cross-linker on sulphonated polysulfone cation exchange membranes for electro dialysis. <i>Reactive and Functional Polymers</i> , 2019, 138, 104-113.	2.0	17
182	Bilayer Designed Hydrocarbon Membranes for All-Climate Vanadium Flow Batteries To Shield Catholyte Degradation and Mitigate Electrolyte Crossover. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 13285-13294.	4.0	30
183	Highly alkaline stable anion exchange membranes from nonplanar polybenzimidazole with steric hindrance backbone. <i>Journal of Polymer Science Part A</i> , 2019, 57, 1087-1096.	2.5	14
184	Electrospinning and Electrospun Nanofibers: Methods, Materials, and Applications. <i>Chemical Reviews</i> , 2019, 119, 5298-5415.	23.0	2,814
185	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
186	Rational design of hydrocarbon-based sulfonated copolymers for proton exchange membranes. <i>Journal of Materials Chemistry A</i> , 2019, 7, 11847-11857.	5.2	17
187	Highly hydroxide conducting membranes with long-chain flexible pendant quaternary ammonium groups of PPEK for HEMFC. <i>Solid State Ionics</i> , 2019, 335, 121-128.	1.3	4
188	Crown ether bridged anion exchange membranes with robust alkaline durability. <i>Journal of Membrane Science</i> , 2019, 578, 230-238.	4.1	44
189	Side-chain-type imidazolium-functionalized anion exchange membranes: The effects of additional hydrophobic side chains and their hydrophobicity. <i>Journal of Membrane Science</i> , 2019, 579, 219-229.	4.1	73
190	Proton exchange membranes with ultra-low vanadium ions permeability improved by sulfated zirconia for all vanadium redox flow battery. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 5997-6006.	3.8	38
191	Piperidinium-functionalized anion exchange membranes and their application in alkaline fuel cells and water electrolysis. <i>Journal of Materials Chemistry A</i> , 2019, 7, 7717-7727.	5.2	143
192	A facile approach of fabricating proton exchange membranes by incorporating polydopamine-functionalized carbon nanotubes into chitosan. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 6909-6918.	3.8	48
193	Chemically Stable, Highly Anion Conductive Polymers Composed of Quinquephenylene and Pendant Ammonium Groups. <i>Macromolecules</i> , 2019, 52, 2131-2138.	2.2	41
194	High Dimensional Stability and Alcohol Resistance Aromatic Poly(aryl ether ketone) Polyelectrolyte Membrane Synthesis and Characterization. <i>ACS Applied Energy Materials</i> , 2019, 2, 1646-1656.	2.5	31
195	Facile construction of poly(arylene ether)s-based anion exchange membranes bearing pendent N-spirocyclic quaternary ammonium for fuel cells. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 26565-26576.	3.8	30
196	Flexible, transparent ion-conducting membranes from two-dimensional nanoclays of intrinsic conductivity. <i>Journal of Materials Chemistry A</i> , 2019, 7, 25657-25664.	5.2	14
197	Characterization and Application of Agave salmiana Cuticle as Bio-Membrane in Low-Temperature Electrolyzer and Fuel Cells. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 4461.	1.3	3
198	The design of a multifunctional separator regulating the lithium ion flux for advanced lithium-ion batteries. <i>RSC Advances</i> , 2019, 9, 40084-40091.	1.7	16

#	ARTICLE	IF	CITATIONS
199	Prospects for Anion-Exchange Membranes in Alkali Metal-Air Batteries. <i>Energies</i> , 2019, 12, 4702.	1.6	30
200	Achieving efficient and inexpensive vanadium flow battery by combining $Ce_xZr_{1-x}O_2$ electrocatalyst and hydrocarbon membrane. <i>Chemical Engineering Journal</i> , 2019, 356, 622-631.	6.6	141
201	Novel phosphoric acid (PA)-poly(ether ketone sulfone) with flexible benzotriazole side chains for high-temperature proton exchange membranes. <i>Polymer Journal</i> , 2019, 51, 69-75.	1.3	16
202	A novel green solvent alternative for polymeric membrane preparation via nonsolvent-induced phase separation (NIPS). <i>Journal of Membrane Science</i> , 2019, 574, 44-54.	4.1	205
203	Anisotropic Water-Mediated Proton Conductivity in Large Iron(II) Metal-Organic Framework Single Crystals for Proton-Exchange Membrane Fuel Cells. <i>ACS Applied Nano Materials</i> , 2019, 2, 291-298.	2.4	39
204	Guiding the self-assembly of hyperbranched anion exchange membranes utilized in alkaline fuel cells. <i>Journal of Membrane Science</i> , 2019, 573, 595-601.	4.1	49
205	Preparation of anion exchange membrane with enhanced conductivity and alkaline stability by incorporating ionic liquid modified carbon nanotubes. <i>Journal of Membrane Science</i> , 2019, 573, 1-10.	4.1	58
206	Poly(2,5-benzimidazole)/sulfonated sepiolite composite membranes with low phosphoric acid doping levels for PEMFC applications in a wide temperature range. <i>Journal of Membrane Science</i> , 2019, 574, 282-298.	4.1	57
207	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
208	Unraveling Anhydrous Proton Conduction in Hydroxygraphane. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 518-523.	2.1	13
209	Impact of Hydration and Sulfonation on the Morphology and Ionic Conductivity of Sulfonated Poly(phenylene) Proton Exchange Membranes. <i>Macromolecules</i> , 2019, 52, 857-876.	2.2	61
210	Incorporating phosphoric acid-functionalized polydopamine into Nafion polymer by in situ sol-gel method for enhanced proton conductivity. <i>Journal of Membrane Science</i> , 2019, 570-571, 236-244.	4.1	19
211	Robust poly(aryl piperidinium)/N-spirocyclic poly(2,6-dimethyl-1,4-phenyl) for hydroxide-exchange membranes. <i>Journal of Membrane Science</i> , 2019, 572, 246-254.	4.1	41
212	Preparation and investigation of block polybenzimidazole membranes with high battery performance and low phosphoric acid doping for use in high-temperature fuel cells. <i>Journal of Membrane Science</i> , 2019, 572, 350-357.	4.1	57
213	Effect of Micromorphology on Alkaline Polymer Electrolyte Stability. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 469-477.	4.0	36
214	High Performance Ion Exchange Membranes Prepared via Direct Polyacylation of Racemic and (S)-1,1'-Binaphthyl-Based Cationic/Anionic Monomers. <i>Macromolecular Materials and Engineering</i> , 2019, 304, 1800547.	1.7	2
215	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
216	Tetra-alkylsulfonate functionalized poly(aryl ether) membranes with nanosized hydrophilic channels for efficient proton conduction. <i>Journal of Energy Chemistry</i> , 2020, 40, 57-64.	7.1	20

#	ARTICLE	IF	CITATIONS
217	Coaxial electrospun sulfonated poly (ether ether ketone) proton exchange membrane for conductivity-strength balance. Journal of Membrane Science, 2020, 595, 117516.	4.1	24
218	Novel proton exchange membranes based on sulfonated-phosphonated poly (p-phenylene-co-aryl ether) Tj ETQq1 1 0.784314 rgBT /Ove Membrane Science, 2020, 594, 117466.	4.1	23
219	Anion conductive piperidinium based poly (ether sulfone): Synthesis, properties and cell performance. Journal of Membrane Science, 2020, 594, 117471.	4.1	24
220	In situ welding: Superb strength, good wettability and fire resistance tri-layer separator with shutdown function for high-safety lithium ion battery. Journal of Membrane Science, 2020, 595, 117509.	4.1	44
221	Poly(phenylene oxide)s incorporating N-spirocyclic quaternary ammonium cation/cation strings for anion exchange membranes. Journal of Membrane Science, 2020, 595, 117507.	4.1	66
222	Molecular branching as a simple approach to improving polymer electrolyte membranes. Journal of Membrane Science, 2020, 595, 117539.	4.1	33
223	Block Copolymer Membranes. , 2020, , 297-316.		9
224	Facile fabrication of amphoteric semi-interpenetrating network ion-exchange membranes for electro dialysis applications. Ionics, 2020, 26, 323-335.	1.2	3
225	Alkaline-stable anion exchange membranes: A review of synthetic approaches. Progress in Polymer Science, 2020, 100, 101177.	11.8	250
226	Chloromethylation and Quaternization of Poly(aryl ether ketone sulfone)s with Clustered Electron-rich Phenyl Groups for Anion Exchange Membranes. Chinese Journal of Polymer Science (English Edition), 2020, 38, 278-287.	2.0	10
227	Preparation of chitosanâ€modified coreâ€shell SiO₂â€acidic polymer multiple crosslinked membranes. Journal of Applied Polymer Science, 2020, 137, 48494.	1.3	2
228	Synthesis and characterization of new sulfonated copolytriazoles and their proton exchange membrane properties. Journal of Applied Polymer Science, 2020, 137, 48514.	1.3	11
229	Improved performance of quaternized poly(arylene ether ketone)s/graphitic carbon nitride nanosheets composite anion exchange membrane for fuel cell applications. Applied Surface Science, 2020, 503, 144071.	3.1	37
230	A mesh-free method for interface problems using the deep learning approach. Journal of Computational Physics, 2020, 400, 108963.	1.9	44
231	Oriented proton-conductive nano-sponge-facilitated polymer electrolyte membranes. Energy and Environmental Science, 2020, 13, 297-309.	15.6	66
232	Preparation of PCL(+)-catechin/gelatin film for wound healing using air-jet spinning. Applied Surface Science, 2020, 509, 145033.	3.1	31
233	Self-crosslinked blend alkaline anion exchange membranes with bi-continuous phase separated morphology to enhance ion conductivity. Journal of Membrane Science, 2020, 597, 117769.	4.1	63
234	Hydrophilic Flexible Ether Containing, Cross-Linked Anion-Exchange Membrane Quaternized with DABCO. ACS Applied Materials & Interfaces, 2020, 12, 3510-3521.	4.0	53

#	ARTICLE	IF	CITATIONS
235	Poly(aryl ether nitrile)s containing flexible side-chain-type quaternary phosphonium cations as anion exchange membranes. <i>Science China Materials</i> , 2020, 63, 533-543.	3.5	33
236	Side Chain Engineering of Sulfonated Poly(arylene ether)s for Proton Exchange Membranes. <i>Chinese Journal of Polymer Science (English Edition)</i> , 2020, 38, 644-652.	2.0	11
237	Rational Synthesis of Metallo-Cations Toward Redox- and Alkaline-Stable Metallo-Polyelectrolytes. <i>Journal of the American Chemical Society</i> , 2020, 142, 1083-1089.	6.6	91
238	Unidirectional solute transfer using a Janus membrane. <i>Journal of Membrane Science</i> , 2020, 596, 117723.	4.1	15
239	Enhanced conductivity and stability via comb-shaped polymer anion exchange membrane incorporated with porous polymeric nanospheres. <i>Journal of Membrane Science</i> , 2020, 597, 117750.	4.1	28
240	Construction of new transport channels by blending POM-based inorganic-organic complex into sulfonated poly(ether ketone sulfone) for proton exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2020, 596, 117711.	4.1	31
241	Hydrophilic microporous membranes for selective ion separation and flow-battery energy storage. <i>Nature Materials</i> , 2020, 19, 195-202.	13.3	237
242	PEMs with high proton conductivity and excellent methanol resistance based on sulfonated poly(aryl ether ketone sulfone) containing comb-shaped structures for DMFCs applications. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 945-957.	3.8	30
243	Perfluorosulfonyl Imide versus Perfluorosulfonic Acid Ionomers in Proton Exchange Membrane Fuel Cells at Low Relative Humidity. <i>ChemSusChem</i> , 2020, 13, 590-600.	3.6	8
244	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
245	Exploring the Effects of Bulky Cations Tethered to Semicrystalline Polymers: The Case of Tetraaminophosphoniums with Ring-Opened Polynorbornenes. <i>Macromolecules</i> , 2020, 53, 8509-8518.	2.2	20
246	Small Groups, Big Impact: Eliminating Li ⁺ Traps in Single-Ion Conducting Polymer Electrolytes. <i>IScience</i> , 2020, 23, 101417.	1.9	20
247	Sulfonated poly(fluorenyl ether ketone)/Sulfonated β -zirconium phosphate Nanocomposite membranes for proton exchange membrane fuel cells. <i>Advanced Composites and Hybrid Materials</i> , 2020, 3, 498-507.	9.9	37
248	Poly(ether sulfone)s with pendent imidazolium for anion exchange membranes via click chemistry. <i>Polymer</i> , 2020, 207, 122944.	1.8	8
249	Rechargeable proton exchange membrane fuel cell containing an intrinsic hydrogen storage polymer. <i>Communications Chemistry</i> , 2020, 3, .	2.0	35
250	Ionomers for electrochemical energy conversion & storage technologies. <i>Polymer</i> , 2020, 211, 123080.	1.8	53
251	Preparation and investigation of 1-(3-aminopropyl)imidazole functionalized polyvinyl chloride/poly(ether ketone cardo) membranes for HT-PEMFCs. <i>Sustainable Energy and Fuels</i> , 2020, 4, 6066-6074.	2.5	9
252	Titanium oxide/graphitic carbon nitride nanocomposites as fillers for enhancing the performance of SPAES membranes for fuel cells. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 91, 213-222.	2.9	13

#	ARTICLE	IF	CITATIONS
253	Alkaline stability of ether bond free fluorene-based anion exchange polymer containing cycloaliphatic quaternary ammonium groups. <i>Polymer Degradation and Stability</i> , 2020, 179, 109299.	2.7	16
254	Molecular engineering of hydrocarbon membrane to substitute perfluorinated sulfonic acid membrane for proton exchange membrane fuel cell operation. <i>Materials Today Energy</i> , 2020, 17, 100483.	2.5	20
255	Hydrophilic TiO ₂ decorated carbon nanotubes/sulfonated poly(ether ether) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 60, 1832-1841.	1.5	16
256	Tungstophosphoric acid-doped sulfonated poly(arylene ether nitriles) composite membranes with improved proton conductivity and excellent long-term stability. <i>Solid State Ionics</i> , 2020, 357, 115487.	1.3	5
257	Weakly Humidity-Dependent Proton-Conducting COF Membranes. <i>Advanced Materials</i> , 2020, 32, e2005565.	11.1	201
258	Sulfonated Poly(ether sulfone)-Coated and -Blended Nafion Membranes with Enhanced Conductivity and Reduced Hydrogen Permeability. <i>ACS Applied Energy Materials</i> , 2020, 3, 11418-11433.	2.5	19
259	High 3D Proton Conductivity of a 2D Zn(II) Metal-Organic Framework Synthesized via Water-Assisted Single-Crystal-to-Single-Crystal Phase Transformation. <i>Journal of Physical Chemistry C</i> , 2020, 124, 18901-18910.	1.5	15
260	Enhanced Conductivity via Extraction of Hydrocarbon Templates from Nanophase-Separated PEO-LiOTf Polymer Electrolyte Films. <i>ACS Omega</i> , 2020, 5, 20567-20574.	1.6	1
261	Selectivity of Transport Processes in Ion-Exchange Membranes: Relationship with the Structure and Methods for Its Improvement. <i>International Journal of Molecular Sciences</i> , 2020, 21, 5517.	1.8	105
262	Partially fluorinated, multication cross-linked poly(arylene piperidinium) membranes with improved conductivity and reduced swelling for fuel cell application. <i>Ionics</i> , 2020, 26, 5617-5627.	1.2	15
263	Crosslinked poly(arylene ether sulfone) block copolymers containing quinoxaline crosslinkage and pendant butanesulfonic acid groups as proton exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 25262-25275.	3.8	11
264	Amino-MIL-53(Al)-Nanosheets@Nafion Composite Membranes with Improved Proton/Methanol Selectivity for Passive Direct Methanol Fuel Cells. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 14825-14833.	1.8	20
265	Notably enhanced proton conductivity by thermally-induced phase-separation transition of Nafion/Poly(vinylidene fluoride) blend membranes. <i>Journal of Power Sources</i> , 2020, 473, 228586.	4.0	36
266	Elastic and durable multi-cation crosslinked anion exchange membrane based on poly(styrene- <i>b</i> -[ethylene-co-butylene]- <i>b</i> -styrene). <i>Journal of Polymer Science</i> , 2020, 58, 2181-2196.	3.8	34
267	Fluorinated sulfonated poly(arylene ether)s bearing semi-crystalline structures for highly conducting and stable proton exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 23469-23479.	3.8	9
268	De Novo Design of Covalent Organic Framework Membranes toward Ultrafast Anion Transport. <i>Advanced Materials</i> , 2020, 32, e2001284.	11.1	130
269	Synthesis of 2,2-hindered pyridine containing semifluorinated polytriazoles and investigation for low-temperature proton exchange membrane application with enhanced oxidative stability. <i>European Polymer Journal</i> , 2020, 136, 109898.	2.6	15
270	A paradigm shift for a new class of proton exchange membranes with ferrocyanide proton-conducting groups providing enhanced oxidative stability. <i>Journal of Membrane Science</i> , 2020, 616, 118536.	4.1	19

#	ARTICLE	IF	CITATIONS
271	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
272	Enhanced proton conductivities of chitosan-based membranes by inorganic solid superacid SO ₄ ²⁻ /TiO ₂ coated carbon nanotubes. International Journal of Hydrogen Energy, 2020, 45, 29212-29221.	3.8	10
273	Twisted ether-free polymer based alkaline membrane for high-performance water electrolysis. Journal of Power Sources, 2020, 480, 228805.	4.0	46
274	Facile synthesis of poly(arylene ether ketone)s with pendent oxyhexyltrimethylammonium groups for Robust anion exchange membranes. Polymer, 2020, 210, 123035.	1.8	6
275	Novel nanofiber-enhanced SPEEK proton-exchange membranes with high conductivity and stability. Polymer, 2020, 210, 123016.	1.8	12
276	Preparation and Application of Aromatic Polymer Proton Exchange Membrane with Low-Sulfonation Degree. International Journal of Chemical Engineering, 2020, 2020, 1-9.	1.4	5
277	Water Content and Ionic Conductivity of Thin Films of Different Anionic Forms of Anion Conducting Ionomers. Journal of Physical Chemistry C, 2020, 124, 23469-23478.	1.5	15
278	Anion exchange membranes with eight flexible side-chain cations for improved conductivity and alkaline stability. Science China Materials, 2020, 63, 2539-2550.	3.5	26
279	Bacterial-Polymer-Based Electrolytes: Recent Progress and Applications. ACS Applied Energy Materials, 2020, 3, 11500-11515.	2.5	12
280	Understanding the role of acid-base interactions using architecturally-controlled, pyridyl-bearing sulfonated phenylated polyphenylenes. Journal of Materials Chemistry A, 2020, 8, 23866-23883.	5.2	5
281	Quaternary Ammonium-Bearing Perfluorinated Polymers for Anion Exchange Membrane Applications. Membranes, 2020, 10, 306.	1.4	11
283	Recent Development in Composite Membranes for Flow Batteries. ChemSusChem, 2020, 13, 3805-3819.	3.6	31
284	Effect of N-cyclic cationic groups in poly(phenylene oxide)-based catalyst ionomer membranes for anion exchange membrane fuel cells. Journal of Membrane Science, 2020, 608, 118183.	4.1	32
285	Nanofiber composite membrane using quantum dot hybridized SPEEK nanofiber for efficient through-plane proton conduction. Journal of Membrane Science, 2020, 609, 118198.	4.1	26
286	In situ synthesis of star copolymers consisting of a polyhedral oligomeric silsesquioxane core and poly(2,5-benzimidazole) arms for high-temperature proton exchange membrane fuel cells. International Journal of Energy Research, 2020, 44, 8769-8780.	2.2	6
287	Tailoring the Proton Conductivity and Microstructure of Block Copolymers by Counter-cation-Selective Membrane Fabrication. Journal of Physical Chemistry C, 2020, 124, 13071-13081.	1.5	5
288	Preparation and characterization of a polyvinyl alcohol grafted bis-crown ether anion exchange membrane with high conductivity and strong alkali stability. International Journal of Hydrogen Energy, 2020, 45, 16738-16750.	3.8	17
289	Preparation of (2-azido-4-PEG)-type tetra-PEG ion gels through Cu-free azide-alkyne cycloaddition. Polymer Journal, 2020, 52, 1129-1135.	1.3	6

#	ARTICLE	IF	CITATIONS
290	Quaternary ammonium-functionalized hexyl bis(quaternary ammonium)-mediated partially crosslinked SEBSs as highly conductive and stable anion exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 15658-15671.	3.8	36
291	Custom-made sulfonated poly (vinylidene fluoride-co-hexafluoropropylene) nanocomposite membranes for vanadium redox flow battery applications. <i>Polymer Testing</i> , 2020, 90, 106685.	2.3	11
292	The Nanostructure of HMT-PMBI, a Sterically Hindered Ionene. <i>Macromolecules</i> , 2020, 53, 4908-4916.	2.2	4
293	Vicious cycle during chemical degradation of sulfonated aromatic proton exchange membranes in the fuel cell application. <i>International Journal of Energy Research</i> , 2020, 44, 8877-8891.	2.2	9
294	Transport and Durability of Energy Storage Materials Operating at High Temperatures. <i>ACS Nano</i> , 2020, 14, 7696-7703.	7.3	27
295	Temperature Effects in Polymer Electrolyte Membrane Fuel Cells. <i>ChemElectroChem</i> , 2020, 7, 3545-3568.	1.7	34
296	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
297	Electrochemical synthesis of ion exchange polymers: Comparison between hydroxide and proton conductors. <i>Solid State Ionics</i> , 2020, 352, 115370.	1.3	4
298	Water Layering Affects Hydroxide Diffusion in Functionalized Nanoconfined Environments. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 5087-5091.	2.1	25
299	Proton Exchange Membrane Electrolyzer Modeling for Power Electronics Control: A Short Review. <i>Journal of Carbon Research</i> , 2020, 6, 29.	1.4	27
300	Synthesis and applicability study of novel poly(dopamine)-modified carbon nanotubes based polymer electrolyte membranes for direct methanol fuel cell. <i>Journal of Environmental Chemical Engineering</i> , 2020, 8, 104118.	3.3	28
301	Novel Trisulfonated Poly(phthalazinone ether phosphine oxide)s with High Dimensional Stability for Proton Exchange Membrane. <i>Energy & Fuels</i> , 2020, 34, 4999-5005.	2.5	14
302	Crosslinked carbon nanodots with highly sulfonated polyphenylsulfone as proton exchange membrane for fuel cell applications. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 9979-9988.	3.8	29
303	Progress of Alkaline Anion Exchange Membranes for Fuel Cells: The Effects of Micro-Phase Separation. <i>Frontiers in Materials</i> , 2020, 7, .	1.2	50
304	Sulfonated Microporous Polymer Membranes with Fast and Selective Ion Transport for Electrochemical Energy Conversion and Storage. <i>Angewandte Chemie</i> , 2020, 132, 9651-9660.	1.6	20
305	An <i>in situ</i> cross-linked vinylphosphonic acid-modified aminosilicon oxide gel electrolyte for proton exchange membrane fuel cells. <i>Sustainable Energy and Fuels</i> , 2020, 4, 2859-2868.	2.5	6
306	A highly robust and water permeable thin film composite membranes for pressure retarded osmosis generating 26 $\text{AWA}\cdot\text{m}^2$ at 21 Abar . <i>Desalination</i> , 2020, 483, 114409.	4.0	24
307	Sulfonated Microporous Polymer Membranes with Fast and Selective Ion Transport for Electrochemical Energy Conversion and Storage. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 9564-9573.	7.2	145

#	ARTICLE	IF	CITATIONS
308	Metallo-Polyelectrolytes: Correlating Macromolecular Architectures with Properties and Applications. Trends in Chemistry, 2020, 2, 227-240.	4.4	19
309	Crosslinked metallo-polyelectrolytes with enhanced flexibility and dimensional stability for anion-exchange membranes. Polymer Chemistry, 2020, 11, 4542-4546.	1.9	15
310	Synthesis and characterization of a novel crosslinkable side-chain sulfonated poly(arylene ether) Tj ETQqO 0 0 rgBT /Qverlock, 10 Tf 50 6	1.7	9
311	Liquid Crystalline Copolymers Containing Sulfonic and Light-Responsive Groups: From Molecular Design to Conductivity. Molecules, 2020, 25, 2579.	1.7	12
312	Sulfonated poly(arylene ether sulfone) composite membrane having sulfonated polytriazole grafted graphene oxide for high-performance proton exchange membrane fuel cells. Journal of Membrane Science, 2020, 612, 118428.	4.1	39
313	Micro-block <i>versus</i> random quaternized poly(arylene ether sulfones) with highly dense quaternization units for anion exchange membranes. Polymer Chemistry, 2020, 11, 2399-2407.	1.9	18
314	Nanoporous thin films in optical waveguide spectroscopy for chemical analytics. Analytical and Bioanalytical Chemistry, 2020, 412, 3299-3315.	1.9	9
315	Performance of Polymer Electrolyte Membrane for Direct Methanol Fuel Cell Application: Perspective on Morphological Structure. Membranes, 2020, 10, 34.	1.4	45
316	Preparation of self-crosslinking anion exchange membrane with acid block performance from side-chain type polysulfone. Journal of Membrane Science, 2020, 599, 117831.	4.1	27
317	Progress and Perspective of Ceramic/Polymer Composite Solid Electrolytes for Lithium Batteries. Advanced Science, 2020, 7, 1903088.	5.6	403
318	Hydrophobic-hydrophilic comb-type quaternary ammonium-functionalized SEBS copolymers for high performance anion exchange membranes. Journal of Membrane Science, 2020, 599, 117829.	4.1	63
319	Sulfonated graphitic carbon nitride nanosheets as proton conductor for constructing long-range ionic channels proton exchange membrane. Journal of Membrane Science, 2020, 601, 117908.	4.1	37
320	Adjust the arrangement of imidazole on the metal-organic framework to obtain hybrid proton exchange membrane with long-term stable high proton conductivity. Journal of Membrane Science, 2020, 607, 118194.	4.1	86
321	Enhanced proton conductivity of metal organic framework at low humidity by improvement in water retention. Journal of Colloid and Interface Science, 2020, 573, 360-369.	5.0	19
322	Aggregated and ionic cross-linked anion exchange membrane with enhanced hydroxide conductivity and stability. Journal of Power Sources, 2020, 459, 227838.	4.0	32
323	Anion exchange membrane electrolyte preserving inverse Ia $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg" \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mover accent="true"} \rangle \langle \text{mml:mn} \rangle 3 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle \hat{\text{€}} 3/4 \langle \text{mml:mo} \rangle \langle \text{mml:mover} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle d$ bicontinuous cubic phase: Effect of microdomain morphology on selective ion transport. Journal of Membrane Science, 2020, 605, 118113.	4.1	15
324	Stimuli-responsive superhydrophobic films driven by solvent vapor for electric switch and liquid manipulation. Chemical Engineering Journal, 2020, 394, 124919.	6.6	23
325	Effect of side chain on the electrochemical performance of poly (ether ether ketone) based anion-exchange membrane: A molecular dynamics study. Journal of Membrane Science, 2020, 605, 118105.	4.1	42

#	ARTICLE	IF	CITATIONS
326	Metal-Organic Nanogel with Sulfonated Three-Dimensional Continuous Channels as a Proton Conductor. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 19788-19796.	4.0	24
327	Preparing proton exchange membranes via incorporating silica-based nanoscale ionic materials for the enhanced proton conductivity. <i>Solid State Ionics</i> , 2020, 349, 115294.	1.3	17
328	Tuning Morphology and Properties of Epoxy-Based Solid-State Polymer Electrolytes by Molecular Interaction for Flexible All-Solid-State Supercapacitors. <i>Chemistry of Materials</i> , 2020, 32, 3879-3892.	3.2	29
329	Structure-Property Relationships in Sterically Congested Proton-Conducting Poly(phenylene)s: the Impact of Biphenyl Linearity. <i>Macromolecules</i> , 2020, 53, 3119-3138.	2.2	26
330	Elastic Single-Ion Conducting Polymer Electrolytes: Toward a Versatile Approach for Intrinsically Stretchable Functional Polymers. <i>Macromolecules</i> , 2020, 53, 3591-3601.	2.2	41
331	Polymer Electrolyte Membranes with Hybrid Cluster Network for Efficient CO ₂ /CH ₄ Separation. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 6815-6825.	3.2	15
332	Hydrocarbon-based electrode ionomer for proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 32856-32864.	3.8	18
333	Incorporating self-anchored phosphotungstic acid@triazole-functionalized covalent organic framework into sulfonated poly(ether ether ketone) for enhanced proton conductivity. <i>Solid State Ionics</i> , 2020, 349, 115316.	1.3	23
334	Long-term effects of anti-biofouling proton exchange membrane using silver nanoparticles and polydopamine on the performance of microbial electrolysis cells. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 11345-11356.	3.8	24
335	New modified Nafion-bisphosphonic acid composite membranes for enhanced proton conductivity and PEMFC performance. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 17562-17571.	3.8	29
336	An overview of amphoteric ion exchange membranes for vanadium redox flow batteries. <i>Journal of Materials Science and Technology</i> , 2021, 69, 212-227.	5.6	41
337	Quinoxaline-based semi-interpenetrating polymer network of sulfonated poly(arylene ether)s and sulfonated polyimides as proton exchange membranes. <i>Polymer Bulletin</i> , 2021, 78, 4333-4354.	1.7	6
338	Effect of steric constraints on the physico-electrochemical properties of sulfonated polyaromatic copolymers. <i>Polymer International</i> , 2021, 70, 96-106.	1.6	6
339	A highly stable membrane with hierarchical structure for wide pH range flow batteries. <i>Journal of Energy Chemistry</i> , 2021, 56, 80-86.	7.1	22
340	Porous polyether sulfone for direct methanol fuel cell applications: Structural analysis. <i>International Journal of Energy Research</i> , 2021, 45, 2277-2291.	2.2	4
341	Homogeneous trimethylamine-quaternized polysulfone-based anion exchange membranes with crosslinked structure for electrodialysis desalination. <i>Separation and Purification Technology</i> , 2021, 257, 117874.	3.9	32
342	Bioinspired layered proton-exchange membranes with high strength and proton conductivity. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 4087-4099.	3.8	17
343	Self-aggregating cationic-chains enable alkaline stable ion-conducting channels for anion-exchange membrane fuel cells. <i>Journal of Materials Chemistry A</i> , 2021, 9, 327-337.	5.2	116

#	ARTICLE	IF	CITATIONS
344	Constructing anhydrous proton exchange membranes through alternate depositing graphene oxide and chitosan on sulfonated poly(vinylidene fluoride) or sulfonated poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 1650 737 1d (fluoride)		
345	Crosslinked poly(arylene ether ketone) membrane with high anion conductivity and selectivity for non-aqueous redox flow batteries. <i>Journal of Membrane Science</i> , 2021, 620, 118928.	4.1	9
346	Improved performance of novel sulfonated poly(arylene ether sulfone) copolymer via tethering densely sulfonated pendant groups. <i>Journal of Power Sources</i> , 2021, 484, 229265.	4.0	12
347	Enhanced performance of proton-conducting poly(arylene ether sulfone)s via multiple alkylsulfonated side-chains and block copolymer structures. <i>Journal of Membrane Science</i> , 2021, 621, 118932.	4.1	13
348	Structure and properties of sulfonated poly(arylene ether)s with densely sulfonated segments containing mono-, di- and tri-tetraphenylmethane as proton exchange membrane. <i>Journal of Membrane Science</i> , 2021, 620, 118856.	4.1	25
349	Polyhedral Oligomeric Silsesquioxanes (<sc>POSS</sc>)â€based Hybrid Materials: Molecular Design, Solution <sc>Selfâ€Assembly</sc> and Biomedical Applications. <i>Chinese Journal of Chemistry</i> , 2021, 39, 757-774.	2.6	31
350	High methanol resistant polyelectrolyte membrane based on semi-crystalline Poly(ether ketone) with densely sulfonated side chain for direct methanol fuel cell. <i>Journal of Power Sources</i> , 2021, 482, 228982.	4.0	25
351	Development of non-woven fabric-based ECTFE membranes for direct contact membrane distillation application. <i>Desalination</i> , 2021, 500, 114879.	4.0	15
352	Comparative study of chemically different structured sulfonic acid and sulfonimide acid of Poly(isatine-phenylene) electrolyte for PEMFC. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 6762-6774.	3.8	5
353	Poly(Alkylâ€Terphenyl Piperidinium) Ionomers and Membranes with an Outstanding Alkalineâ€Membrane Fuelâ€Cell Performance of 2.58â€...Wâ€%cm^{âˆ2}. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 7710-7718.		185
354	Reinforced Polymer Blend Membranes with Liposomeâ€Like Morphology for Polymer Electrolyte Membrane Fuel Cells Operating under Lowâ€Humidity Conditions. <i>Advanced Engineering Materials</i> , 2021, 23, 2001174.	1.6	4
355	Ion/Molecule-selective transport nanochannels of membranes for redox flow batteries. <i>Energy Storage Materials</i> , 2021, 34, 648-668.	9.5	37
356	Acidâ€base coreâ€shell microspheres are incorporated into proton exchange membranes to effectively alleviate the rapid decline in proton conductivity at low humidity. <i>High Performance Polymers</i> , 2021, 33, 228-242.	0.8	1
357	The effect of guest cations on proton conduction of LTA zeolite. <i>RSC Advances</i> , 2021, 11, 5393-5398.	1.7	6
358	On the evolution of sulfonated polyphenylenes as proton exchange membranes for fuel cells. <i>Materials Advances</i> , 2021, 2, 4966-5005.	2.6	41
359	Proton conducting ABA triblock copolymers with sulfonated poly(phenylene sulfide sulfone) midblock obtained via copper-free thiol-click chemistry. <i>Polymer Chemistry</i> , 2021, 12, 2563-2571.	1.9	3
360	High-performance composite membrane based on synergistic main-chain/side-chain proton conduction channels for the vanadium redox flow battery. <i>Journal of Materials Chemistry A</i> , 2021, 9, 4240-4252.	5.2	28
361	Suitable acid groups and density in electrolytes to facilitate proton conduction. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 23778-23786.	1.3	4

#	ARTICLE	IF	CITATIONS
362	Gel-polymer electrolytes based on polyurethane ionomers for lithium power sources. RSC Advances, 2021, 11, 21548-21559.	1.7	5
363	Construction of Bi ₅ O ₇ I anchored on a polymer with boosted interfacial charge transfer for biofouling resistance and photocatalytic H ₂ evolution. Catalysis Science and Technology, 2021, 11, 1330-1336.	2.1	3
364	Functionalized metallic transition metal dichalcogenide (TaS ₂) for nanocomposite membranes in direct methanol fuel cells. Journal of Materials Chemistry A, 2021, 9, 6368-6381.	5.2	22
365	Cation-dipole interaction that creates ordered ion channels in an anion exchange membrane for fast OH ⁻ conduction. AIChE Journal, 2021, 67, e17133.	1.8	53
366	Trust is good, control is better: a review on monitoring and characterization techniques for flow battery electrolytes. Materials Horizons, 2021, 8, 1866-1925.	6.4	45
367	Hydronium ion diffusion in model proton exchange membranes at low hydration: insights from ab initio molecular dynamics. Journal of Materials Chemistry A, 2021, 9, 2448-2458.	5.2	25
368	Poly(Alkyl-Terphenyl Piperidinium) Ionomers and Membranes with an Outstanding Alkaline Membrane Fuel Cell Performance of 2.58 W cm ⁻² . Angewandte Chemie, 2021, 133, 7789-7797.	1.6	29
369	The effect of amino-modified mesoporous silica nanospheres on properties of SPEEK / HPW @ Mesoporous Silica Nanoparticles proton exchange membrane. Journal of the Chinese Chemical Society, 2021, 68, 1197-1204.	0.8	9
370	Highly conductive anion exchange membranes based on polymer networks containing imidazolium functionalised side chains. Scientific Reports, 2021, 11, 3764.	1.6	22
371	Anion exchange polyelectrolytes for membranes and ionomers. Progress in Polymer Science, 2021, 113, 101345.	11.8	264
372	Novel Proton Exchange Membrane with Long-Range Acid-Base-Pair Proton Transfer Pathways Based on Functionalized Polyethyleneimine. ACS Sustainable Chemistry and Engineering, 2021, 9, 3963-3974.	3.2	16
373	Self-Cross-Linked Sulfonated Poly(ether ether ketone) with Pendant Sulfoalkoxy Groups for Proton Exchange Membrane Fuel Cells. ACS Applied Energy Materials, 2021, 4, 2732-2740.	2.5	24
374	Enhancing Proton Conductivity of Sulfonated Poly(ether ether ketone)-Based Membranes by Incorporating Phosphotungstic-Acid-Coupled Graphene Oxide. Industrial & Engineering Chemistry Research, 2021, 60, 4460-4470.	1.8	22
375	Nanostructured Polymer Composite Electrolytes with Self-Assembled Polyoxometalate Networks for Proton Conduction. CCS Chemistry, 2022, 4, 151-161.	4.6	35
376	Alcohol-Treated Porous PTFE Substrate for the Penetration of PTFE-Incompatible Hydrocarbon-Based Ionomer Solutions. Langmuir, 2021, 37, 3694-3701.	1.6	18
377	Constructing micro-phase separation structure to improve the performance of anion-exchange membrane based on poly(aryl piperidinium) cross-linked membranes. Journal of Power Sources, 2021, 487, 229429.	4.0	91
378	Porous PTFE reinforced SPEEK proton exchange membranes for enhanced mechanical, dimensional, and electrochemical stability. Polymer, 2021, 218, 123506.	1.8	23
379	Recent Progress in Electrolyte Development and Design Strategies for Next-Generation Potassium-Ion Batteries. Batteries and Supercaps, 2021, 4, 1428-1450.	2.4	29

#	ARTICLE	IF	CITATIONS
380	Ionic Mobility in Ion-Exchange Membranes. <i>Membranes</i> , 2021, 11, 198.	1.4	49
381	Accurate evaluation of hydrogen crossover in water electrolysis systems for wetted membranes. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 15135-15144.	3.8	16
382	Anion exchange membrane based on poly(arylene ether ketone) containing long alkyl densely quaternized carbazole derivative pendant. <i>Journal of Membrane Science</i> , 2021, 623, 119079.	4.1	35
383	Ultrafast and Stable Proton Conduction in Polybenzimidazole Covalent Organic Frameworks via Confinement and Activation. <i>Angewandte Chemie</i> , 2021, 133, 13028-13033.	1.6	8
384	Ultrafast and Stable Proton Conduction in Polybenzimidazole Covalent Organic Frameworks via Confinement and Activation. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 12918-12923.	7.2	58
385	Poly(fluorenyl aryl piperidinium) membranes and ionomers for anion exchange membrane fuel cells. <i>Nature Communications</i> , 2021, 12, 2367.	5.8	193
386	Reinforced Polyphenylene Ionomer Membranes Exhibiting High Fuel Cell Performance and Mechanical Durability. <i>ACS Materials Au</i> , 2021, 1, 81-88.	2.6	29
387	A Review of Nanostructured Ion-Exchange Membranes. <i>Advanced Materials Technologies</i> , 2021, 6, 2001171.	3.0	25
388	Durable and highly proton conducting poly(arylene perfluorophenylphosphonic acid) membranes. <i>Journal of Membrane Science</i> , 2021, 623, 119074.	4.1	18
389	Side-chain manipulation of poly (phenylene oxide) based anion exchange membrane: Alkoxy extender integrated with flexible spacer. <i>Journal of Membrane Science</i> , 2021, 624, 119088.	4.1	47
390	Highly Proton Conductive Phosphoric Acid Porous Organic Polymers via Knitting Method. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 6337-6343.	1.8	10
391	Enhanced proton conductivity of Nafion membrane with electrically aligned sulfonated graphene nanoplates. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 17784-17792.	3.8	10
392	Designing Ion-Selective Membranes for Vanadium Redox Flow Batteries. <i>Advanced Materials Technologies</i> , 2021, 6, 2001308.	3.0	16
393	Side-Chain-Type Anion Exchange Membranes Based on Poly(arylene ether sulfone)s Containing High-Density Quaternary Ammonium Groups. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 23547-23557.	4.0	34
394	OH ⁻ and H ₃ O ⁺ Diffusion in Model AEMs and PEMs at Low Hydration: Insights from Ab Initio Molecular Dynamics. <i>Membranes</i> , 2021, 11, 355.	1.4	11
395	Crosslinked quaternary phosphonium-functionalized poly(ether ether ketone) polymer-based anion-exchange membranes. <i>Journal of Membrane Science</i> , 2021, 626, 119167.	4.1	59
396	Alkaline fuel cell technology - A review. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 18489-18510.	3.8	166
397	Recent Insights on Catalyst Layers for Anion Exchange Membrane Fuel Cells. <i>Advanced Science</i> , 2021, 8, e2100284.	5.6	76

#	ARTICLE	IF	CITATIONS
398	Comb-shaped anion exchange membranes: Hydrophobic side chains grafted onto backbones or linked to cations?. <i>Journal of Membrane Science</i> , 2021, 626, 119096.	4.1	26
399	Synthesis of Sulfonated Poly(Arylene Ether Sulfone)s Containing Aliphatic Moieties for Effective Membrane Electrode Assembly Fabrication by Low-Temperature Decal Transfer Methods. <i>Polymers</i> , 2021, 13, 1713.	2.0	5
400	Towards performance improved anion exchange membrane: Cross-linking with multi-cations oligomer modified graphene oxide. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 23855-23867.	3.8	16
401	Freestanding polyimide fiber network as thermally safer separator for high-performance Li metal batteries. <i>Electrochimica Acta</i> , 2021, 377, 138069.	2.6	11
402	Structural Transitions During Formation and Rehydration of Proton Conducting Polymeric Membranes. <i>Macromolecular Rapid Communications</i> , 2021, 42, 2000717.	2.0	0
403	Understanding of hydrocarbon ionomers in catalyst layers for enhancing the performance and durability of proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2021, 493, 229671.	4.0	21
404	Dual-Side-Chain-Grafted Poly(phenylene oxide) Anion Exchange Membranes for Fuel-Cell and Electrodialysis Applications. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 8611-8622.	3.2	23
405	Mesoscale Morphologies of Nafion-Based Blend Membranes by Dissipative Particle Dynamics. <i>Processes</i> , 2021, 9, 984.	1.3	2
406	Neutron imaging of operando proton exchange membrane fuel cell with novel membrane. <i>Journal of Power Sources</i> , 2021, 496, 229836.	4.0	7
407	Design and synthesis of side-chain optimized poly(2,6-dimethyl-1,4-phenylene oxide)-g-poly(styrene) Tj ETQq1 1 0.784314 rgBT /Over water-resistance and the sulfonation degree. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 20664-20677.	3.8	9
408	High flexible ether-free semi-crystalline fuel cell membranes: Molecular-level design, assembly structure and properties. <i>Journal of Membrane Science</i> , 2021, 627, 119240.	4.1	6
409	Layered double hydroxide membrane with high hydroxide conductivity and ion selectivity for energy storage device. <i>Nature Communications</i> , 2021, 12, 3409.	5.8	94
410	Humidity-Induced Mechanical Behavior and Proton Transport Mechanism in Aromatic Multiblock Ionomer Membranes. <i>ACS Applied Energy Materials</i> , 2021, 4, 5809-5820.	2.5	2
411	Self-assembled lamellar nanochannels in polyoxometalate-polymer nanocomposites for proton conduction. <i>Chinese Chemical Letters</i> , 2021, 32, 2013-2016.	4.8	27
412	Highly Stable and Conductive Multicationic Poly(biphenyl indole) with Extender Side Chains for Anion Exchange Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2021, 4, 6154-6165.	2.5	47
413	Composite Anion Exchange Membranes Fabricated by Coating and UV Crosslinking of Low-Cost Precursors Tested in a Redox Flow Battery. <i>Polymers</i> , 2021, 13, 2396.	2.0	6
414	Nafion/PTFE Composite Membranes for a High Temperature PEM Fuel Cell Application. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 11086-11094.	1.8	17
415	Insight into the Alkaline Stability of Nâ€Heterocyclic Ammonium Groups for Anionâ€™Exchange Polyelectrolytes. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 19272-19280.	7.2	85

#	ARTICLE	IF	CITATIONS
416	Insight into the Alkaline Stability of Nâ€Heterocyclic Ammonium Groups for Anionâ€Exchange Polyelectrolytes. <i>Angewandte Chemie</i> , 2021, 133, 19421-19429.	1.6	15
417	Improving ionic conductivity of polymer-based solid electrolytes for lithium metal batteries. <i>Chinese Journal of Chemical Engineering</i> , 2022, 43, 202-215.	1.7	11
418	Ionic liquid-impregnated covalent organic framework/silk nanofibril composite membrane for efficient proton conduction. <i>Chemical Engineering Journal</i> , 2021, 415, 129021.	6.6	48
419	Improved proton conduction of sulfonated poly (ether ether ketone) membrane by sulfonated covalent organic framework nanosheets. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 26550-26559.	3.8	23
420	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
421	Bipolar Membrane and Interface Materials for Electrochemical Energy Systems. <i>ACS Applied Energy Materials</i> , 2021, 4, 7419-7439.	2.5	21
422	Fluorine-Free Precise Polymer Electrolyte for Efficient Proton Transport: Experiments and Simulations. <i>Chemistry of Materials</i> , 2021, 33, 6041-6051.	3.2	20
423	Dimethylimidazolium-Functionalized Polybenzimidazole and Its Organicâ€Inorganic Hybrid Membranes for Anion Exchange Membrane Fuel Cells. <i>Polymers</i> , 2021, 13, 2864.	2.0	10
424	Highly Proton-Conducting Membranes Based on Poly(arylene ether)s with Densely Sulfonated and Partially Fluorinated Multiphenyl for Fuel Cell Applications. <i>Membranes</i> , 2021, 11, 626.	1.4	8
425	Anion Exchange membrane with High hydroxide ion conductivity and robust tensile strength fabricated from quaternary ammonia functionalized <i>Pinus contorta</i> , Dougl. Chip. <i>Industrial Crops and Products</i> , 2021, 166, 113458.	2.5	7
426	Mechanically robust microporous anion exchange membranes with efficient anion conduction for fuel cells. <i>Chemical Engineering Journal</i> , 2021, 418, 129311.	6.6	44
427	Construction of new alternative transmission sites by incorporating structure-defect metal-organic framework into sulfonated poly(arylene ether ketone sulfone)s. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 27193-27206.	3.8	28
428	Flexible Bis-piperidinium Side Chains Construct Highly Conductive and Robust Anion-Exchange Membranes. <i>ACS Applied Energy Materials</i> , 2021, 4, 9701-9711.	2.5	34
429	Development of a proton exchange membrane based on trifluoromethanesulfonylimide-grafted polybenzimidazole. <i>Polymer Journal</i> , 2021, 53, 1403-1411.	1.3	5
430	Designing Anion-Exchange Ionomers with Oriented Nanoscale Phase Separation at a Silver Interface. <i>Journal of Physical Chemistry C</i> , 2021, 125, 20592-20605.	1.5	3
431	Covalentâ€Organic Frameworks (COFs) as Proton Conductors. <i>Advanced Energy Materials</i> , 2021, 11, 2102300.	10.2	106
432	Anion exchange membranes with fast ion transport channels driven by cation-dipole interactions for alkaline fuel cells. <i>Journal of Membrane Science</i> , 2021, 634, 119404.	4.1	51
433	Fenton Stability of Mesoporous Ceriaâ€Silica and Its Role in Enhanced Durability of Poly(arylene ether) Tj ETQq1 1 0.784314 rgBT /Ome Omega, 2021, 6, 25551-25561.	1.6	6

#	ARTICLE	IF	CITATIONS
434	Superior acidic sulfate ester group based high conductive membrane for vanadium redox flow battery. <i>Journal of Power Sources</i> , 2021, 506, 230203.	4.0	16
435	Charged Block Copolymers: From Fundamentals to Electromechanical Applications. <i>Accounts of Chemical Research</i> , 2021, 54, 4024-4035.	7.6	24
436	ePTFE reinforced, sulfonated aromatic polymer membranes enable durable, high-temperature operable PEMFCs. <i>IScience</i> , 2021, 24, 102962.	1.9	17
437	Functionalized TiO ₂ mediated organic-inorganic composite membranes based on quaternized poly(arylene ether ketone) with enhanced ionic conductivity and alkaline stability for alkaline fuel cells. <i>Journal of Membrane Science</i> , 2021, 634, 119435.	4.1	31
438	Development of Polymer Nanofiber-based Electrolyte Membranes for PEFCs. <i>Denki Kagaku</i> , 2021, 89, 273-277.	0.0	0
439	A novel concept of hierarchical cation exchange membrane fabricated from commodity precursors through an easily scalable process. <i>Journal of Membrane Science</i> , 2021, 636, 119594.	4.1	11
440	Anion exchange membranes with twisted poly(terphenylene) backbone: Effect of the N-cyclic cations. <i>Journal of Membrane Science</i> , 2021, 635, 119525.	4.1	26
441	Water channel structure of alternative perfluorosulfonic acid membranes for fuel cells. <i>Journal of Membrane Science</i> , 2021, 636, 119559.	4.1	1
442	Molecular dynamics study on water and hydroxide transfer mechanisms in PSU-g-alkyl-TMA membranes at low hydration: Effect of side chain length. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 33915-33933.	3.8	4
443	Novel sulfonated N-heterocyclic poly(aryl ether ketone)s with pendant phenyl groups for proton exchange membrane performing enhanced oxidative stability and excellent fuel cell properties. <i>Journal of Membrane Science</i> , 2022, 641, 119926.	4.1	25
444	High-performance multiblock PEMs containing a highly acidic fluorinated-hydrophilic domain for water electrolysis. <i>Journal of Membrane Science</i> , 2021, 638, 119694.	4.1	12
445	Unveiling the influence of radiation-induced grafting methods on the properties of polyethylene-based anion-exchange membranes for alkaline fuel cells. <i>Journal of Power Sources</i> , 2021, 512, 230484.	4.0	14
446	High-performance poly(fluorenyl aryl piperidinium)-based anion exchange membrane fuel cells with realistic hydrogen supply. <i>Journal of Power Sources</i> , 2021, 512, 230474.	4.0	12
447	Chemically & physically stable crosslinked poly(aryl-co-aryl piperidinium)s for anion exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2021, 638, 119685.	4.1	57
448	High proton selectivity membrane based on the keto-linked cationic covalent organic framework for acid recovery. <i>Journal of Membrane Science</i> , 2021, 640, 119800.	4.1	23
449	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
450	Novel application of ion exchange membranes for preparing effective silver and copper based antibacterial membranes. <i>Chemosphere</i> , 2022, 287, 132131.	4.2	22
451	Perfluorocyclobutyl-containing multiblock copolymers to induce enhanced hydrophilic/hydrophobic phase separation and high proton conductivity at low humidity. <i>Journal of Membrane Science</i> , 2022, 641, 119892.	4.1	13

#	ARTICLE	IF	CITATIONS
452	Acidity effects of medium fluids on anhydrous proton conductivity of acid-swollen block polymer electrolyte membranes. <i>RSC Advances</i> , 2021, 11, 19012-19020.	1.7	5
453	Sulfonated polybenzimidazole/amine functionalized titanium dioxide (sPBI/AFT) composite electrolyte membranes for high temperature proton exchange membrane fuel cells usage. <i>Chinese Journal of Chemical Engineering</i> , 2020, 28, 2425-2437.	1.7	31
454	Enhancement in proton conductivity by blending poly(polyoxometalate)-b-poly(hexanoic acid) block copolymers with sulfonated polysulfone. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 15495-15506.	3.8	6
455	Constructing micro-phase separation structure by multi-arm side chains to improve the property of anion exchange membrane. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 17916-17926.	3.8	19
456	Water transport through hydrocarbon-based proton exchange membranes. <i>Journal of Membrane Science</i> , 2020, 610, 118276.	4.1	9
457	NMR spin diffusion measurements in disordered polymers: Insights and limitations. <i>Physical Review Materials</i> , 2019, 3, .	0.9	3
458	Stability & Kinetics of the Bipolar Membrane Interface: Implications for Electrochemical Technologies. <i>Journal of the Electrochemical Society</i> , 2020, 167, 164513.	1.3	9
459	Study on Control of Polymeric Architecture of Sulfonated Hydrocarbon-Based Polymers for High-Performance Polymer Electrolyte Membranes in Fuel Cell Applications. <i>Polymers</i> , 2021, 13, 3520.	2.0	17
460	3D Zipped Interface: In Situ Covalent Locking for High Performance of Anion Exchange Membrane Fuel Cells. <i>Advanced Science</i> , 2021, 8, e2102637.	5.6	21
461	Highly Selective Anion Exchange Membrane Based on Quaternized Poly(triphenyl piperidine) for the Vanadium Redox Flow Battery. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 14297-14306.	3.2	17
462	H ⁺ -Conducting Aromatic Multiblock Copolymer and Blend Membranes and Their Application in PEM Electrolysis. <i>Polymers</i> , 2021, 13, 3467.	2.0	2
463	Study on fiber-reinforced proton exchange membrane using high-surface-energy substrate. <i>Journal of Membrane Science</i> , 2022, 647, 119940.	4.1	4
464	Dielectric properties of organophosphorus polyurethane ionomers. <i>Journal of Applied Polymer Science</i> , 0, , 51751.	1.3	3
465	Highly Cationized and Porous Hyper-cross-linked Polymer Nanospheres for Composite Anion Exchange Membranes. <i>ACS Applied Polymer Materials</i> , 2021, 3, 5612-5621.	2.0	9
466	New Approaches to the Preparation of Nanocomposite Proton Exchange Membranes for Fuel Cells. <i>Nanotechnologies in Russia</i> , 2020, 15, 319-325.	0.7	0
467	Clustered piperidinium-functionalized poly(terphenylene) anion exchange membranes with well-developed conductive nanochannels. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 1247-1256.	5.0	38
468	New crosslinked membranes based on cardo-poly(etherketone) and poly(ethylene imine) for the vanadium redox flow battery. <i>European Polymer Journal</i> , 2021, 161, 110858.	2.6	5
469	Anion exchange membranes based on long side-chain quaternary ammonium-functionalized poly(arylene piperidinium)s for vanadium redox flow batteries. <i>Science China Materials</i> , 2022, 65, 683-694.	3.5	20

#	ARTICLE	IF	CITATIONS
470	Micro-phase separation promoted by electrostatic field in electrospinning of alkaline polymer electrolytes: DFT and MD simulations. <i>Chemical Engineering Science</i> , 2022, 248, 117171.	1.9	9
471	Polyamide-coated Nafion composite membranes with reduced hydrogen crossover produced via interfacial polymerization. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 1202-1216.	3.8	12
472	Mechanical stress and strain investigation of sulfonated Poly(ether ether ketone) proton exchange membrane in fuel cells: A numerical study. <i>Renewable Energy</i> , 2022, 184, 182-200.	4.3	10
473	Ultrafast ion-transport at hierarchically porous covalent-organic membrane interface for efficient power production. <i>Nano Energy</i> , 2022, 92, 106690.	8.2	10
474	Oxidized black phosphorus nanosheets/sulfonated poly (ether ether ketone) composite membrane for vanadium redox flow battery. <i>Journal of Membrane Science</i> , 2022, 644, 120084.	4.1	10
475	Sandwich-structure PI/SPEEK/PI proton exchange membrane developed for achieving the high durability on excellent proton conductivity and stability. <i>Journal of Membrane Science</i> , 2022, 644, 120116.	4.1	27
476	Impact of side-chains in poly(dibenzyl-co-terphenyl piperidinium) copolymers for anion exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2022, 644, 120109.	4.1	44
477	Quantitative analysis of proton exchange membrane prepared by radiation-induced grafting on ultra-thin FEP film. <i>International Journal of Hydrogen Energy</i> , 2021, , .	3.8	1
478	A critical review and commentary on recent progress of additive manufacturing and its impact on membrane technology. <i>Journal of Membrane Science</i> , 2022, 645, 120041.	4.1	38
479	Multication Cross-Linked Poly(<i>p</i> -terphenyl isatin) Anion Exchange Membranes for Fuel Cells: Effect of Cross-Linker Length on Membrane Performance. <i>ACS Applied Energy Materials</i> , 2021, 4, 14476-14487.	2.5	28
480	Nitrogen-rich Graphdiyne Film for Efficiently Suppressing the Methanol Crossover in Direct Methanol Fuel Cells. <i>Chemical Research in Chinese Universities</i> , 2021, 37, 1275-1282.	1.3	2
481	Membranes for Cation Transport Based on Dendronized Poly(Epichlorohydrin-Co-Ethylene Oxide). Part 2: Membrane Characterization and Transport Properties. <i>Polymers</i> , 2021, 13, 3915.	2.0	1
482	Novel Polymers with Ultrapermselectivity Based on Alternately Planar and Contorted Units for Gas Separation. , 2022, 4, 61-67.		6
483	Investigation into the performance decay of proton-exchange membranes based on sulfonated heterocyclic poly(aryl ether ketone)s in Fenton's reagent. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 1760-1769.	1.3	4
484	Electromembranes for Water Treatment Driven by Electricity. <i>Chemistry in the Environment</i> , 2021, , 57-82.	0.2	0
485	Enhancing the durability of hydrocarbon-membrane-based polymer electrolyte water electrolysis using a radical scavenger-embedded interlocking interfacial layer. <i>Journal of Materials Chemistry A</i> , 2022, 10, 789-798.	5.2	14
486	Light-induced Self-Writing of polymer composites: A novel approach to develop core-shell type structures. <i>Composites Communications</i> , 2022, 30, 101058.	3.3	4
487	Reinforced poly(fluorenyl-co-terphenyl piperidinium) anion exchange membranes for fuel cells. <i>Journal of Membrane Science</i> , 2022, 644, 120160.	4.1	23

#	ARTICLE	IF	CITATIONS
488	Charged nanochannels endow COF membrane with weakly concentration-dependent methanol permeability. <i>Journal of Membrane Science</i> , 2022, 645, 120186.	4.1	10
489	Sulfonated poly(phenylene-co-arylene ether sulfone) multiblock membranes for application in high-performance fuel cells. <i>Journal of Membrane Science</i> , 2022, 645, 120203.	4.1	13
490	Synthesis partially sulfonamide hydrocarbon membranes for PEMFC. , 2020, , .		0
491	Anion-conducting polyelectrolytes for energy devices. <i>Trends in Chemistry</i> , 2022, 4, 236-249.	4.4	34
492	Nanocage-oriented induction for highly ion-selective sub-1-nanometer channels of membranes. <i>Journal of Materials Chemistry A</i> , 0, , .	5.2	5
493	Bis-pyridinium crosslinked poly(ether ether ketone) anion exchange membranes with enhancement of hydroxide conductivity and alkaline stability. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 6097-6110.	3.8	18
494	Di-piperidinium-crosslinked poly(fluorenyl-co-terphenyl piperidinium)s for high-performance alkaline exchange membrane fuel cells. <i>Journal of Materials Chemistry A</i> , 2022, 10, 3678-3687.	5.2	45
495	Strategies for Improving Anion Exchange Membrane Fuel Cell Performance by Optimizing Electrode Conditions. <i>Journal of the Electrochemical Society</i> , 2022, 169, 014515.	1.3	7
496	Theoretical studies on the proton dissociation and degradation of sulfonated polyethylene electrolyte membrane. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 5553-5563.	3.8	0
497	Enhanced proton conductivity of poly(ether sulfone) multi-block copolymers grafted with densely pendant sulfoalkoxyl side chains for proton exchange membranes. <i>Polymer</i> , 2022, 242, 124604.	1.8	10
498	Poly(p-terphenyl alkylene)s grafted with highly acidic sulfonated polypentafluorostyrene side chains for proton exchange membranes. <i>Journal of Membrane Science</i> , 2022, 647, 120270.	4.1	18
499	A quantum dot intercalated robust covalent organic framework membrane for ultrafast proton conduction. <i>Journal of Materials Chemistry A</i> , 2022, 10, 6616-6622.	5.2	11
500	Robust and durable poly(aryl-co-aryl piperidinium) reinforced membranes for alkaline membrane fuel cells. <i>Journal of Materials Chemistry A</i> , 2022, 10, 6587-6595.	5.2	27
501	Fully Hydrocarbon Membrane Electrode Assemblies for Proton Exchange Membrane Fuel Cells and Electrolyzers: An Engineering Perspective. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	34
502	Enhanced proton conductivity assisted by sodium ions in the proton conductive hybrid membranes. <i>Materials Chemistry and Physics</i> , 2022, 280, 125845.	2.0	2
503	Elucidating the role of alkyl chain in poly(aryl piperidinium) copolymers for anion exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2022, 647, 120341.	4.1	45
504	Approaches towards the development of heteropolyacid-based high temperature membranes for PEM fuel cells. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 6638-6656.	3.8	42
505	Enhanced Proton Conductivity and Stability of Polybenzimidazole Membranes at Low Phosphoric Acid Doping Levels Via Constructing Efficient Proton Transport Pathways with Ionic Liquids and Cnts. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0

#	ARTICLE	IF	CITATIONS
506	Elucidating the Role of Alkyl Chain in Poly(Aryl Piperidinium) Copolymers for Anion Exchange Membrane Fuel Cells. SSRN Electronic Journal, 0, , .	0.4	0
507	Dimensionally stable multication-crosslinked poly(arylene piperidinium) membranes for water electrolysis. Journal of Materials Chemistry A, 2022, 10, 8401-8412.	5.2	41
508	Development of Poly(Arylene Ether Sulfone)S Containing Aliphatic Moiety for Low-Temperature Decal Transfer Method. SSRN Electronic Journal, 0, , .	0.4	0
509	Construction of Safety and Non-flammable Polyimide Separator Containing Carboxyl Groups for Advanced Fast Charging Lithium-ion Batteries. Chinese Journal of Polymer Science (English Edition), 2022, 40, 345-354.	2.0	4
510	Study on the PI/SPEEK nanofiber composite proton exchange membrane for fuel cells. Journal of Physics: Conference Series, 2022, 2194, 012003.	0.3	5
511	MXene-copper oxide/sulfonated polyether ether ketone as a hybrid composite proton exchange membrane in electrochemical water electrolysis. Catalysis Today, 2023, 407, 96-106.	2.2	11
512	Hollow COF Selective Layer Based Flexible Composite Membranes Constructed by an Integrated "Casting" "Precipitation" "Evaporation" Strategy. Advanced Functional Materials, 2022, 32, .	7.8	20
513	Controlling Hydronium Diffusivity in Model Proton Exchange Membranes. Journal of Physical Chemistry Letters, 2022, 13, 2245-2253.	2.1	7
514	Aligned for renewable power. Nature Energy, 0, , .	19.8	0
515	Current status of cross-linking and blending approaches for durability improvement of hydrocarbon-based fuel cell membranes. International Journal of Hydrogen Energy, 2022, 47, 13460-13489.	3.8	6
516	Morphology and Dynamics in Hydroxide-Conducting Polysulfones. ACS Applied Polymer Materials, 2022, 4, 2470-2480.	2.0	12
517	Low-cost hydrocarbon membrane enables commercial-scale flow batteries for long-duration energy storage. Joule, 2022, 6, 884-905.	11.7	53
518	Facile preparation of polybenzimidazole membrane crosslinked with three-dimensional polyaniline for high-temperature proton exchange membrane. Journal of Power Sources, 2022, 528, 231218.	4.0	25
519	Oligomeric chain extender-derived poly(p-phenylene)-based multi-block polymer membranes for a wide operating current density range in polymer electrolyte membrane water electrolysis. Journal of Power Sources, 2022, 526, 231146.	4.0	16
520	Comb-shaped sulfonated poly(aryl ether sulfone) proton exchange membrane for fuel cell applications. International Journal of Hydrogen Energy, 2022, 47, 16249-16261.	3.8	15
521	Preparation and properties of composite membranes of fully fluorinated nanofibrous electrospun mat impregnated with highly sulfonated polysulfone: Effect of thermal treatment on the mat and the membranes thereof. International Journal of Hydrogen Energy, 2022, 47, 17313-17328.	3.8	2
522	High methanol resistance semi-crystalline sulfonated poly(ether ketone) proton exchange membrane for direct methanol fuel cell. Journal of Membrane Science, 2022, 650, 120413.	4.1	22
523	Proton exchange membranes for high temperature proton exchange membrane fuel cells: Challenges and perspectives. Journal of Power Sources, 2022, 533, 231386.	4.0	99

#	ARTICLE	IF	CITATIONS
524	The Role of Fluorinated Polymers in the Water Management of Proton Exchange Membrane Fuel Cells: A Review. <i>Energies</i> , 2021, 14, 8387.	1.6	11
525	Structural architectures of polymer proton exchange membranes suitable for high-temperature fuel cell applications. <i>Science China Materials</i> , 2022, 65, 273-297.	3.5	14
526	A phosphonated phenol-formaldehyde-based high-temperature proton exchange membrane with intrinsic protonic conductors and proton transport channels. <i>Journal of Materials Chemistry A</i> , 2022, 10, 10916-10925.	5.2	26
527	Efficient lamellar two-dimensional proton channels derived from dipole interactions in a polyelectrolyte membrane. <i>AIChE Journal</i> , 2022, 68, .	1.8	8
528	Stability Analysis of Substituted Cobaltocenium [Bis(cyclopentadienyl)cobalt(III)] Employing Chemistry-Informed Neural Networks. <i>Journal of Chemical Theory and Computation</i> , 2022, 18, 3099-3110.	2.3	3
529	Optimized step-growth polymerization of water-insoluble, highly sulfonated poly(phenylene sulfone). <i>Polymers for Advanced Technologies</i> , 2022, 33, 2336-2343.	1.6	1
530	High performance poly(isatin alkyl-terphenyl)s proton exchange membranes with flexible alkylsulfonated side groups. <i>High Performance Polymers</i> , 2022, 34, 797-810.	0.8	2
531	A Short Overview of Biological Fuel Cells. <i>Membranes</i> , 2022, 12, 427.	1.4	8
532	Improving the conductivity and dimensional stability of anion exchange membranes by grafting of quaternized dendrons. <i>Journal of Polymer Science</i> , 2022, 60, 2055-2068.	2.0	4
533	Modification of sulfonated poly(etherether ketone) composite polymer electrolyte membranes with 2D molybdenum disulfide nanosheet-coated carbon nanotubes for direct methanol fuel cell application. <i>Polymer</i> , 2022, 249, 124839.	1.8	10
534	Hydrophilic-Hydrophobic Bulky Units Modified Anion Exchange Membranes for Fuel Cell Application. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 5748-5757.	3.2	19
535	2,6-Azulene-based Homopolymers: Design, Synthesis, and Application in Proton Exchange Membrane Fuel Cells. <i>ACS Macro Letters</i> , 2022, 11, 680-686.	2.3	8
536	Current Challenges and Perspectives of Polymer Electrolyte Membranes. <i>Macromolecules</i> , 2022, 55, 3773-3787.	2.2	45
537	In situ crosslinking of polyoxometalate-polymer nanocomposites for robust high-temperature proton exchange membranes. <i>Chinese Chemical Letters</i> , 2023, 34, 107497.	4.8	7
538	Cost-effective Prussian blue analogue composite proton exchange membranes for low humidity fuel cell operation. <i>Journal of Power Sources</i> , 2022, 537, 231542.	4.0	9
539	Host-guest interaction induced ion channels for accelerated OH ⁻ transport in anion exchange membranes. <i>Journal of Membrane Science</i> , 2022, 655, 120580.	4.1	15
540	One Porphyrin Per Chain Self-Assembled Helical Ion-Exchange Channels for Ultrahigh Osmotic Energy Conversion. <i>Journal of the American Chemical Society</i> , 2022, 144, 9472-9478.	6.6	41
541	Anion Exchange Membranes Incorporating Multi-Spirocyclic Quaternary Ammonium Cations via Ultraviolet-Initiated Polymerization for Zinc Slurry-Air Flow Batteries. <i>ACS Applied Energy Materials</i> , 2022, 5, 7069-7080.	2.5	10

#	ARTICLE	IF	CITATIONS
542	Tailoring the molecular structure of pyridine-based polymers for enhancing performance of anion exchange electrolyte membranes. <i>Renewable Energy</i> , 2022, 194, 366-377.	4.3	13
543	Ion exchange membrane related processes towards carbon capture, utilization and storage: Current trends and perspectives. <i>Separation and Purification Technology</i> , 2022, 296, 121390.	3.9	18
544	Polyoxometalate-Cross-Linked Proton Exchange Membranes with Post-Assembled Nanostructures for High-Temperature Proton Conduction. <i>ACS Applied Energy Materials</i> , 2022, 5, 9058-9069.	2.5	18
545	Development of efficient aqueous organic redox flow batteries using ion-sieving sulfonated polymer membranes. <i>Nature Communications</i> , 2022, 13, .	5.8	58
546	High alkaline stability and long-term durability of imidazole functionalized poly(ether ether ketone) by incorporating graphene oxide/metal-organic framework complex. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 25755-25768.	3.8	21
547	Supramolecular hydrogen-bonded organic networks grown on cellulose fibers for efficient proton conduction. <i>Cellulose</i> , 2022, 29, 6247-6259.	2.4	4
548	Suppression of radical attack in polymer electrolyte membranes using a vinyl polymer blend interlayer with low oxygen permeability. <i>Journal of Membrane Science</i> , 2022, 658, 120734.	4.1	2
549	New block poly(ether sulfone) based anion exchange membranes with rigid side-chains and high-density quaternary ammonium groups for fuel cell application. <i>Polymer Chemistry</i> , 2022, 13, 4395-4405.	1.9	7
550	Positron annihilation lifetime study of subnano level free volume features of grafted polymer electrolyte membranes for hydrogen fuel cell applications. <i>Polymers for Advanced Technologies</i> , 2022, 33, 2952-2965.	1.6	3
551	Novel bifunctional fillers (ATP/Pa€“CNOs) for sulfonated poly(aryl ether sulfone) matrix for improved power output and durability of H ₂ /O ₂ fuel cell at low humidity. <i>Journal of Membrane Science</i> , 2022, 660, 120774.	4.1	4
552	New proton conductive membranes of indazole- and condensed pyrazolebisphosphonic acid-Nafion membranes for PEMFC. <i>Renewable Energy</i> , 2022, 196, 1187-1196.	4.3	9
553	Multifunctional Sulfonated Polytriazoles: Proton-Exchange Membrane Properties, Molecular Logic Gates, and Modeling of Stimuli-Responsive Behaviors. <i>ACS Applied Polymer Materials</i> , 2022, 4, 5583-5595.	2.0	4
554	Enhanced proton conductivity and stability of polybenzimidazole membranes at low phosphoric acid doping levels via constructing efficient proton transport pathways with ionic liquids and carbon nanotubes. <i>Journal of Power Sources</i> , 2022, 543, 231802.	4.0	23
555	Longâ€Life Aqueous Organic Redox Flow Batteries Enabled by Amidoximeâ€Functionalized Ionâ€Selective Polymer Membranes. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	6
556	Longâ€Life Aqueous Organic Redox Flow Batteries Enabled by Amidoximeâ€Functionalized Ionâ€Selective Polymer Membranes. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	24
557	Anchoring Highly Sulfonated Hyperbranched PBI onto oPBI: Fast Proton Conduction with Low Leaching. <i>ACS Applied Energy Materials</i> , 2022, 5, 10802-10814.	2.5	5
559	Strong and Flexible High-Performance Anion Exchange Membranes with Long-Distance Interconnected Ion Transport Channels for Alkaline Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 38132-38143.	4.0	11
560	Advances in polymeric cation exchange membranes for electrodialysis: An overview. <i>Journal of Environmental Chemical Engineering</i> , 2022, 10, 108295.	3.3	12

#	ARTICLE	IF	CITATIONS
561	Development of Poly(Arylene ether Sulfone)-Based blend membranes containing aliphatic moieties for the low-temperature decal transfer method. <i>Journal of Membrane Science</i> , 2022, 660, 120853.	4.1	1
562	Consecutive and reliable proton transfer channels construction based on the compatible interface between nanofiber and SPEEK. <i>Journal of Membrane Science</i> , 2022, 662, 121001.	4.1	7
563	Low humidity dependence of proton conductivity in modified zirconium(IV)-hydroxy ethylidene diphosphonates. <i>Materials Chemistry Frontiers</i> , 2022, 6, 3271-3278.	3.2	1
564	How membrane characteristics influence the performance of CO_2 and CO electrolysis. <i>Energy and Environmental Science</i> , 2022, 15, 4440-4469.	15.6	40
565	Ultrathin anion exchange membranes with an improved OH^- transfer rate for high-performance AEMFCs. <i>Journal of Materials Chemistry A</i> , 2022, 10, 21503-21511.	5.2	24
566	Field Grand Challenge for Membrane Science and Technology. , 0, 1, .		4
567	Sulfonated Poly(arylene ether sulfone) Multi-Block Copolymers with Selectively Cross-Linked Domains for Proton Exchange Membranes. <i>ACS Applied Polymer Materials</i> , 2022, 4, 7476-7486.	2.0	2
568	Functionalized POSS-Modified SEBS-Based Composite Anion-Exchange Membranes for AEMFCs. <i>Energy & Fuels</i> , 2022, 36, 12780-12790.	2.5	4
569	Diffusion in Sulfonated Co-Polynaphthoyleneimide Proton Exchange Membranes with Different Ratios of Hydrophilic to Hydrophobic Groups Studied Using SFG NMR. <i>Macromolecules</i> , 2022, 55, 8823-8833.	2.2	5
570	A Secondary-Doped Polybenzimidazole Membrane with High Proton Conductivity and Ion Selectivity for Vanadium Redox Flow Batteries. <i>Journal of the Electrochemical Society</i> , 2022, 169, 110545.	1.3	2
571	The Effect of Ion Exchange Poisoning on the Ion Transport and Conduction in Polymer Electrolyte Membranes (PEMs) for Water Electrolysis. <i>Journal of the Electrochemical Society</i> , 2022, 169, 094510.	1.3	4
572	Development of electrolytes for rechargeable zinc-air batteries: current progress, challenges, and future outlooks. <i>SN Applied Sciences</i> , 2022, 4, .	1.5	9
573	Sulfonated Pentablock Copolymer Membrane Morphological Anisotropy and Its Impact on Dimensional Swelling, Proton Conductivity, and the Transport of Protons and Water. <i>Macromolecules</i> , 2022, 55, 9269-9281.	2.2	4
574	Sterically Hindered Pyridine-Linked Sulfonated Polytriazoles: Fabrication of Membranes and Investigation of Single Fuel Cell Performance. <i>ACS Applied Polymer Materials</i> , 2022, 4, 7450-7462.	2.0	3
575	Machine Learning-Assisted Identification of Copolymer Microstructures Based on Microscopic Images. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 47157-47166.	4.0	7
576	Effect of Covalent Organic Frameworks Containing Different Groups on Properties of Sulfonated Poly(ether ether ketone) Matrix Proton Exchange Membranes. <i>Nanomaterials</i> , 2022, 12, 3518.	1.9	3
577	Key Components and Design Strategy for a Proton Exchange Membrane Water Electrolyzer. <i>Small Structures</i> , 2023, 4, .	6.9	32
578	Ionic Conductivity Enhancement of Li_2ZrCl_6 Halide Electrolytes via Mechanochemical Synthesis for All-Solid-State Lithium-Metal Batteries. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 49839-49846.	4.0	9

#	ARTICLE	IF	CITATIONS
579	Covalent Organic Frameworks for Ion Conduction. , 0, , .		2
581	Review of vanadium and its redox flow batteries for renewable energy storage. Proceedings of Institution of Civil Engineers: Energy, 2024, 177, 3-13.	0.5	1
582	Ion Exchange Membranes: Constructing and Tuning Ion Transport Channels. Advanced Functional Materials, 2022, 32, .	7.8	31
583	Supramolecular interactions enable pseudo-nanophase separation for constructing an ion-transport highway. Chem, 2023, 9, 592-606.	5.8	8
584	In-situ electrochemical surface-enhanced Raman spectroscopy in metal/polyelectrolyte interfaces. Chinese Journal of Catalysis, 2022, 43, 2820-2825.	6.9	2
585	Three birds with one stone: Microphase separation induced by densely grafted short chains in ion conducting membranes. Journal of Membrane Science, 2022, 664, 121119.	4.1	3
586	Alkoxy Phosphonic Acid-Functionalized Conjugated Microporous Polymers for Efficient and Multi-environmental Proton Conduction. Materials Advances, 0, , .	2.6	0
587	Controlling the microphase morphology and performance of cross-linked highly sulfonated polyimide membranes by varying the molecular structure and volume of the hydrophobic cross-linkable diamine monomers. Journal of Membrane Science, 2023, 666, 121177.	4.1	6
588	Biohydrogen Production in Microbial Electrolysis Cells Utilizing Organic Residue Feedstock: A Review. Energies, 2022, 15, 8396.	1.6	4
589	High-Performance and Low-Cost Membranes Based on Poly(vinylpyrrolidone) and Cardo-Poly(etherketone) Blends for Vanadium Redox Flow Battery Applications. Batteries, 2022, 8, 230.	2.1	4
590	Highly Sulfonated Aromatic Graft Polymer with Very High Proton Conductivity and Low Hydrogen Permeability for Water Electrolysis. ACS Energy Letters, 2022, 7, 4427-4435.	8.8	12
591	Predictive Molecular Models for Charged Materials Systems: From Energy Materials to Biomacromolecules. Advanced Materials, 2023, 35, .	11.1	2
592	Synthesis and characterization of cross-linked polymer with sulfonylimide group via UV-radical polymerization for PEMFC. International Journal of Hydrogen Energy, 2022, 47, 40491-40501.	3.8	3
593	Polyoxometalate-polymer nanocomposites with multiplex proton transport channels for high-performance proton exchange membranes. Composites Science and Technology, 2023, 232, 109842.	3.8	9
594	Tailoring proton transfer species on the membrane surface: An approach to enhance proton conductivity for polymer electrolyte membrane fuel cell. Polymer, 2023, 265, 125583.	1.8	1
595	High-performance aromatic proton exchange membranes bearing multiple flexible pendant sulfonate groups: Exploring side chain length and main chain polarity. Journal of Membrane Science, 2023, 668, 121255.	4.1	14
596	Sulfonated graphene oxide doped sulfonated polybenzothiazoles for proton exchange membrane fuel cells. Journal of Membrane Science, 2023, 668, 121239.	4.1	15
597	Multilayered hydrocarbon ionomer/PTFE composite electrolytes with enhanced performance for energy conversion devices. International Journal of Hydrogen Energy, 2023, 48, 5288-5300.	3.8	9

#	ARTICLE	IF	CITATIONS
598	Sulfonation of Polyvinylidene fluoride: Investigation of the Microstructure by ^1H , ^{13}C , ^{19}F NMR Spectroscopy and Mechanisms. ACS Applied Polymer Materials, 2022, 4, 9463-9471.	2.0	2
599	Sulfonated poly (ether ketone sulfone) composite membranes containing ZIF-67 coordinate graphene oxide showing high proton conductivity and improved physicochemical properties. Journal of Industrial and Engineering Chemistry, 2023, 119, 439-449.	2.9	5
600	Pore Geometry and Surface Engineering of Covalent Organic Frameworks for Anhydrous Proton Conduction. Angewandte Chemie, 0, , .	1.6	0
601	Recent Advances in Polymers for Potassium Ion Batteries. Polymers, 2022, 14, 5538.	2.0	5
602	Morphological Effect of Side Chain Length in Sulfonated Poly(arylene ether sulfone)s Polymer Electrolyte Membranes via Molecular Dynamics Simulation. Polymers, 2022, 14, 5499.	2.0	0
603	Pore Geometry and Surface Engineering of Covalent Organic Frameworks for Anhydrous Proton Conduction. Angewandte Chemie - International Edition, 2023, 62, .	7.2	16
604	Pyridine-extended proton sponge enabling high-performance membrane for flow batteries. Journal of Membrane Science, 2023, 669, 121290.	4.1	4
605	Highly Branched Poly(arylene ether ketone sulfone)s Bearing Flexible Sulfoalkyl Side Chains for Proton Exchange Membranes. ACS Applied Energy Materials, 2023, 6, 564-572.	2.5	3
606	High Ion Conductive and Selective Membrane Achieved through Dual Ion Conducting Mechanisms. Small, 2023, 19, .	5.2	6
607	Investigation of sulfonation degree and temperature on structure, thermal and membrane's properties of sulfonated poly (ether ether ketone). International Journal of Hydrogen Energy, 2023, 48, 13791-13803.	3.8	5
608	Effects of hydrophobic side chains in poly(fluorenyl-co-aryl piperidinium) ionomers for durable anion exchange membrane fuel cells. Journal of Materials Chemistry A, 2023, 11, 2031-2041.	5.2	17
609	Ion-Selective Microporous Polymer Membranes with Hydrogen-Bond and Salt-Bridge Networks for Aqueous Organic Redox Flow Batteries. Advanced Materials, 2023, 35, .	11.1	10
610	Sulfonated branched poly(arylene ether ketone sulfone) proton exchange membranes: Effects of degree of branching and ion exchange capacity. European Polymer Journal, 2023, 186, 111837.	2.6	3
611	Challenges and Strategies of Anion Exchange Membranes in Hydrogen-Electricity Energy Conversion Devices. Chemistry - A European Journal, 2023, 29, .	1.7	11
612	Proton exchange membrane based on interpenetrating polymer network structure for excellent cell performance and chemical stability. Journal of Power Sources, 2023, 558, 232602.	4.0	4
613	Designing sulfonated polyimide-based fuel cell polymer electrolyte membranes using machine learning approaches. Computational Materials Science, 2023, 219, 111974.	1.4	4
614	Micro-block poly(arylene ether sulfone)s with densely quaternized units for anion exchange membranes: Effects of benzyl N-methylpiperidinium and benzyl trimethyl ammonium cations. Journal of Membrane Science, 2023, 669, 121333.	4.1	9
615	Recent advance in biomass membranes: Fabrication, functional regulation, and antimicrobial applications. Carbohydrate Polymers, 2023, 305, 120537.	5.1	23

#	ARTICLE	IF	CITATIONS
616	Novel sulfonated poly(oxybenzimidazole) membranes bearing sulfo-naphthalimide pendant groups with improved proton conductivity and fuel cell performance. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 11844-11859.	3.8	1
617	Highly proton conductive and stable sulfonated poly(arylene-alkane) for fuel cells with performance over 2.46 W cm ² . <i>Journal of Materials Chemistry A</i> , 2023, 11, 4547-4558.	5.2	9
618	Morphological transformation of perfluorinated sulfonic acid ionomer via ionic complex formation at a high entropy state. <i>Materials Today Energy</i> , 2023, 33, 101250.	2.5	0
619	Partially fluorinated poly(arylene-alkane)s containing cobaltocenium for alkaline-stable anion exchange membranes. <i>Chemical Communications</i> , 2023, 59, 5289-5292.	2.2	4
620	Synthesis and Characterization of Copolymers from Diallyldimethylammonium Hexafluorophosphate and Methyl Methacrylate. <i>Macromolecules</i> , 2023, 56, 1572-1580.	2.2	1
621	Introduction to Membrane. , 2023, , 1-5.		0
622	Long side-chain imidazolium functionalized poly(vinyl chloride) membranes with low cost and high performance for vanadium redox flow batteries. <i>Journal of Molecular Liquids</i> , 2023, 376, 121401.	2.3	1
625	Microwave Assisted Grafting of Polyethylene Membrane through Imidazolium and Pyridinium Moieties as Alkaline Anion Exchanger for Fuel Cell Applications. <i>Chemical Data Collections</i> , 2023, 44, 101002.	1.1	0
626	Synthesis and property comparison of mono-, di-, and trisulfonated poly(arylene ether phosphine) Tj ETQqO 0 0 rgBTJ /Overlock 10 Tf 50	1.8	1
627	Mesoscale Simulation Based on the Dynamic Mean-Field Density Functional Method on Block-Copolymeric Ionomers for Polymer Electrolyte Membranes. <i>Membranes</i> , 2023, 13, 258.	1.4	1
628	Metal-coordinated polybenzimidazole membranes with preferential K ⁺ transport. <i>Nature Communications</i> , 2023, 14, .	5.8	8
629	Effects of microstructure on the retention of proton conductivity of Nafion/SiO ₂ composite membranes at elevated temperatures:An in situ SAXS study. <i>Polymer</i> , 2023, 273, 125869.	1.8	5
630	<sc>TiO₂</sc> graphene dispersed sulfonated polyphenylenesulfide sulfone nanocomposites for medium temperature<sc>PEMFCs</sc>. <i>Polymers for Advanced Technologies</i> , 2023, 34, 2261-2271.	1.6	3
631	Hollow Heteropoly Acid-Functionalized ZIF Composite Membrane for Proton Exchange Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2023, 6, 4283-4296.	2.5	6
632	The advances development of proton exchange membrane with high proton conductivity and balanced stability in fuel cells. <i>Journal of Applied Polymer Science</i> , 2023, 140, .	1.3	6
633	Artificial neural network to evaluate proton conductivity of sulfonated fluorinated membranes: Effect of sulfonation degree, fluorine content, and cost for membranes of synthesized copolymers, blends, and nanofibrous electrospun composite case studies. <i>International Journal of Hydrogen Energy</i> . 2023, . . .	3.8	0
634	Construction of reliable ion-conducting channels based on the perfluorinated anion-exchange membrane for high-performance pure-water-fed electrolysis. <i>Advanced Composites and Hybrid Materials</i> , 2023, 6, .	9.9	9
635	Nanocomposite membrane for direct methanol fuel cell. , 2023, , 125-142.		0

#	ARTICLE	IF	CITATIONS
671	Recent Advances on PEM Fuel Cells: From Key Materials to Membrane Electrode Assembly. Electrochemical Energy Reviews, 2023, 6, .	13.1	12