

Guangwei He

List of Publications by Year in descending order

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71
papers

5,492
citations

70961

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88477

70
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71
all docs

71
docs citations

71
times ranked

4917
citing authors

#	ARTICLE	IF	CITATIONS
1	Advances in high permeability polymer-based membrane materials for CO ₂ separations. Energy and Environmental Science, 2016, 9, 1863-1890.	15.6	612
2	Nanostructured Ion-Exchange Membranes for Fuel Cells: Recent Advances and Perspectives. Advanced Materials, 2015, 27, 5280-5295.	11.1	335
3	Recent advances in the fabrication of advanced composite membranes. Journal of Materials Chemistry A, 2013, 1, 10058.	5.2	252
4	Two-dimensional nanochannel membranes for molecular and ionic separations. Chemical Society Reviews, 2020, 49, 1071-1089.	18.7	242
5	Facilitated transport of small molecules and ions for energy-efficient membranes. Chemical Society Reviews, 2015, 44, 103-118.	18.7	211
6	A highly permeable graphene oxide membrane with fast and selective transport nanochannels for efficient carbon capture. Energy and Environmental Science, 2016, 9, 3107-3112.	15.6	192
7	Enhanced Proton Conductivity of Nafion Hybrid Membrane under Different Humidities by Incorporating Metal-Organic Frameworks With High Phytic Acid Loading. ACS Applied Materials & Interfaces, 2014, 6, 9799-9807.	4.0	172
8	Single-layer graphene membranes by crack-free transfer for gas mixture separation. Nature Communications, 2018, 9, 2632.	5.8	160
9	De Novo Design of Covalent Organic Framework Membranes toward Ultrafast Anion Transport. Advanced Materials, 2020, 32, e2001284.	11.1	130
10	Fabricating graphene oxide-based ultrathin hybrid membrane for pervaporation dehydration via layer-by-layer self-assembly driven by multiple interactions. Journal of Membrane Science, 2015, 487, 162-172.	4.1	128
11	Restricting Lattice Flexibility in Polycrystalline Metal-Organic Framework Membranes for Carbon Capture. Advanced Materials, 2019, 31, e1900855.	11.1	122
12	Graphene Oxide Membranes with Heterogeneous Nanodomains for Efficient CO ₂ Separations. Angewandte Chemie - International Edition, 2017, 56, 14246-14251.	7.2	121
13	Efficient CO ₂ capture by humidified polymer electrolyte membranes with tunable water state. Energy and Environmental Science, 2014, 7, 1489.	15.6	119
14	Enhanced proton conductivity of proton exchange membranes by incorporating sulfonated metal-organic frameworks. Journal of Power Sources, 2014, 262, 372-379.	4.0	117
15	Constructing efficient ion nanochannels in alkaline anion exchange membranes by the in situ assembly of a poly(ionic liquid) in metal-organic frameworks. Journal of Materials Chemistry A, 2016, 4, 2340-2348.	5.2	113
16	Incorporating Zwitterionic Graphene Oxides into Sodium Alginate Membrane for Efficient Water/Alcohol Separation. ACS Applied Materials & Interfaces, 2016, 8, 2097-2103.	4.0	113
17	Enhanced proton conductivity of Nafion nanohybrid membrane incorporated with phosphonic acid functionalized graphene oxide at elevated temperature and low humidity. Journal of Membrane Science, 2016, 518, 243-253.	4.1	106
18	High-permeance polymer-functionalized single-layer graphene membranes that surpass the postcombustion carbon capture target. Energy and Environmental Science, 2019, 12, 3305-3312.	15.6	100

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19	Tunable Nanochannels along Graphene Oxide/Polymer Core-Shell Nanosheets to Enhance Proton Conductivity. <i>Advanced Functional Materials</i> , 2015, 25, 7502-7511.	7.8	97
20	Preparing alkaline anion exchange membrane with enhanced hydroxide conductivity via blending imidazolium-functionalized and sulfonated poly(ether ether ketone). <i>Journal of Power Sources</i> , 2015, 288, 384-392.	4.0	93
21	Graphitic carbon nitride nanosheets/sulfonated poly(ether ether ketone) nanocomposite membrane for direct methanol fuel cell application. <i>Journal of Membrane Science</i> , 2016, 507, 1-11.	4.1	88
22	Functionalized Carbon Nanotube via Distillation Precipitation Polymerization and Its Application in Nafion-Based Composite Membranes. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 15291-15301.	4.0	84
23	Bioinspired Ultrastrong Solid Electrolytes with Fast Proton Conduction along 2D Channels. <i>Advanced Materials</i> , 2017, 29, 1605898.	11.1	81
24	Manipulating the interfacial interactions of composite membranes via a mussel-inspired approach for enhanced separation selectivity. <i>Journal of Materials Chemistry A</i> , 2015, 3, 19980-19988.	5.2	76
25	Independent control of water retention and acid-base pairing through double-shelled microcapsules to confer membranes with enhanced proton conduction under low humidity. <i>Journal of Materials Chemistry A</i> , 2013, 1, 2267-2277.	5.2	74
26	Enhanced CO ₂ Permeability of Membranes by Incorporating Polyzwitterion@CNT Composite Particles into Polyimide Matrix. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 13051-13060.	4.0	73
27	Electrophoretic Nuclei Assembly for Crystallization of High-Performance Membranes on Unmodified Supports. <i>Advanced Functional Materials</i> , 2018, 28, 1707427.	7.8	71
28	Fabrication of sulfonated poly(ether ether ketone)-based hybrid proton-conducting membranes containing carboxyl or amino acid-functionalized titania by in situ sol-gel process. <i>Journal of Power Sources</i> , 2015, 276, 271-278.	4.0	69
29	Facilitating Proton Transport in Nafion-Based Membranes at Low Humidity by Incorporating Multifunctional Graphene Oxide Nanosheets. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 27676-27687.	4.0	67
30	Constructing facile proton-conduction pathway within sulfonated poly(ether ether ketone) membrane by incorporating poly(phosphonic acid)/silica nanotubes. <i>Journal of Power Sources</i> , 2014, 259, 203-212.	4.0	65
31	Engineering Covalent Organic Framework Membranes. <i>Accounts of Materials Research</i> , 2021, 2, 630-643.	5.9	64
32	Novel sulfonated poly(ether ether ketone)/phosphonic acid-functionalized titania nanohybrid membrane by an in situ method for direct methanol fuel cells. <i>Journal of Power Sources</i> , 2015, 273, 544-553.	4.0	63
33	Self-crosslinked blend alkaline anion exchange membranes with bi-continuous phase separated morphology to enhance ion conductivity. <i>Journal of Membrane Science</i> , 2020, 597, 117769.	4.1	63
34	Tight Covalent Organic Framework Membranes for Efficient Anion Transport via Molecular Precursor Engineering. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 17638-17646.	7.2	63
35	Manipulation of interactions at membrane interfaces for energy and environmental applications. <i>Progress in Polymer Science</i> , 2018, 80, 125-152.	11.8	56
36	Crystal Engineering of Metal-Organic Framework Thin Films for Gas Separations. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 49-69.	3.2	52

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37	A highly proton-conducting, methanol-blocking Nafion composite membrane enabled by surface-coating crosslinked sulfonated graphene oxide. <i>Chemical Communications</i> , 2016, 52, 2173-2176.	2.2	49
38	Zwitterionic Microcapsules as Water Reservoirs and Proton Carriers within a Nafion Membrane To Confer High Proton Conductivity under Low Humidity. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 5362-5366.	4.0	48
39	Enhancing water retention and low-humidity proton conductivity of sulfonated poly(ether ether) Tj ETQq1 1 0.784314 rgBT /Overlock hydrophilicityâ€“hydrophobicity. <i>Journal of Power Sources</i> , 2014, 248, 951-961.	4.0	48
40	Enhancing Hydroxide Conductivity and Stability of Anion Exchange Membrane by Blending Quaternary Ammonium Functionalized Polymers. <i>Electrochimica Acta</i> , 2017, 240, 486-494.	2.6	44
41	Synergistic CO ₂ Sieving from Polymer with Intrinsic Microporosity Masking Nanoporous Single-Layer Graphene. <i>Advanced Functional Materials</i> , 2020, 30, 2003979.	7.8	43
42	Irreversible synthesis of an ultrastrong two-dimensional polymeric material. <i>Nature</i> , 2022, 602, 91-95.	13.7	42
43	MOFâ€“COF Alloy Membranes for Efficient Propylene/Propane Separation. <i>Advanced Materials</i> , 2022, 34, e2201423.	11.1	39
44	A highly conductive and robust anion conductor obtained via synergistic manipulation in intra- and inter-laminate of layered double hydroxide nanosheets. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10277-10285.	5.2	38
45	Comparison of facilitated transport behavior and separation properties of membranes with imidazole groups and zinc ions as CO ₂ carriers. <i>Journal of Membrane Science</i> , 2016, 505, 44-52.	4.1	34
46	Highly conductive and robust composite anion exchange membranes by incorporating quaternized MIL-101(Cr). <i>Science Bulletin</i> , 2017, 62, 266-276.	4.3	32
47	Efficient ethylene/ethane separation through ionic liquid-confined covalent organic framework membranes. <i>Journal of Materials Chemistry A</i> , 2022, 10, 5420-5429.	5.2	29
48	Predicting Gas Separation through Graphene Nanopore Ensembles with Realistic Pore Size Distributions. <i>ACS Nano</i> , 2021, 15, 1727-1740.	7.3	28
49	Direct Chemical Vapor Deposition Synthesis of Porous Single-Layer Graphene Membranes with High Gas Permeances and Selectivities. <i>Advanced Materials</i> , 2021, 33, e2104308.	11.1	28
50	Enhancing hydroxide conductivity of anion exchange membrane via incorporating densely imidazolium functionalized graphene oxide. <i>Solid State Ionics</i> , 2019, 333, 83-92.	1.3	28
51	Gas Separations using Nanoporous Atomically Thin Membranes: Recent Theoretical, Simulation, and Experimental Advances. <i>Advanced Materials</i> , 2022, 34, e2201472.	11.1	28
52	Weakly pressure-dependent molecular sieving of propylene/propane mixtures through mixed matrix membrane with ZIF-8 direct-through channels. <i>Journal of Membrane Science</i> , 2022, 648, 120366.	4.1	26
53	Centimeter-scale gas-sieving nanoporous single-layer graphene membrane. <i>Journal of Membrane Science</i> , 2021, 618, 118745.	4.1	23
54	Accelerating CO ₂ capture of highly permeable polymer through incorporating highly selective hollow zeolite imidazolate framework. <i>AIChE Journal</i> , 2020, 66, e16800.	1.8	21

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55	Confined facilitated transport within covalent organic frameworks for propylene/propane membrane separation. <i>Chemical Engineering Journal</i> , 2022, 439, 135657.	6.6	20
56	Highly Hydroxide-Conductive Nanostructured Solid Electrolyte via Predesigned Ionic Nanoaggregates. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 28346-28354.	4.0	19
57	Enhancing the hydroxide conductivity of imidazolium-functionalized polysulfone by incorporating organic microsphere with ionic brushes. <i>Journal of Membrane Science</i> , 2018, 554, 6-15.	4.1	19
58	Ultrathin Carbon Molecular Sieve Films and Room-Temperature Oxygen Functionalization for Gas-Sieving. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 16729-16736.	4.0	19
59	Multipulsed Millisecond Ozone Gasification for Predictable Tuning of Nucleation and Nucleation-Decoupled Nanopore Expansion in Graphene for Carbon Capture. <i>ACS Nano</i> , 2021, 15, 13230-13239.	7.3	16
60	Enhanced proton conductivity under low humidity of sulfonated poly(ether ether ketone) composite membrane enabled by multifunctional phosphonic acid polymeric submicrocapsules. <i>Journal of Power Sources</i> , 2013, 240, 258-266.	4.0	15
61	Enhanced water retention and low-humidity proton conductivity of sulfonated poly(ether ether) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Hydrogen Energy, 2015, 40, 8398-8406.	3.8	15
62	Enhanced water retention and proton conductivity of proton exchange membranes by incorporating hollow polymer microspheres grafted with sulfonated polystyrene brushes. <i>RSC Advances</i> , 2015, 5, 5343-5356.	1.7	15
63	Tight Covalent Organic Framework Membranes for Efficient Anion Transport via Molecular Precursor Engineering. <i>Angewandte Chemie</i> , 2021, 133, 17779-17787.	1.6	15
64	Graphene Oxide Membranes with Heterogeneous Nanodomains for Efficient CO ₂ Separations. <i>Angewandte Chemie</i> , 2017, 129, 14434-14439.	1.6	13
65	Polybenzimidazole copolymer derived lacey carbon film for graphene transfer and contamination removal strategies for imaging graphene nanopores. <i>Carbon</i> , 2021, 173, 980-988.	5.4	13
66	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
67	Microstructure Manipulation of Covalent Organic Frameworks (COFs)-based Membrane for Efficient Separations. <i>Chemical Research in Chinese Universities</i> , 2022, 38, 325-338.	1.3	10
68	Advanced organic molecular sieve membranes for carbon capture: Current status, challenges and prospects. , 2022, 2, 100028.		8
69	Membranes for Gas Separation. <i>Membranes</i> , 2021, 11, 755.	1.4	6
70	One-Pot Synthesis of Chloromethylated Mesoporous Silica Nanoparticles as Multifunctional Fillers in Hybrid Anion Exchange Membranes. <i>Chinese Journal of Chemistry</i> , 2017, 35, 673-680.	2.6	4
71	Electrophoretic Crystallization of Ultrathin High-performance Metal-organic Framework Membranes. <i>Journal of Visualized Experiments</i> , 2018, , .	0.2	3