

Zhe Wang

List of Publications by Year in descending order

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96
papers

3,137
citations

136950

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189892

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96
times ranked

1925
citing authors

#	ARTICLE	IF	CITATIONS
1	A Conductive and Highly Deformable All-Pseudocapacitive Composite Paper as Supercapacitor Electrode with Improved Areal and Volumetric Capacitance. <i>Small</i> , 2018, 14, e1803786.	10.0	158
2	Direct synthesis of sulfonated poly(ether ether ketone ketone)s (SPEEKs) proton exchange membranes for fuel cell application. <i>Polymer</i> , 2005, 46, 5820-5827.	3.8	154
3	Polybenzimidazole/ionic-liquid-functional silica composite membranes with improved proton conductivity for high temperature proton exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2017, 541, 492-499.	8.2	121
4	Constructing micro-phase separation structure to improve the performance of anion-exchange membrane based on poly(aryl piperidinium) cross-linked membranes. <i>Journal of Power Sources</i> , 2021, 487, 229429.	7.8	91
5	Adjust the arrangement of imidazole on the metal-organic framework to obtain hybrid proton exchange membrane with long-term stable high proton conductivity. <i>Journal of Membrane Science</i> , 2020, 607, 118194.	8.2	86
6	Boosting gravimetric and volumetric energy density via engineering macroporous MXene films for supercapacitors. <i>Chemical Engineering Journal</i> , 2020, 395, 124057.	12.7	77
7	Blend membranes based on disulfonated poly(aryl ether ether ketone)s (SPEEK) and poly(amide imide) (PAI) for direct methanol fuel cell usages. <i>Polymer</i> , 2007, 48, 3090-3097.	3.8	74
8	Base-acid doped polybenzimidazole with high phosphoric acid retention for HT-PEMFC applications. <i>Journal of Membrane Science</i> , 2020, 596, 117722.	8.2	74
9	Preparation and properties of sulfonated poly(ether ether ketone)s (SPEEK)/polypyrrole composite membranes for direct methanol fuel cells. <i>Journal of Power Sources</i> , 2006, 162, 1-8.	7.8	71
10	Direct polymerization of a novel sulfonated poly(arylene ether ketone sulfone)/sulfonated poly(vinylalcohol) crosslinked membrane for direct methanol fuel cell applications. <i>Journal of Membrane Science</i> , 2015, 492, 505-517.	8.2	67
11	A facile functionalized routine for the synthesis of imidazolium-based anion-exchange membrane with excellent alkaline stability. <i>Journal of Membrane Science</i> , 2016, 505, 138-147.	8.2	63
12	Cross-Linkable Polymeric Ionic Liquid Improve Phosphoric Acid Retention and Long-Term Conductivity Stability in Polybenzimidazole Based PEMs. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 16352-16362.	6.7	63
13	Enhanced proton conductivity of sulfonated poly(arylene ether ketone sulfone) for fuel cells by grafting triazole groups onto polymer chains. <i>Journal of Membrane Science</i> , 2016, 509, 173-181.	8.2	61
14	Imidazolium-functionalized poly(arylene ether ketone) cross-linked anion exchange membranes. <i>Journal of Membrane Science</i> , 2018, 566, 205-212.	8.2	59
15	Enhanced proton conductivity of sulfonated poly(arylene ether ketone sulfone) polymers by incorporating phosphotungstic acid-ionic-liquid-functionalized metal-organic framework. <i>Journal of Membrane Science</i> , 2021, 630, 119304.	8.2	54
16	Preparation and characterization of sulfonated poly(arylene ether ketone) copolymers with pendant sulfoalkyl groups as proton exchange membranes. <i>Journal of Power Sources</i> , 2014, 260, 307-316.	7.8	53
17	Multifunctional poly(ionic liquid)s cross-linked polybenzimidazole membrane with excellent long-term stability for high temperature-proton exchange membranes fuel cells. <i>Journal of Power Sources</i> , 2021, 494, 229732.	7.8	53
18	Sandwich-like MXene/±-Fe ₂ O ₃ -MoS ₂ -PEDOT:PSS/MXene Film Electrodes with Ultrahigh Area Capacitance for Flexible Supercapacitors. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 9172-9182.	8.0	50

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19	Composite membranes based on polybenzimidazole and ionic liquid functional Si-O-Si network for HT-PEMFC applications. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 21913-21921.	7.1	47
20	Organic-inorganic composite membrane based on sulfonated poly (arylene ether ketone sulfone) with excellent long-term stability for proton exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2017, 529, 243-251.	8.2	46
21	Effect of "bridge" on the performance of organic-inorganic crosslinked hybrid proton exchange membranes via KH550. <i>Journal of Power Sources</i> , 2017, 340, 126-138.	7.8	45
22	Ultra-high strength Ultrahigh Molecular Weight Polyethylene (UHMWPE)-Based Fiber Electrode for High Performance Flexible Supercapacitors. <i>Advanced Functional Materials</i> , 2018, 28, 1707351.	14.9	44
23	Proton exchange membranes with cross-linked interpenetrating network of sulfonated polyvinyl alcohol and poly(2-acrylamido-2-methyl-1-propanesulfonic acid): Excellent relative selectivity. <i>Journal of Membrane Science</i> , 2020, 595, 117511.	8.2	42
24	Investigation of sulfonated poly(ether ether ketone sulfone)/heteropolyacid composite membranes for high temperature fuel cell applications. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2006, 44, 1967-1978.	2.1	41
25	Sodium Alginate Binders for Bivalency Aqueous Batteries. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 20681-20688.	8.0	41
26	Novel cross-linked membranes based on polybenzimidazole and polymeric ionic liquid with improved proton conductivity for HT-PEMFC applications. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2019, 95, 185-194.	5.3	40
27	Synthesis and characterization of sulfonated poly(arylene ether ketone sulfone) membranes for application in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2006, 160, 969-976.	7.8	38
28	Synthesis and properties of novel cross-linked composite sulfonated poly (aryl ether ketone sulfone) containing multiple sulfonic side chains for high-performance proton exchange membranes. <i>Renewable Energy</i> , 2019, 138, 1104-1113.	8.9	37
29	Sulfonated poly(ether ether sulfone) copolymers for proton exchange membrane fuel cells. <i>Journal of Applied Polymer Science</i> , 2007, 104, 1443-1450.	2.6	36
30	Cage-like cross-linked membranes with excellent ionic liquid retention and elevated proton conductivity for HT-PEMFCs. <i>Electrochimica Acta</i> , 2018, 283, 691-698.	5.2	36
31	Poly (aryl ether ketone)/polymeric ionic liquid with anisotropic swelling behavior for anion exchange membranes. <i>Journal of Membrane Science</i> , 2019, 581, 303-311.	8.2	36
32	Influence of the hydroquinone with different pendant groups on physical and electrochemical behaviors of directly polymerized sulfonated poly(ether ether sulfone) copolymers for proton exchange membranes. <i>Journal of Membrane Science</i> , 2006, 285, 239-248.	8.2	35
33	Synthesis and properties of a novel sulfonated poly(arylene ether ketone sulfone) membrane with a high λ -value for direct methanol fuel cell applications. <i>Electrochimica Acta</i> , 2014, 146, 688-696.	5.2	35
34	Long-term durable anion exchange membranes based on imidazole-functionalized poly(ether ether) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5		35
35	Synthesis and characterization of long-side-chain type quaternary ammonium-functionalized poly (ether ether ketone) anion exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 8156-8166.	7.1	33
36	HT-PEMs based on carbazole grafted polybenzimidazole with high proton conductivity and excellent tolerance of phosphoric acid. <i>Journal of Membrane Science</i> , 2021, 637, 119610.	8.2	33

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37	Construction of a new continuous proton transport channel through a covalent crosslinking reaction between carboxyl and amino groups. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 10092-10103.	7.1	32
38	High-Temperature and All-Solid-State Flexible Supercapacitors with Excellent Long-Term Stability Based on Porous Polybenzimidazole/Functional Ionic Liquid Electrolyte. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 17742-17750.	8.0	31
39	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.	8.2	31
40	The impact of poly (ionic liquid) on the phosphoric acid stability of polybenzimidazole-base HT-PEMs. <i>Renewable Energy</i> , 2021, 163, 1692-1700.	8.9	31
41	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.	7.1	30
42	Poly (isatin biphenylene) polymer containing ferrocenium derivatives for anion exchange membrane fuel cell. <i>Journal of Membrane Science</i> , 2022, 642, 119986.	8.2	29
43	Enhanced proton conductivity of poly (arylene ether ketone sulfone) containing uneven sulfonic acid side chains by incorporating imidazole functionalized metal-organic framework. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 7443-7457.	7.1	29
44	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.	7.1	28
45	Direct polymerization of novel functional sulfonated poly(arylene ether ketone sulfone)/sulfonated poly(vinyl alcohol) with high selectivity for fuel cells. <i>RSC Advances</i> , 2016, 6, 27725-27737.	3.6	27
46	Synthesis and properties of sulfonated poly(arylene ether ketone sulfone) containing amino groups/functional titania inorganic particles hybrid membranes for fuel cells. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 6136-6147.	7.1	27
47	Prepared poly(aryl piperidinium) anion exchange membranes for acid recovery to improve dialysis coefficients and selectivity. <i>Journal of Membrane Science</i> , 2021, 619, 118805.	8.2	27
48	Sandwich-like high-load MXene/polyaniline film electrodes with ultrahigh volumetric capacitance for flexible supercapacitors. <i>Journal of Colloid and Interface Science</i> , 2022, 620, 35-46.	9.4	27
49	A facile functionalized routine for the synthesis of side-chain sulfonated poly(arylene ether ketone) Tj ETQq1 1 0.784314 rgBT /Overlock 26	7.1	26
50	Fabrication of sulfonated poly(aryl ether ketone sulfone) membranes blended with phosphotungstic acid and microporous poly(vinylidene fluoride) as a depository for direct-methanol fuel cells. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 7182-7191.	7.1	25
51	Construction of ion transport channels by grafting flexible alkyl imidazolium chain into functional poly(arylene ether ketone sulfone) as anion exchange membranes. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 25996-26006.	7.1	24
52	Antifreezing Zwitterionic-Based Hydrogel Electrolyte for Aqueous Zn Ion Batteries. <i>ACS Applied Energy Materials</i> , 2022, 5, 7530-7537.	5.1	24
53	Novel double cross-linked membrane based on poly (ionic liquid) and polybenzimidazole for high-temperature proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2021, 515, 230637.	7.8	23
54	Physical and electrochemical behaviors of directly polymerized sulfonated poly(arylene ether ketone) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Polymer Science, 2009, 112, 858-866.	2.6	22

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55	Poly(arylene ether ketone) with an Ultrahigh-Selectivity Hydrophilic Phase Proton Transport Channel by Grafting Sulfonated Benzotriazole Groups onto Pendant Chains. ACS Sustainable Chemistry and Engineering, 2020, 8, 6505-6516.	6.7	22
56	A novel anion exchange membrane based on poly (2,6-dimethyl-1,4-phenylene oxide) with excellent alkaline stability for AEMFC. International Journal of Hydrogen Energy, 2021, 46, 24328-24338.	7.1	22
57	Flame-retardant AEMs based on organic-inorganic composite polybenzimidazole membranes with enhanced hydroxide conductivity. Journal of Membrane Science, 2019, 591, 117306.	8.2	21
58	High-stable, outstanding heat resistance ionogel electrolyte and the poly(3,4-ethylenedioxythiophene) electrodes with excellent long-term stability for all-solid-state supercapacitor. Chemical Engineering Journal, 2021, 417, 129269.	12.7	21
59	High alkaline stability and long-term durability of imidazole functionalized poly(ether ether ketone) by incorporating graphene oxide/metal-organic framework complex. International Journal of Hydrogen Energy, 2022, 47, 25755-25768.	7.1	21
60	Phosphotungstic acid embedded sulfonated poly(arylene ether ketone sulfone) copolymers with amino groups for proton exchange membranes. RSC Advances, 2015, 5, 83320-83330.	3.6	20
61	Excellent performance of resistance methanol of a novel sulfonated poly (aryl ether ketone) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 International Journal of Hydrogen Energy, 2016, 41, 20536-20548.	7.1	19
62	Facilitating Proton Transport with Enhanced Water Conservation Membranes for Direct Methanol Fuel Cells. ACS Sustainable Chemistry and Engineering, 2020, 8, 5880-5890.	6.7	19
63	Constructing micro-phase separation structure by multi-arm side chains to improve the property of anion exchange membrane. International Journal of Hydrogen Energy, 2020, 45, 17916-17926.	7.1	19
64	Preparation and behavior of a macromolecular compound through covalent crosslinking between amino and sulfonic groups in single copolymers. Journal of Polymer Research, 2014, 21, 1.	2.4	18
65	Double network anion exchange membrane with excellent flexibility and stability. Journal of Membrane Science, 2019, 587, 117178.	8.2	18
66	Cross-linked poly (aryl ether ketone) anion exchange membrane with high ion conductivity by two different functional imidazole side chain. Reactive and Functional Polymers, 2020, 151, 104551.	4.1	18
67	Preparation of an Anion Exchange Membrane by Pyridine-Functionalized Polyether Ether Ketone To Improve Alkali Resistance Stability for an Alkali Fuel Cell. Energy & Fuels, 2021, 35, 3360-3367.	5.1	18
68	Enhanced proton conductivity and relative selectivity of sulfonated poly(arylene ether ketone) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 227 Electrochimica Acta, 2018, 291, 49-63.	5.2	16
69	Preparation and characterization of sulfonated poly(arylene ether ketone sulfone)s for ion exchange membranes. Desalination, 2009, 242, 236-244.	8.2	14
70	Long-term durable solid state electrolyte membranes based on a metal-organic framework with phosphotungstic acid confined in the mesoporous cages. International Journal of Hydrogen Energy, 2020, 45, 27527-27538.	7.1	14
71	Synthesizing spindle-shaped anion exchange membranes to improve conductivity and stability. International Journal of Hydrogen Energy, 2020, 45, 11814-11823.	7.1	14
72	Poly (arylene ether ketone) with carboxyl groups ultrafiltration membrane for enhanced permeability and anti-fouling performance. Separation and Purification Technology, 2022, 281, 119885.	7.9	14

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73	Improved conductivity and stability of anion exchange membranes by introducing steric hindrance and crosslinked structure. International Journal of Hydrogen Energy, 2019, 44, 22129-22136.	7.1	13
74	Construction of proton transport channels on the same polymer chains by covalent crosslinking. Journal of Membrane Science, 2015, 496, 84-94.	8.2	12
75	Sulfonated poly (aryl ether sulfone) containing 1, 3, 4-oxadiazole as proton exchange membranes for medium-high temperature fuel cells. Journal of Polymer Research, 2013, 20, 1.	2.4	11
76	Construction of effective transmission channels by anchoring metal-organic framework on side-chain sulfonated poly(arylene ether ketone sulfone) for fuel cells. International Journal of Energy Research, 2022, 46, 11123-11138.	4.5	11
77	Sulfonated poly (arylene ether ketone sulfone)/ZrP composite membranes for medium-high temperature operation of PEMFC. Journal of Polymer Research, 2013, 20, 1.	2.4	10
78	HT-PEMs based on nitrogen-heterocycle decorated poly (arylene ether ketone) with enhanced proton conductivity and excellent stability. International Journal of Hydrogen Energy, 2018, 43, 16248-16257.	7.1	10
79	Towards to better permeability and antifouling sulfonated poly (aryl ether ketone sulfone) with carboxyl group ultrafiltration membrane blending with amine functionalization of SBA-15. Separation and Purification Technology, 2021, 265, 118512.	7.9	10
80	High-Performance Proton Exchange Membranes Based on Block Polybenzimidazole and Organic-Inorganic Fillers with a Low Acid Doping Level. ACS Applied Energy Materials, 2022, 5, 2553-2563.	5.1	10
81	Synthesis and characterization of sulfonated polymers containing triazoles as low-humidity proton exchange membranes. Journal of Polymer Research, 2014, 21, 1.	2.4	9
82	Poly(arylene ether ketone) containing amino and fluorenyl groups for highly selective of gas separation. Journal of Polymer Research, 2019, 26, 1.	2.4	9
83	4-Aminopyridine grafted sulfonated poly(arylene ether ketone sulfone) proton exchange membrane with high relative selectivity for fuel cells. International Journal of Hydrogen Energy, 2020, 45, 29738-29748.	7.1	9
84	An all-in-one flexible supercapacitor based on redox ionogel electrolyte with high cycle performance. Journal of Alloys and Compounds, 2022, 893, 162197.	5.5	9
85	Preparation, characterization and enhanced performance of functional crosslinked membranes using poly(vinyl alcohol) as macromolecular crosslinker for fuel cells. RSC Advances, 2016, 6, 41428-41438.	3.6	8
86	Improvement the hydroxide conductivity and alkaline stability simultaneously of anion exchange membranes by changing quaternary ammonium and imidazole contents. International Journal of Energy Research, 2021, 45, 13668-13680.	4.5	8
87	Polymer Electrolyte Membranes from Microporous Troger's Base Polymers for Fuel Cells. ACS Applied Energy Materials, 2021, 4, 13327-13334.	5.1	8
88	Influence of casting conditions on the properties of sulfonated poly(ether ether ketone) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 147 Td (k Science, 2007, 103, 4020-4026.	2.6	7
89	Diazoniabicyclo-type poly (ionic liquid) cross-linked polybenzimidazole membrane with improved phosphoric acid retention for HT-PEMFCs. International Journal of Hydrogen Energy, 2022, 47, 22522-22531.	7.1	7
90	Preparation of a new type of ion-exchange membrane based on sulfonated poly(ether ether ketone) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	2.6	6

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91	A modified poly(aryle ether ketone sulfone) proton exchange membrane with <i>in situ</i> polymerized polypyrrole for the direct methanol fuel cells. Journal of Applied Polymer Science, 2011, 120, 914-920.	2.6	5
92	Precise modification of poly(aryl ether ketone sulfone) proton exchange membranes with positively charged bismuth oxide clusters for high proton conduction performance. SusMat, 2022, 2, 76-89.	14.9	5
93	A simple self-regulating permeability and selectivity of poly (arylene ether ketone) with amino groups for gas separation membrane. Journal of Polymer Research, 2019, 26, 1.	2.4	4
94	A novel anion exchange membrane based on silicone/polyphenylene oxide with excellent ionic conductivity for <i>AEMFC</i> . Polymers for Advanced Technologies, 2022, 33, 2656-2666.	3.2	3
95	Synthesis and property of novel gas mixed-matrix membrane with carbon nanotubes. Journal of Polymer Research, 2020, 27, 1.	2.4	2
96	PREPARATION AND PROPERTIES OF AMINO-CONTAINING POLY(ARYLE ETHER KETONE)/POLY(ARYLE ETHER) Polymerica Sinica, 2012, 012, 972-979.	0.0	1