

Huacheng Zhang

List of Publications by Year in descending order

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68
papers

5,431
citations

87723

38
h-index

95083

68
g-index

73
all docs

73
docs citations

73
times ranked

4940
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrafast selective transport of alkali metal ions in metal organic frameworks with subnanometer pores. <i>Science Advances</i> , 2018, 4, eaaq0066.	4.7	368
2	Zeolitic Imidazolate Framework/Graphene Oxide Hybrid Nanosheets as Seeds for the Growth of Ultrathin Molecular Sieving Membranes. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 2048-2052.	7.2	281
3	Efficient metal ion sieving in rectifying subnanochannels enabled by metal-organic frameworks. <i>Nature Materials</i> , 2020, 19, 767-774.	13.3	275
4	Fundamental studies and practical applications of bio-inspired smart solid-state nanopores and nanochannels. <i>Nano Today</i> , 2016, 11, 61-81.	6.2	261
5	Bioinspired Artificial Single Ion Pump. <i>Journal of the American Chemical Society</i> , 2013, 135, 16102-16110.	6.6	254
6	Bio-inspired Photonic Crystal Microchip for Fluorescent Ultratrace Detection. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 5791-5795.	7.2	253
7	Enantioselective Recognition in Biomimetic Single Artificial Nanochannels. <i>Journal of the American Chemical Society</i> , 2011, 133, 7644-7647.	6.6	239
8	Building Bio-inspired Artificial Functional Nanochannels: From Symmetric to Asymmetric Modification. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 5296-5307.	7.2	228
9	A Bioinspired Multifunctional Heterogeneous Membrane with Ultrahigh Ionic Rectification and Highly Efficient Selective Ionic Gating. <i>Advanced Materials</i> , 2016, 28, 144-150.	11.1	179
10	Hydrophilic-Hydrophobic Patterned Molecularly Imprinted Photonic Crystal Sensors for Highly Sensitive Colorimetric Detection of Tetracycline. <i>Small</i> , 2015, 11, 2738-2742.	5.2	176
11	Fast and selective fluoride ion conduction in sub-1-nanometer metal-organic framework channels. <i>Nature Communications</i> , 2019, 10, 2490.	5.8	158
12	Homochiral MOF-Polymer Mixed Matrix Membranes for Efficient Separation of Chiral Molecules. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 16928-16935.	7.2	141
13	Polycrystalline Advanced Microporous Framework Membranes for Efficient Separation of Small Molecules and Ions. <i>Advanced Materials</i> , 2020, 32, e1902009.	11.1	134
14	A sunlight-responsive metal-organic framework system for sustainable water desalination. <i>Nature Sustainability</i> , 2020, 3, 1052-1058.	11.5	131
15	Angstrom-scale ion channels towards single-ion selectivity. <i>Chemical Society Reviews</i> , 2022, 51, 2224-2254.	18.7	116
16	Incorporation of Homochirality into a Zeolitic Imidazolate Framework Membrane for Efficient Chiral Separation. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 17130-17134.	7.2	113
17	Voltage-Gated Ion Transport in Two-Dimensional Sub-1 nm Nanofluidic Channels. <i>ACS Nano</i> , 2019, 13, 11793-11799.	7.3	89
18	Single Nanochannel-Aptamer-Based Biosensor for Ultrasensitive and Selective Cocaine Detection. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 2033-2039.	4.0	87

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19	From symmetric to asymmetric design of bio-inspired smart single nanochannels. <i>Chemical Communications</i> , 2013, 49, 10048.	2.2	83
20	Synthetic Asymmetric ϵ -Shaped Nanodevices with Symmetric pH ϵ Gating Characteristics. <i>Advanced Functional Materials</i> , 2015, 25, 1102-1110.	7.8	83
21	Healable green hydrogen bonded networks for circuit repair, wearable sensor and flexible electronic devices. <i>Journal of Materials Chemistry A</i> , 2017, 5, 13138-13144.	5.2	83
22	Bioinspired Smart Gate-Location-Controllable Single Nanochannels: Experiment and Theoretical Simulation. <i>ACS Nano</i> , 2015, 9, 12264-12273.	7.3	82
23	Supramolecular Self-Assembly Induced Adjustable Multiple Gating States of Nanofluidic Diodes. <i>Journal of the American Chemical Society</i> , 2016, 138, 16372-16379.	6.6	82
24	Oscillatory Reaction Induced Periodic C-Quadruplex DNA Gating of Artificial Ion Channels. <i>ACS Nano</i> , 2017, 11, 3022-3029.	7.3	81
25	A Bio ϵ nspired Potassium and pH Responsive Double ϵ gated Nanochannel. <i>Advanced Functional Materials</i> , 2015, 25, 421-426.	7.8	79
26	Lithium Extraction by Emerging Metal ϵ Organic Framework ϵ Based Membranes. <i>Advanced Functional Materials</i> , 2021, 31, 2105991.	7.8	79
27	Four ϵ Dimensional Screening Anti ϵ Counterfeiting Pattern by Inkjet Printed Photonic Crystals. <i>Chemistry - an Asian Journal</i> , 2016, 11, 2680-2685.	1.7	72
28	Unidirectional and Selective Proton Transport in Artificial Heterostructured Nanochannels with Nano ϵ to ϵ Subnano Confined Water Clusters. <i>Advanced Materials</i> , 2020, 32, e2001777.	11.1	72
29	Zeolitic Imidazolate Framework/Graphene Oxide Hybrid Nanosheets as Seeds for the Growth of Ultrathin Molecular Sieving Membranes. <i>Angewandte Chemie</i> , 2016, 128, 2088-2092.	1.6	70
30	Efficient Gating of Ion Transport in Three ϵ Dimensional Metal ϵ Organic Framework Sub ϵ Nanochannels with Confined Light ϵ Responsive Azobenzene Molecules. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 13051-13056.	7.2	70
31	Bio-inspired Smart Single Asymmetric Hourglass Nanochannels for Continuous Shape and Ion Transport Control. <i>Small</i> , 2015, 11, 786-791.	5.2	67
32	Non-swelling graphene oxide-polymer nanocomposite membrane for reverse osmosis desalination. <i>Journal of Membrane Science</i> , 2018, 562, 47-55.	4.1	64
33	Zirconium Metal ϵ Organic Framework Materials for Efficient Ion Adsorption and Sieving. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 12907-12923.	1.8	60
34	Ultrasensitive detection of glucose with enzyme-functionalized single nanochannels. <i>Journal of Materials Chemistry A</i> , 2014, 2, 19131-19135.	5.2	52
35	Ultrasensitive Monovalent Metal Ion Conduction in a Three-Dimensional Sub-1 nm Nanofluidic Device Constructed by Metal ϵ Organic Frameworks. <i>ACS Nano</i> , 2021, 15, 1240-1249.	7.3	52
36	Thermoresponsive Amphoteric Metal ϵ Organic Frameworks for Efficient and Reversible Adsorption of Multiple Salts from Water. <i>Advanced Materials</i> , 2018, 30, e1802767.	11.1	51

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37	Emerging Homochiral Porous Materials for Enantiomer Separation. <i>Advanced Functional Materials</i> , 2021, 31, 2101335.	7.8	43
38	Cyclodextrin metal-organic framework-polymer composite membranes towards ultimate and stable enantioselectivity. <i>Journal of Membrane Science</i> , 2021, 620, 118956.	4.1	42
39	Sulfonated Sub-1-nm Metal-Organic Framework Channels with Ultrahigh Proton Selectivity. <i>Journal of the American Chemical Society</i> , 2020, 142, 9827-9833.	6.6	41
40	Functionalized Boron Nitride Nanosheets: A Thermally Rearranged Polymer Nanocomposite Membrane for Hydrogen Separation. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 16056-16061.	7.2	39
41	Tunable Ionic Transport Control inside a Bio-Inspired Constructive Bi-Channel Nanofluidic Device. <i>Small</i> , 2014, 10, 793-801.	5.2	37
42	Incorporation of Homochirality into a Zeolitic Imidazolate Framework Membrane for Efficient Chiral Separation. <i>Angewandte Chemie</i> , 2018, 130, 17376-17380.	1.6	36
43	Carbon Nanotube Networks as Nanoscaffolds for Fabricating Ultrathin Carbon Molecular Sieve Membranes. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 20182-20188.	4.0	33
44	Homochiral MOF-Polymer Mixed Matrix Membranes for Efficient Separation of Chiral Molecules. <i>Angewandte Chemie</i> , 2019, 131, 17084-17091.	1.6	31
45	Functionalized Boron Nitride Nanosheets: A Thermally Rearranged Polymer Nanocomposite Membrane for Hydrogen Separation. <i>Angewandte Chemie</i> , 2018, 130, 16288-16293.	1.6	30
46	Metal-Organic Framework-Based Ion-Selective Membranes. <i>Advanced Materials Technologies</i> , 2021, 6, 2000790.	3.0	28
47	Bioinspired Self-Gating Nanofluidic Devices for Autonomous and Periodic Ion Transport and Cargo Release. <i>Advanced Functional Materials</i> , 2019, 29, 1806416.	7.8	26
48	Improvement of the Swelling Properties of Ionic Hydrogels by the Incorporation of Hydrophobic, Elastic Microfibers for Forward Osmosis Applications. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 505-512.	1.8	24
49	Microfiber-polymer hydrogel monolith as forward osmosis draw agent. <i>Journal of Membrane Science</i> , 2016, 510, 426-436.	4.1	21
50	Effect of Anion Species on Ion Current Rectification Properties of Positively Charged Nanochannels. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 28915-28922.	4.0	21
51	Periodic oscillation of ion conduction of nanofluidic diodes using a chemical oscillator. <i>Nanoscale</i> , 2017, 9, 7297-7304.	2.8	20
52	Photoresponsive Styrylpyrene-Modified MOFs for Gated Loading and Release of Cargo Molecules. <i>Chemistry of Materials</i> , 2020, 32, 10621-10627.	3.2	20
53	Bio-inspired artificial ion channels: from physical to chemical gating. <i>Materials Chemistry Frontiers</i> , 2021, 5, 4059-4072.	3.2	17
54	Fabrication of hydrogel-coated single conical nanochannels exhibiting controllable ion rectification characteristics. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 6367-6373.	1.3	15

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55	Magnetic Gated Biomimetic Artificial Nanochannels for Controllable Ion Transportation Inspired by Homing Pigeon. <i>Small</i> , 2018, 14, e1703369.	5.2	15
56	Synthetic azobenzene-containing metal-organic framework ion channels toward efficient light-gated ion transport at the subnanoscale. <i>Nanoscale</i> , 2021, 13, 17396-17403.	2.8	15
57	Acrylic acid grafted porous polycarbonate membrane with smart hydrostatic pressure response to pH. <i>Journal of Materials Chemistry A</i> , 2013, 1, 4642.	5.2	13
58	Applications of polymer single nanochannels in biosensors. <i>Science Bulletin</i> , 2013, 58, 1473-1482.	1.7	12
59	Porous 2D carbon nanosheets synthesized via organic groups triggered polymer particles exfoliation: An effective cathode catalyst for polymer electrolyte membrane fuel cells. <i>Electrochimica Acta</i> , 2020, 332, 135397.	2.6	10
60	Efficient Gating of Ion Transport in Three-Dimensional Metal-Organic Framework Sub-Nanochannels with Confined Light-Responsive Azobenzene Molecules. <i>Angewandte Chemie</i> , 2020, 132, 13151-13156.	1.6	7
61	Fouling and cleaning of polymer-entwined graphene oxide nanocomposite membrane for forward osmosis process. <i>Separation Science and Technology</i> , 2019, 54, 1376-1386.	1.3	6
62	Polyamide-Based Electronanofiltration Membranes for Efficient Anion Separation. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 9869-9878.	1.8	6
63	Preparation of high-flux ultrafiltration membranes by blending strongly charged polymer. <i>Journal of Applied Polymer Science</i> , 2017, 134, .	1.3	5
64	Frontispiece: Homochiral MOF-Polymer Mixed Matrix Membranes for Efficient Separation of Chiral Molecules. <i>Angewandte Chemie - International Edition</i> , 2019, 58, .	7.2	2
65	Innenr¼cktitelbild: Bio-Inspired Photonic-Crystal Microchip for Fluorescent Ultratrace Detection (<i>Angew. Chem.</i> 23/2014). <i>Angewandte Chemie</i> , 2014, 126, 6119-6119.	1.6	1
66	Water Desalination: Thermoresponsive Amphoteric Metal-Organic Frameworks for Efficient and Reversible Adsorption of Multiple Salts from Water (<i>Adv. Mater.</i> 34/2018). <i>Advanced Materials</i> , 2018, 30, 1870256.	11.1	1
67	Photonic Crystals: Hydrophilic-Hydrophobic Patterned Molecularly Imprinted Photonic Crystal Sensors for High-Sensitive Colorimetric Detection of Tetracycline (<i>Small</i> 23/2015). <i>Small</i> , 2015, 11, 2828-2828.	5.2	0
68	Frontispiz: Homochiral MOF-Polymer Mixed Matrix Membranes for Efficient Separation of Chiral Molecules. <i>Angewandte Chemie</i> , 2019, 131, .	1.6	0