Wu Xiao

List of Publications by Year in descending order

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47 papers	1,025 citations	430874 18 h-index	434195 31 g-index
50 all docs	50 docs citations	50 times ranked	1115 citing authors

#	Article	IF	Citations
1	Pore size and surface area control of MgO nanostructures using a surfactant-templated hydrothermal process: High adsorption capability to azo dyes. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2012, 408, 79-86.	4.7	100
2	Preparation of porous PPy TiO 2 composites: Improved visible light photoactivity and the mechanism. Chemical Engineering Journal, 2014, 236, 480-489.	12.7	72
3	Superhydrophobic polypropylene membrane with fabricated antifouling interface for vacuum membrane distillation treating high concentration sodium/magnesium saline water. Journal of Membrane Science, 2019, 579, 240-252.	8.2	66
4	Enhanced performance of superhydrophobic polypropylene membrane with modified antifouling surface for high salinity water treatment. Separation and Purification Technology, 2019, 214, 11-20.	7.9	62
5	Pulverization Control by Confining Fe₃O₄ Nanoparticles Individually into Macropores of Hollow Carbon Spheres for High-Performance Li-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 2581-2590.	8.0	56
6	Scalable High-Areal-Capacity Liâ€“S Batteries Enabled by Sandwich-Structured Hierarchically Porous Membranes with Intrinsic Polysulfide Adsorption. Nano Letters, 2020, 20, 6922-6929.	9.1	47
7	Membrane assisted cooling crystallization: Process model, nucleation, metastable zone, and crystal size distribution. AICHE Journal, 2016, 62, 829-841.	3.6	46
8	Simultaneous optimization of batch process schedules and water-allocation network. Computers and Chemical Engineering, 2009, 33, 1153-1168.	3.8	40
9	Simultaneous recovery and crystallization control of saline organic wastewater by membrane distillation crystallization. AICHE Journal, 2017, 63, 2187-2197.	3.6	39
10	Synthesis of Large-scale Multistream Heat Exchanger Networks Based on Stream Pseudo Temperature. Chinese Journal of Chemical Engineering, 2006, 14, 574-583.	3.5	34
11	Simultaneous optimization strategies for heat exchanger network synthesis and detailed shell-and-tube heat-exchanger design involving phase changes using GA/SA. Energy, 2019, 183, 1166-1177.	8.8	30
12	A novel hollow fiber membraneâ€assisted antisolvent crystallization for enhanced mass transfer process control. AICHE Journal, 2019, 65, 734-744.	3.6	29
13	A novel membrane distillation response technology for nucleation detection, metastable zone width measurement and analysis. Chemical Engineering Science, 2015, 134, 671-680.	3.8	27
14	Interfaceâ€based crystal particle autoselection via membrane crystallization: From scaling to process control. AICHE Journal, 2019, 65, 723-733.	3.6	27
15	A multi-objective optimization strategy of steam power system to achieve standard emission and optimal economic by NSGA-â…¡. Energy, 2021, 232, 120953.	8.8	27
16	Falling film melt crystallization (III): Model development, separation effect compared to static melt crystallization and process optimization. Chemical Engineering Science, 2014, 117, 198-209.	3.8	26
17	Electron-Donating C-NH₂ Link Backbone for Highly Alkaline and Mechanical Stable Anion Exchange Membranes. ACS Applied Materials & Interfaces, 2021, 13, 10490-10499.	8.0	22
18	Hybrid Control Mechanism of Crystal Morphology Modification for Ternary Solution Treatment via Membrane Assisted Crystallization. Crystal Growth and Design, 2018, 18, 934-943.	3.0	21

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19	Tailored Robust Hydrogel Composite Membranes for Continuous Protein Crystallization with Ultrahigh Morphology Selectivity. ACS Applied Materials & Interfaces, 2018, 10, 26653-26661.	8.0	19
20	Synergy of CO 2 removal and light hydrocarbon recovery from oil-field associated gas by dual-membrane process. Journal of Natural Gas Science and Engineering, 2015, 26, 1254-1263.	4.4	18
21	Dual-Membrane Module and Its Optimal Flow Pattern for H₂/CO₂ Separation. Industrial & Engineering Chemistry Research, 2016, 55, 1064-1075.	3.7	15
22	A Novel Composite Material UiO-66@HNT/Pebax Mixed Matrix Membranes for Enhanced CO2/N2 Separation. Membranes, 2021, 11, 693.	3.0	15
23	Microspheroidization treatment of macroporous TiO2 to enhance its recycling and prevent membrane fouling of photocatalysisâ€“membrane system. Chemical Engineering Journal, 2014, 251, 58-68.	12.7	14
24	Visual study and simulation of interfacial liquid layer mass transfer in membrane-assisted antisolvent crystallization. Chemical Engineering Science, 2020, 228, 116003.	3.8	14
25	Coupling hydrogen separation with butanone hydrogenation in an electrochemical hydrogen pump with sulfonated poly (phthalazinone ether sulfone ketone) membrane. Journal of Power Sources, 2016, 327, 178-186.	7.8	13
26	Membrane-Assisted Antisolvent Crystallization: Interfacial Mass-Transfer Simulation and Multistage Process Control. Industrial & Engineering Chemistry Research, 2020, 59, 10160-10171.	3.7	13
27	Dual-membrane natural gas pretreatment process as CO 2 source for enhanced gas recovery with synergy hydrocarbon recovery. Journal of Natural Gas Science and Engineering, 2016, 34, 563-574.	4.4	12
28	A Novel Process of H2/CO2 Membrane Separation of Shifted Syngas Coupled with Gasoil Hydrogenation. Processes, 2020, 8, 590.	2.8	12
29	Na+/Mg2+ interactions on membrane distillation permeation flux and crystallization performance during high saline solution treatment. Separation and Purification Technology, 2021, 259, 118191.	7.9	12
30	Simultaneous optimal integration of water utilization and heat exchange networks using holistic mathematical programming. Korean Journal of Chemical Engineering, 2009, 26, 1161-1174.	2.7	11
31	Effects of Hydrophobicity of Diffusion Layer on the Electroreduction of Biomass Derivatives in Polymer Electrolyte Membrane Reactors. ChemSusChem, 2015, 8, 288-300.	6.8	11
32	Efficiency Separation Process of H2/CO2/CH4 Mixtures by a Hollow Fiber Dual Membrane Separator. Processes, 2020, 8, 560.	2.8	10
33	High-efficient crystal particle manufacture by microscale process intensification technology. Green Chemical Engineering, 2021, 2, 57-69.	6.3	9
34	Membrane-Assisted Cooling Crystallization for Interfacial Nucleation Induction and Self-Seeding Control. Industrial & Engineering Chemistry Research, 2022, 61, 765-776.	3.7	9
35	Elimination of Product Inhibition by Ethanol Competitive Adsorption on Carbon Catalyst Support in a Maleic Acid Electrochemical Hydrogen Pump Hydrogenation Reactor. ACS Sustainable Chemistry and Engineering, 2017, 5, 8738-8746.	6.7	7
36	Tailored 3D printed micro-crystallization chip for versatile and high-efficiency droplet evaporative crystallization. Lab on A Chip, 2019, 19, 767-777.	6.0	7

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37	Conceptual Design of Pyrolytic Oil Upgrading Process Enhanced by Membrane-Integrated Hydrogen Production System. Processes, 2019, 7, 284.	2.8	7
38	Interfacial microdroplet evaporative crystallization on 3D printed regular matrix platform. AICHE Journal, 2020, 66, e16280.	3.6	6
39	Protein crystal regulation and harvest via electric field-based method. Current Opinion in Chemical Engineering, 2022, 36, 100744.	7.8	5
40	A Covalent Organic Framework Membrane with Homo Hierarchical Pores for Confined Reactive Crystallization. ACS Applied Materials & Interfaces, 2022, , .	8.0	4
41	Porosity Distribution Simulation and Impure Inclusion Analysis of Porous Crystal Layer Formed via Polythermal Process. Crystals, 2021, 11, 1347.	2.2	3
42	Design and Economic Evaluation of a Hybrid Membrane Separation Process from Multiple Refinery Gases Using a Graphic Synthesis Method. Processes, 2022, 10, 820.	2.8	3
43	Membrane separation system for coalâ€fired flue gas reclamation: Process planning and initial design. Canadian Journal of Chemical Engineering, 2019, 97, 717-726.	1.7	2
44	An automated method for synthesizing a multi-stream heat exchanger network based on stream pseudo-temperature. Computer Aided Chemical Engineering, 2006, 21, 919-924.	0.5	0
45	Optimization of the scheduling and water integration in batch processes based on the Timed Petri net. Computer Aided Chemical Engineering, 2012, , 1447-1451.	0.5	0
46	A Simultaneous Approach for Batch Water-allocation Network Design. , 2009, , 213-222.		0
47	10.2478/s11814-010-0157-z. , 2011, 27, 373.		0