

Zhi Xu

List of Publications by Year in descending order

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76
papers

2,779
citations

126907

33
h-index

189892

50
g-index

77
all docs

77
docs citations

77
times ranked

2649
citing authors

#	ARTICLE	IF	CITATIONS
1	A Surfactant-Free and Scalable General Strategy for Synthesizing Ultrathin Two-Dimensional Metal-Organic Framework Nanosheets for the Oxygen Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 13565-13572.	13.8	205
2	Sulfur-Modified Oxygen Vacancies in Iron-Cobalt Oxide Nanosheets: Enabling Extremely High Activity of the Oxygen Evolution Reaction to Achieve the Industrial Water Splitting Benchmark. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 14664-14670.	13.8	178
3	Induced activation of the commercial Cu/ZnO/Al ₂ O ₃ catalyst for the steam reforming of methanol. <i>Nature Catalysis</i> , 2022, 5, 99-108.	34.4	155
4	Two-dimensional MXene incorporated chitosan mixed-matrix membranes for efficient solvent dehydration. <i>Journal of Membrane Science</i> , 2018, 563, 625-632.	8.2	135
5	Two-dimensional material separation membranes for renewable energy purification, storage, and conversion. <i>Green Energy and Environment</i> , 2021, 6, 193-211.	8.7	90
6	Sulfur-Modified Oxygen Vacancies in Iron-Cobalt Oxide Nanosheets: Enabling Extremely High Activity of the Oxygen Evolution Reaction to Achieve the Industrial Water Splitting Benchmark. <i>Angewandte Chemie</i> , 2020, 132, 14772-14778.	2.0	89
7	Ultrathin ZSM-5 zeolite nanosheet laminated membrane for high-flux desalination of concentrated brines. <i>Science Advances</i> , 2018, 4, eaau8634.	10.3	88
8	DDR-type zeolite membrane synthesis, modification and gas permeation studies. <i>Journal of Membrane Science</i> , 2016, 505, 194-204.	8.2	77
9	Catalytic partial oxidation of methane to syngas: review of perovskite catalysts and membrane reactors. <i>Catalysis Reviews - Science and Engineering</i> , 2021, 63, 1-67.	12.9	71
10	A Surfactant-Free and Scalable General Strategy for Synthesizing Ultrathin Two-Dimensional Metal-Organic Framework Nanosheets for the Oxygen Evolution Reaction. <i>Angewandte Chemie</i> , 2019, 131, 13699-13706.	2.0	64
11	Zr-MOF-Enabled Controllable Ion Sieving and Proton Conductivity in Flow Battery Membrane. <i>Advanced Functional Materials</i> , 2021, 31, 2104629.	14.9	64
12	Structural Buffer Engineering on Metal Oxide for Long-Term Stable Seawater Splitting. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	64
13	Effect of Pressure on High-Temperature Water Gas Shift Reaction in Microporous Zeolite Membrane Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 1364-1375.	3.7	60
14	Co-immobilization of cellulase and lysozyme on amino-functionalized magnetic nanoparticles: An activity-tunable biocatalyst for extraction of lipids from microalgae. <i>Bioresource Technology</i> , 2018, 263, 317-324.	9.6	60
15	Assembly of 2D MXene nanosheets and TiO ₂ nanoparticles for fabricating mesoporous TiO ₂ -MXene membranes. <i>Journal of Membrane Science</i> , 2018, 564, 35-43.	8.2	57
16	Nonionic zeolite membrane as potential ion separator in redox-flow battery. <i>Journal of Membrane Science</i> , 2014, 450, 12-17.	8.2	55
17	Colloidal silicalite-nafion composite ion exchange membrane for vanadium redox-flow battery. <i>Journal of Membrane Science</i> , 2015, 484, 1-9.	8.2	51
18	Biomimetic Strain-Stiffening Self-Assembled Hydrogels. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 4830-4834.	13.8	48

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19	Computational Design and Experimental Validation of the Optimal Bimetal-Doped SrCoO _{3-δ} Perovskite as Solid Oxide Fuel Cell Cathode. <i>Journal of the American Chemical Society</i> , 2021, 143, 9507-9514.	13.7	48
20	Microfluidic-architected Nanoarrays/Porous Core-shell Fibers toward Robust Micro-energy Storage. <i>Advanced Science</i> , 2020, 7, 1901931.	11.2	47
21	Li ⁺ /Mg ²⁺ separation by membrane separation: The role of the compensatory effect. <i>Journal of Membrane Science</i> , 2021, 636, 119542.	8.2	47
22	Insight into effective denitrification and desulfurization of liquid fuel with deep eutectic solvents: an innovative evaluation criterion to filtrate extractants using the compatibility index. <i>Green Chemistry</i> , 2018, 20, 3112-3120.	9.0	46
23	Balancing Osmotic Pressure of Electrolytes for Nanoporous Membrane Vanadium Redox Flow Battery with a Draw Solute. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 35289-35297.	8.0	42
24	Microfluidic-Directed Hydrogel Fabrics Based on Interfibrillar Self-Healing Effects. <i>Chemistry of Materials</i> , 2018, 30, 8822-8828.	6.7	42
25	Tunable dextran retention of MXene-TiO ₂ mesoporous membranes by adjusting the 2D MXene content. <i>2D Materials</i> , 2018, 5, 045003.	4.4	42
26	Porous Structure Engineering of Iridium Oxide Nanoclusters on Atomic Scale for Efficient pH-Universal Overall Water Splitting. <i>Small</i> , 2021, 17, e2100121.	10.0	40
27	Advanced Nafion hybrid membranes with fast proton transport channels toward high-performance vanadium redox flow battery. <i>Journal of Membrane Science</i> , 2021, 624, 119047.	8.2	39
28	Ultrafast Water Transport in Two-dimensional Channels Enabled by Spherical Polyelectrolyte Brushes with Controllable Flexibility. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 19933-19941.	13.8	39
29	Self-crosslinked MXene hollow fiber membranes for H ₂ /CO ₂ separation. <i>Journal of Membrane Science</i> , 2021, 638, 119669.	8.2	37
30	Selective Swelling of Electrospun Block Copolymers: From Perforated Nanofibers to High Flux and Responsive Ultrafiltration Membranes. <i>Macromolecules</i> , 2018, 51, 2283-2292.	4.8	36
31	A zeolite ion exchange membrane for redox flow batteries. <i>Chemical Communications</i> , 2014, 50, 2416.	4.1	35
32	High-flux, anti-fouling dendrimer grafted PAN membrane: Fabrication, performance and mechanisms. <i>Journal of Membrane Science</i> , 2020, 596, 117743.	8.2	35
33	Perovskite Cathode Materials for Low-Temperature Solid Oxide Fuel Cells: Fundamentals to Optimization. <i>Electrochemical Energy Reviews</i> , 2022, 5, 263-311.	25.5	35
34	Acidic ZSM-5 zeolite-coated long period fiber grating for optical sensing of ammonia. <i>Journal of Materials Chemistry</i> , 2011, 21, 181-186.	6.7	34
35	Ag NPs coated PVDF@TiO ₂ nanofiber membrane prepared by epitaxial growth on TiO ₂ inter-layer for 4-NP reduction application. <i>Separation and Purification Technology</i> , 2019, 227, 115700.	7.9	33
36	Proton-Selective Ion Transport in ZSM-5 Zeolite Membrane. <i>Journal of Physical Chemistry C</i> , 2016, 120, 26386-26392.	3.1	31

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37	Anchoring metal organic frameworks on nanofibers via etching-assisted strategy: Toward water-in-oil emulsion separation membranes. Separation and Purification Technology, 2022, 281, 119812.	7.9	30
38	Zeolite membranes for ion separations from aqueous solutions. Current Opinion in Chemical Engineering, 2015, 8, 15-20.	7.8	28
39	Recent progress in the design and fabrication of MXene-based membranes. Frontiers of Chemical Science and Engineering, 2021, 15, 820-836.	4.4	27
40	Fabrication of microporous GO-TiO ₂ membrane via an improved weak alkaline sol-gel method. Journal of Membrane Science, 2018, 561, 10-18.	8.2	26
41	Solvent-induced interfacial polymerization enables highly crystalline covalent organic framework membranes. Journal of Membrane Science, 2022, 659, 120799.	8.2	24
42	Preparation and characterization of mixed-conducting thin tubular membrane. Journal of Membrane Science, 2007, 299, 261-267.	8.2	22
43	Unveiling the effects of dimensionality of tin oxide-derived catalysts on CO ₂ reduction by using gas-diffusion electrodes. Reaction Chemistry and Engineering, 2021, 6, 345-352.	3.7	20
44	Microscopic transport and phase behaviors of CO ₂ injection in heterogeneous formations using microfluidics. Energy, 2022, 256, 124524.	8.8	19
45	Electrostatic-Induced Crystal-Rearrangement of Porous Organic Cage Membrane for CO ₂ Capture. Angewandte Chemie - International Edition, 2022, 61, .	13.8	18
46	Novel membrane separation technologies and membrane processes. Frontiers of Chemical Science and Engineering, 2021, 15, 717-719.	4.4	16
47	Rapid removal of PFOA and PFOS via modified industrial solid waste: Mechanisms and influences of water matrices. Chemical Engineering Journal, 2022, 433, 133271.	12.7	16
48	Adaptation and evolution of freshwater Anammox communities treating saline/brackish wastewater. Water Research, 2021, 207, 117815.	11.3	15
49	Biomimetic Strain-Stiffening Self-Assembled Hydrogels. Angewandte Chemie, 2020, 132, 4860-4864.	2.0	14
50	Phase and morphology engineering of porous cobalt-copper sulfide as a bifunctional oxygen electrode for rechargeable Zn-air batteries. Journal of Materials Chemistry A, 2021, 9, 18329-18337.	10.3	14
51	Gravity-driven electrospun membranes for effective removal of perfluoro-organics from synthetic groundwater. Journal of Membrane Science, 2022, 644, 120180.	8.2	14
52	MOF-801 polycrystalline membrane with sub-10 nm polymeric assembly layer for ion sieving and flow battery storage. AIChE Journal, 2022, 68, .	3.6	14
53	Recent Advances on Hydrogen Evolution and Oxygen Evolution Catalysts for Direct Seawater Splitting. Coatings, 2022, 12, 659.	2.6	14
54	Chemical Expansion, Crystal Structural Stability, and Oxygen Permeability of SrCo _{0.4} Fe _{0.6} Al _x O _{3-δ} Oxides. Journal of the American Ceramic Society, 2007, 90, 3923-3929.	3.8	10

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55	Rigidly and intrinsically microporous polymer reinforced sulfonated polyether ether ketone membrane for vanadium flow battery. <i>Journal of Membrane Science</i> , 2022, 653, 120517.	8.2	10
56	Fish-scale-like nano-porous membrane based on zeolite nanosheets for long stable zinc-based flow battery. <i>AIChE Journal</i> , 2022, 68, .	3.6	10
57	Investigations on a Mesoporous Glass Membrane as Ion Separator for a Redox Flow Battery. <i>Batteries</i> , 2019, 5, 6.	4.5	9
58	Novel Ag-AgBr decorated composite membrane for dye rejection and photodegradation under visible light. <i>Frontiers of Chemical Science and Engineering</i> , 2021, 15, 892-901.	4.4	8
59	A Fiber Optic Interferometric Sensor Platform for Determining Gas Diffusivity in Zeolite Films. <i>Sensors</i> , 2018, 18, 1090.	3.8	7
60	Pore-scale investigation of immiscible displacement in rough fractures. <i>Journal of Petroleum Science and Engineering</i> , 2021, 207, 109107.	4.2	7
61	The Simulation of Liquid Flow in the Pore Network Model of Nanoporous Media. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2021, 143, .	2.3	7
62	Mechanochemically Synthesised Flexible Electrodes based on Bimetallic Metal-Organic Framework Glasses for the Oxygen Evolution Reaction. <i>Angewandte Chemie</i> , 0, , .	2.0	7
63	Two-dimensional sub-nanometer confinement channels enabled by functional carbon dots for ultra-permeable alcohol dehydration. <i>Journal of Membrane Science</i> , 2022, 644, 120069.	8.2	7
64	Optimizing pore structure of nanoporous membranes for high-performance salinity gradient power conversion. <i>Chemical Engineering Journal</i> , 2022, 444, 136675.	12.7	7
65	Room-Temperature Synthesis of NiCo-Layered Double Hydroxide/MXene Composites for High-Performance Supercapacitors. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 8800-8808.	3.7	7
66	Fast proton-selective transport through covalent organic frameworks in aqueous phase. <i>Journal of Membrane Science</i> , 2022, 648, 120361.	8.2	6
67	Electrostatic-Induced Crystal-Rearrangement of Porous Organic Cage Membrane for CO ₂ Capture. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	6
68	High-Flux Nanofibrous Membranes with an Under-oil Superhydrophobic Surface Modulated by Zeolitic Imidazolate Framework-71 for Gravity-Driven Water-in-Oil Separation. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 9037-9043.	3.7	5
69	Ultrafast Water Transport in Two-Dimensional Channels Enabled by Spherical Polyelectrolyte Brushes with Controllable Flexibility. <i>Angewandte Chemie</i> , 2021, 133, 20086-20094.	2.0	4
70	Regulating multiscale structures of nickel-iron-based electrocatalysts for efficient water oxidation. <i>Cell Reports Physical Science</i> , 2022, 3, 100870.	5.6	4
71	Sulfonic acid-grafted polyvinylidene fluoride electrospun mats as electro-Fenton reactor membrane components. <i>RSC Advances</i> , 2017, 7, 29193-29199.	3.6	2
72	Mineralized Supramolecular Hydrogels Bearing Tunable Thermo-Responsiveness. <i>Macromolecular Rapid Communications</i> , 2019, 40, 1900516.	3.9	2

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73	Tailoring of a catalyst $\text{La}_{0.8}\text{Ce}_{0.1}\text{Ni}_{0.4}\text{Ti}_{0.6}\text{O}_3$ interlayer via in situ exsolution for a catalytic membrane reactor. <i>Reaction Chemistry and Engineering</i> , 2021, 6, 1395-1403.	3.7	2
74	Influence of porous media heterogeneity on water-oil immiscible displacement and mechanism analysis. <i>Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica</i> , 2021, , .	0.5	1
75	Proton-Conducting Nanocrystalline Ceramics for High-Temperature Hydrogen Sensing. <i>Metallurgical and Materials Transactions E</i> , 2014, 1, 48-57.	0.5	0
76	Abstract: Biomimetic Strain-Stiffening Self-Assembled Hydrogels (<i>Angew. Chem.</i> 12/2020). <i>Angewandte Chemie</i> , 2020, 132, 5001-5001.	2.0	0