

# Nanwen Li

## List of Publications by Year in descending order

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100  
papers

6,647  
citations

47006

47  
h-index

64796

79  
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107  
all docs

107  
docs citations

107  
times ranked

3639  
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly Stable, Anion Conductive, Comb-Shaped Copolymers for Alkaline Fuel Cells. <i>Journal of the American Chemical Society</i> , 2013, 135, 10124-10133.	13.7	471
2	Ion Transport by Nanochannels in Ion-Containing Aromatic Copolymers. <i>Macromolecules</i> , 2014, 47, 2175-2198.	4.8	388
3	Comb-shaped polymers to enhance hydroxide transport in anion exchange membranes. <i>Energy and Environmental Science</i> , 2012, 5, 7888.	30.8	317
4	Tuning the properties of poly(2,6-dimethyl-1,4-phenylene oxide) anion exchange membranes and their performance in H <sub>2</sub> /O <sub>2</sub> fuel cells. <i>Energy and Environmental Science</i> , 2018, 11, 435-446.	30.8	225
5	Fluorene-Based Poly(arylene ether sulfone)s Containing Clustered Flexible Pendant Sulfonic Acids as Proton Exchange Membranes. <i>Macromolecules</i> , 2011, 44, 7296-7306.	4.8	211
6	Click-chemistry for nanoparticle-modification. <i>Journal of Materials Chemistry</i> , 2011, 21, 16717.	6.7	157
7	Enhancement of Proton Transport by Nanochannels in Comb-Shaped Copoly(arylene ether sulfone)s. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 9158-9161.	13.8	157
8	Cross-linked comb-shaped anion exchange membranes with high base stability. <i>Chemical Communications</i> , 2014, 50, 4092.	4.1	148
9	Highly stable anion exchange membranes based on quaternized polypropylene. <i>Journal of Materials Chemistry A</i> , 2015, 3, 12284-12296.	10.3	144
10	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.	10.3	143
11	Fuel cells with an operational range of 20°C to 200°C enabled by phosphoric acid-doped intrinsically ultramicroporous membranes. <i>Nature Energy</i> , 2022, 7, 153-162.	39.5	138
12	A new class of highly-conducting polymer electrolyte membranes: Aromatic ABA triblock copolymers. <i>Energy and Environmental Science</i> , 2012, 5, 5346-5355.	30.8	131
13	Crosslinking of comb-shaped polymer anion exchange membranes via thiol-ene click chemistry. <i>Polymer Chemistry</i> , 2016, 7, 2464-2475.	3.9	131
14	Towards High Conductivity in Anion Exchange Membranes for Alkaline Fuel Cells. <i>ChemSusChem</i> , 2013, 6, 1376-1383.	6.8	120
15	Practical implementation of bis-six-membered N-cyclic quaternary ammonium cations in advanced anion exchange membranes for fuel cells: Synthesis and durability. <i>Journal of Membrane Science</i> , 2019, 578, 239-250.	8.2	113
16	1,2,3-Triazolium-Based Poly(2,6-Dimethyl Phenylene Oxide) Copolymers as Anion Exchange Membranes. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 4651-4660.	8.0	111
17	Polymer Electrolyte Membranes Derived from New Sulfone Monomers with Pendent Sulfonic Acid Groups. <i>Macromolecules</i> , 2010, 43, 9810-9820.	4.8	102
18	Soluble poly(aryl piperidinium) with extended aromatic segments as anion exchange membranes for alkaline fuel cells and water electrolysis. <i>Journal of Membrane Science</i> , 2022, 642, 119966.	8.2	101

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19	Mixed-matrix membranes based on Zn/Ni-ZIF-8-PEBA for high performance CO <sub>2</sub> separation. <i>Journal of Membrane Science</i> , 2018, 560, 38-46.	8.2	97
20	Densely Sulfophenylated Segmented Copoly(arylene ether sulfone) Proton Exchange Membranes. <i>Macromolecules</i> , 2011, 44, 4901-4910.	4.8	94
21	Antifouling polysulfone ultrafiltration membranes with pendent sulfonamide groups. <i>Journal of Membrane Science</i> , 2018, 548, 481-489.	8.2	94
22	Facilitating Anion Transport in Polyolefin-Based Anion Exchange Membranes via Bulky Side Chains. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 23321-23330.	8.0	91
23	Morphological transformation during cross-linking of a highly sulfonated poly(phenylene sulfide) Tj ETQq1 1 0.784314 rgBT /Overlock 10	30.8	90
24	Highly anion conductive, alkyl-chain-grafted copolymers as anion exchange membranes for operable alkaline H <sub>2</sub> /O <sub>2</sub> fuel cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10301-10310.	10.3	90
25	Blending of compatible polymer of intrinsic microporosity (PIM-1) with TrÄtger's Base polymer for gas separation membranes. <i>Journal of Membrane Science</i> , 2018, 566, 77-86.	8.2	74
26	Rational design of comb-shaped poly(arylene indole piperidinium) to enhance hydroxide ion transport for H <sub>2</sub> /O <sub>2</sub> fuel cell. <i>Journal of Membrane Science</i> , 2021, 631, 119335.	8.2	71
27	Azide-assisted self-crosslinking of highly ion conductive anion exchange membranes. <i>Journal of Membrane Science</i> , 2016, 509, 48-56.	8.2	68
28	Zn(II)-modified imidazole containing polyimide/ZIF-8 mixed matrix membranes for gas separations. <i>Journal of Membrane Science</i> , 2020, 597, 117775.	8.2	68
29	Piperidinium functionalized aryl ether-free polyaromatics as anion exchange membrane for water electrolyzers: Performance and durability. <i>Journal of Membrane Science</i> , 2021, 621, 118964.	8.2	68
30	Self-crosslinking of comb-shaped polystyrene anion exchange membranes for alkaline fuel cell application. <i>Journal of Membrane Science</i> , 2017, 536, 133-140.	8.2	67
31	Semi-interpenetrating polymer networks by azide-alkyne cycloaddition as novel anion exchange membranes. <i>Journal of Materials Chemistry A</i> , 2018, 6, 11317-11326.	10.3	67
32	Side-chain-type anion exchange membranes for vanadium flow battery: properties and degradation mechanism. <i>Journal of Materials Chemistry A</i> , 2018, 6, 22778-22789.	10.3	66
33	A novel polybenzimidazole membrane containing bulky naphthalene group for vanadium flow battery. <i>Journal of Membrane Science</i> , 2019, 586, 231-239.	8.2	63
34	Anion conductive poly(2,6-dimethyl phenylene oxide)s with clicked bulky quaternary phosphonium groups. <i>Journal of Membrane Science</i> , 2018, 558, 9-16.	8.2	61
35	UV-crosslinking of polystyrene anion exchange membranes by azidated macromolecular crosslinker for alkaline fuel cells. <i>Journal of Membrane Science</i> , 2017, 535, 322-330.	8.2	60
36	Molecularly designed, solvent processable tetraalkylammonium-functionalized fluoropolyolefin for durable anion exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2019, 574, 212-221.	8.2	59

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37	Enhancement of the mechanical properties of anion exchange membranes with bulky imidazolium by $\alpha$ -thiol-ene-crosslinking. <i>Journal of Membrane Science</i> , 2020, 596, 117700.	8.2	59
38	Controlled functionalization of poly(4-methyl-1-pentene) films for high energy storage applications. <i>Journal of Materials Chemistry A</i> , 2016, 4, 4797-4807.	10.3	58
39	The effect of $\alpha$ -NH <sup>+</sup> on quaternized polybenzimidazole anion exchange membranes for alkaline fuel cells. <i>Journal of Membrane Science</i> , 2021, 626, 119178.	8.2	58
40	Symmetric sponge-like porous polybenzimidazole membrane for high temperature proton exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2021, 620, 118981.	8.2	56
41	Solid-State Rechargeable Zinc-Air Battery with Long Shelf Life Based on Nanoengineered Polymer Electrolyte. <i>ChemSusChem</i> , 2018, 11, 3215-3224.	6.8	55
42	Polyvinylamine/graphene oxide/PANI@CNTs mixed matrix composite membranes with enhanced CO <sub>2</sub> /N <sub>2</sub> separation performance. <i>Journal of Membrane Science</i> , 2019, 589, 117246.	8.2	54
43	Nafion-Initiated ATRP of 1-Vinylimidazole for Preparation of Proton Exchange Membranes. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 11516-11525.	8.0	53
44	N-cyclic quaternary ammonium-functionalized anion exchange membrane with improved alkaline stability enabled by aryl-ether free polymer backbones for alkaline fuel cells. <i>Journal of Membrane Science</i> , 2019, 587, 117135.	8.2	53
45	Synthesis of midblock-quaternized triblock copolystyrenes as highly conductive and alkaline-stable anion-exchange membranes. <i>Polymer Chemistry</i> , 2017, 8, 2074-2086.	3.9	51
46	Tröger's base mixed matrix membranes for gas separation incorporating NH <sub>2</sub> -MIL-53(Al) nanocrystals. <i>Journal of Membrane Science</i> , 2019, 573, 359-369.	8.2	51
47	The effect of polymer backbones and cation functional groups on properties of anion exchange membranes for fuel cells. <i>Journal of Membrane Science</i> , 2020, 603, 118025.	8.2	49
48	Ultra-selective molecular-sieving gas separation membranes enabled by multi-covalent-crosslinking of microporous polymer blends. <i>Nature Communications</i> , 2021, 12, 6140.	12.8	49
49	Quaternized poly(2,6-dimethyl-1,4-phenylene oxide) anion exchange membranes with pendant sterically-protected imidazoliums for alkaline fuel cells. <i>Journal of Membrane Science</i> , 2020, 601, 117881.	8.2	48
50	Chemically stable anion exchange membranes based on C <sub>2</sub> -Protected imidazolium cations for vanadium flow battery. <i>Journal of Membrane Science</i> , 2021, 618, 118696.	8.2	48
51	Crucial role of side-chain functionality in anion exchange membranes: Properties and alkaline fuel cell performance. <i>Journal of Membrane Science</i> , 2021, 625, 119172.	8.2	48
52	Mixed-charge poly(2,6-dimethyl-phenylene oxide) anion exchange membrane for diffusion dialysis in acid recovery. <i>Journal of Membrane Science</i> , 2018, 549, 543-549.	8.2	47
53	Olefin metathesis-crosslinked, bulky imidazolium-based anion exchange membranes with excellent base stability and mechanical properties. <i>Journal of Membrane Science</i> , 2020, 598, 117793.	8.2	45
54	Tailoring the Microporosity of Polymers of Intrinsic Microporosity for Advanced Gas Separation by Atomic Layer Deposition. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 17875-17880.	13.8	41

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55	Poly(terphenyl piperidinium) containing hydrophilic crown ether units in main chains as anion exchange membranes for alkaline fuel cells and water electrolyzers. <i>Journal of Membrane Science</i> , 2022, 653, 120558.	8.2	40
56	A facile strategy for disentangling the conductivity and selectivity dilemma enables advanced composite membrane for vanadium flow batteries. <i>Journal of Membrane Science</i> , 2020, 607, 118177.	8.2	36
57	Self-crosslinking of bromomethylated 6FDA-DAM polyimide for gas separations. <i>Journal of Membrane Science</i> , 2021, 636, 119534.	8.2	36
58	Proton blockage membrane with tertiary amine groups for concentration of sulfonic acid in electro dialysis. <i>Journal of Membrane Science</i> , 2018, 555, 78-87.	8.2	35
59	Comb-shaped sulfonated poly(ether ether ketone) as a cation exchange membrane for electro dialysis in acid recovery. <i>Journal of Materials Chemistry A</i> , 2018, 6, 22940-22950.	10.3	35
60	Preparation and antifouling property improvement of TrÄ¶ger's base polymer ultrafiltration membrane. <i>Journal of Membrane Science</i> , 2018, 561, 59-68.	8.2	35
61	Properties and stability of quaternary ammonium-biphosphate ion-pair poly(sulfone)s high temperature proton exchange membranes for H <sub>2</sub> /O <sub>2</sub> fuel cells. <i>Journal of Power Sources</i> , 2020, 475, 228521.	7.8	33
62	Polybenzimidazole/cerium dioxide/graphitic carbon nitride nanosheets for high performance and durable high temperature proton exchange membranes. <i>Journal of Membrane Science</i> , 2021, 639, 119760.	8.2	33
63	Effect of N-cyclic cationic groups in poly(phenylene oxide)-based catalyst ionomer membranes for anion exchange membrane fuel cells. <i>Journal of Membrane Science</i> , 2020, 608, 118183.	8.2	32
64	Quaternized poly(2,6-dimethyl-1,4-phenylene oxide) anion exchange membranes based on isomeric benzyltrimethylammonium cations for alkaline fuel cells. <i>Journal of Membrane Science</i> , 2020, 606, 118133.	8.2	31
65	Enhanced mechanical strength and performance of sulfonated polysulfone/TrÄ¶ger's base polymer blend ultrafiltration membrane. <i>Journal of Membrane Science</i> , 2021, 625, 119138.	8.2	31
66	Anion-conductive poly(2,6-dimethyl-1,4-phenylene oxide) grafted with tailored polystyrene chains for alkaline fuel cells. <i>Journal of Membrane Science</i> , 2019, 573, 247-256.	8.2	30
67	Molecularly Designed Stabilized Asymmetric Hollow Fiber Membranes for Aggressive Natural Gas Separation. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 13754-13758.	13.8	29
68	Polymers of Intrinsic Microporosity Having Bulky Substitutes and Cross-Linking for Gas Separation Membranes. <i>ACS Applied Polymer Materials</i> , 2020, 2, 987-995.	4.4	29
69	Improved antifouling performance of a polyamide composite reverse osmosis membrane by surface grafting of dialdehyde carboxymethyl cellulose (DACMC). <i>Journal of Membrane Science</i> , 2021, 620, 118843.	8.2	28
70	Sealing TrÄ¶ger base/ZIF-8 mixed matrix membranes defects for improved gas separation performance. <i>Journal of Membrane Science</i> , 2021, 636, 119582.	8.2	28
71	A stable ion-solvating PBI electrolyte enabled by sterically bulky naphthalene for alkaline water electrolysis. <i>Journal of Membrane Science</i> , 2022, 643, 120042.	8.2	28
72	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.	10.3	27

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73	Synthesis and properties of phosphonated polysulfones for durable high-temperature proton exchange membranes fuel cell. <i>Journal of Membrane Science</i> , 2020, 605, 118107.	8.2	27
74	The alkaline stability and fuel cell performance of poly(N-spirocyclic quaternary ammonium) ionenes as anion exchange membrane. <i>Journal of Membrane Science</i> , 2021, 630, 119325.	8.2	25
75	Carbon molecular sieve gas separation membranes from crosslinkable bromomethylated 6FDA-DAM polyimide. <i>Journal of Membrane Science</i> , 2022, 659, 120781.	8.2	23
76	Synergistic effect of thermal crosslinking and thermal rearrangement on free volume and gas separation properties of 6FDA based polyimide membranes studied by positron annihilation. <i>Journal of Membrane Science</i> , 2022, 645, 120163.	8.2	22
77	Synthesis of cellulose acetate propionate and cellulose acetate butyrate in a CO <sub>2</sub> /DBU/DMSO system. <i>Cellulose</i> , 2018, 25, 205-216.	4.9	21
78	Polynorbornene-based anion exchange membranes with hydrophobic large steric hindrance arylene substituent. <i>Journal of Membrane Science</i> , 2022, 641, 119938.	8.2	21
79	Improved permeability and antifouling performance of Tröger's base polymer-based ultrafiltration membrane via zwitterionization. <i>Journal of Membrane Science</i> , 2022, 646, 120251.	8.2	21
80	Simultaneously tuning dense skin and porous substrate of asymmetric hollow fiber membranes for efficient purification of aggressive natural gas. <i>AIChE Journal</i> , 2019, 65, 1269-1280.	3.6	20
81	Quaternized poly(2,6-dimethyl-1,4-phenylene oxide)s with zwitterion groups as diffusion dialysis membranes for acid recovery. <i>Separation and Purification Technology</i> , 2020, 250, 117267.	7.9	19
82	Enhanced molecular selectivity and plasticization resistance in ring-opened Tröger's base polymer membranes. <i>Journal of Membrane Science</i> , 2021, 634, 119399.	8.2	19
83	Enhanced proton/iron permselectivity of sulfonated poly (ether ether ketone) membrane functionalized with basic pendant groups during electrodialysis. <i>Journal of Membrane Science</i> , 2020, 610, 118227.	8.2	18
84	Synthesis and gas separation properties of polyimide membranes derived from oxygencyclic pseudo-Tröger's base. <i>Journal of Membrane Science</i> , 2021, 637, 119604.	8.2	18
85	Organocatalytic Cellulose Dissolution and In Situ Grafting of $\epsilon$ -Caprolactone via ROP in a Reversible DBU/DMSO/CO <sub>2</sub> System. <i>ChemistrySelect</i> , 2017, 2, 7128-7134.	1.5	16
86	Blending and in situ thermally crosslinking of dual rigid polymers for anti-plasticized gas separation membranes. <i>Journal of Membrane Science</i> , 2021, 638, 119668.	8.2	15
87	Performance optimization of imidazole containing copolyimide/functionalized ZIF-8 mixed matrix membrane for gas separations. <i>Journal of Membrane Science</i> , 2022, 644, 120071.	8.2	15
88	A strategy to design quaternized poly(2,6-dimethyl-1,4-phenylene oxide) anion exchange membranes by atom transfer radical coupling. <i>Journal of Membrane Science</i> , 2022, 649, 120397.	8.2	15
89	Functionalization of polyacrylonitrile with tetrazole groups for ultrafiltration membranes. <i>RSC Advances</i> , 2016, 6, 72133-72140.	3.6	14
90	Enhanced antifouling and separation properties of Tröger's base polymer ultrafiltration membrane via ring-opening modification. <i>Journal of Membrane Science</i> , 2020, 597, 117763.	8.2	13

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91	Comb-shaped diblock copolystyrene for anion exchange membranes. <i>Journal of Applied Polymer Science</i> , 2019, 136, 47370.	2.6	12
92	Hydrogen bonding-induced 6FDA-DABA/TB polymer blends for high performance gas separation membranes. <i>Journal of Membrane Science</i> , 2022, 655, 120575.	8.2	12
93	Mechanically flexible bulky imidazolium-based anion exchange membranes by grafting PEG pendants for alkaline fuel cells. <i>Journal of Membrane Science</i> , 2022, 659, 120820.	8.2	12
94	Multiblock poly(Phenylene ether nitrile)s with pendant sulfoalkoxyl side chain for H <sub>2</sub> /air fuel cells at low humidity condition. <i>Journal of Polymer Science Part A</i> , 2017, 55, 1940-1948.	2.3	11
95	Structural engineering on copolyimide membranes for improved gas separation performance. <i>Journal of Membrane Science</i> , 2022, 643, 119989.	8.2	11
96	On the stability of imidazolium and benzimidazolium salts in phosphoric acid based fuel cell electrolytes. <i>Journal of Power Sources</i> , 2021, 515, 230642.	7.8	10
97	Molecularly Designed Stabilized Asymmetric Hollow Fiber Membranes for Aggressive Natural Gas Separation. <i>Angewandte Chemie</i> , 2016, 128, 13958-13962.	2.0	9
98	Fe(III) Ions-Assisted Aniline Polymerization Strategy to Nitrogen-Doped Carbon-Supported Bimetallic CoFeP Nanospheres as Efficient Bifunctional Electrocatalysts toward Overall Water Splitting. <i>Materials</i> , 2021, 14, 1473.	2.9	4
99	Photoluminescence properties of Tb <sup>3+</sup> -doped stalk-like Al <sub>2</sub> O <sub>3</sub> . <i>International Journal of Materials Research</i> , 2016, 107, 280-282.	0.3	2
100	“All Polyimide” Mixed Matrix Membranes for High Performance Gas Separation. <i>Polymers</i> , 2021, 13, 1329.	4.5	2