# Xuehua Ruan

List of Publications by Year
in descending order

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| | | 172207 | 243296 |
|---|---|---|---|
| 88 | 2,479 | 29 | 44 |
| papers | citations | h-index | g-index |

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|---|---|---|---|
| 89 | 89 | 89 | 1963 |
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Constructing MOF-doped two-dimensional composite material ZIF-90@C3N4 mixed matrix membranes for CO2/N2 separation. Separation and Purification Technology, 2022, 280, 119803. | 3.9 | 31 |
| 2 | Protein crystal regulation and harvest via electric field-based method. Current Opinion in Chemical Engineering, 2022, 36, 100744. | 3.8 | 5 |
| 3 | A Covalent Organic Framework Membrane with Homo Hierarchical Pores for Confined Reactive Crystallization. ACS Applied Materials & Interfaces, 2022, , . | 4.0 | 4 |
| 4 | Interfacial co-weaving of AO-PIM-1 and ZIF-8 in composite membranes for enhanced H2 purification. Journal of Membrane Science, 2022, 645, 120217. | 4.1 | 12 |
| 5 | Constructing continuous and fast transport pathway by highly permeable polymer electrospun fibers in composite membrane to improve CO2 capture. Separation and Purification Technology, 2022, 285, 120332. | 3.9 | 7 |
| 6 | PAN electrospun nanofiber skeleton induced MOFs continuous distribution in MMMs to boost CO2 capture. Journal of Membrane Science, 2022, 650, 120330. | 4.1 | 22 |
| 7 | 3D hollow CoNi-LDH nanocages based MMMs with low resistance and CO2-philic transport channel to boost CO2 capture. Journal of Membrane Science, 2022, 653, 120542. | 4.1 | 23 |
| 8 | Novel and versatile PEI modified ZIF-8 hollow nanotubes to construct CO2 facilitated transport pathway in MMMs. Separation and Purification Technology, 2022, 289, 120768. | 3.9 | 19 |
| 9 | Membrane-Assisted Cooling Crystallization for Interfacial Nucleation Induction and Self-Seeding Control. Industrial & Engineering Chemistry Research, 2022, 61, 765-776. | 1.8 | 9 |
| 10 | Regulating Cutoff Size of Metalâ€“Organic Frameworks by In Situ Anchoring of Poly(ethylene glycol) to Boost CO<sub>2</sub> Capture. Industrial & Engineering Chemistry Research, 2022, 61, 6650-6661. | 1.8 | 5 |
| 11 | Design and Economic Evaluation of a Hybrid Membrane Separation Process from Multiple Refinery Gases Using a Graphic Synthesis Method. Processes, 2022, 10, 820. | 1.3 | 3 |
| 12 | PNIPAm hydrogel composite membrane for high-throughput adsorption of biological macromolecules. Separation and Purification Technology, 2022, 294, 121224. | 3.9 | 6 |
| 13 | Multi-technique integration separation frameworks after steam reforming for coal-based hydrogen generation. Chinese Journal of Chemical Engineering, 2021, 35, 163-172. | 1.7 | 7 |
| 14 | Prestructured<scp>MXene</scp>fillers with uniform channels to enhance<scp>CO<sub>2</sub></scp>selective permeation in mixed matrix membranes. Journal of Applied Polymer Science, 2021, 138, 49895. | 1.3 | 31 |
| 15 | Na+/Mg2+ interactions on membrane distillation permeation flux and crystallization performance during high saline solution treatment. Separation and Purification Technology, 2021, 259, 118191. | 3.9 | 12 |
| 16 | Constructing low-resistance and high-selectivity transport multi-channels in mixed matrix membranes for efficient CO2 separation. Journal of Membrane Science, 2021, 624, 119046. | 4.1 | 53 |
| 17 | Movable membrane-based separation system with high SF6 retention for large-scale gas-insulated transmission lines during maintenance. Separation and Purification Technology, 2021, 264, 118438. | 3.9 | 3 |
| 18 | Vesicles-shaped MOF-based mixed matrix membranes with intensified interfacial affinity and CO2 transport freeway. Chemical Engineering Journal, 2021, 414, 128807. | 6.6 | 36 |

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|---|---|---|---|
| 19 | ZIF-8 hollow nanotubes based mixed matrix membranes with high-speed gas transmission channel to promote CO2/N2 separation. Journal of Membrane Science, 2021, 630, 119323. | 4.1 | 53 |
| 20 | A multi-objective optimization strategy of steam power system to achieve standard emission and optimal economic by NSGA-â...¡. Energy, 2021, 232, 120953. | 4.5 | 27 |
| 21 | High selective synthesis of CaCO3 superstructures via ultra-homoporous interfacial crystallizer. Chemical Engineering Journal Advances, 2021, 8, 100179. | 2.4 | 2 |
| 22 | Nanofibers interpenetrating network mimicking â€œreinforced-concreteâ€•to construct mechanically robust composite membrane for enhanced CO2 separation. Journal of Membrane Science, 2021, 639, 119749. | 4.1 | 10 |
| 23 | Amino-functional ZIF-8 nanocrystals by microemulsion based mixed linker strategy and the enhanced CO2/N2 separation. Separation and Purification Technology, 2020, 236, 116209. | 3.9 | 65 |
| 24 | Bioinspired Hybrid Micro/Nanostructure Composited Membrane with Intensified Mass Transfer and Antifouling for High Saline Water Membrane Distillation. ACS Nano, 2020, 14, 17376-17386. | 7.3 | 64 |
| 25 | Cefalexin crystallization residual liquor separation via nanofiltration based multistage process. Separation and Purification Technology, 2020, 251, 117356. | 3.9 | 8 |
| 26 | Visual study and simulation of interfacial liquid layer mass transfer in membrane-assisted antisolvent crystallization. Chemical Engineering Science, 2020, 228, 116003. | 1.9 | 14 |
| 27 | Covalent/ionic co-crosslinking constructing ultra-densely functionalized ether-free poly(biphenylene) Tj ETQq1 1 0.784314 rgBT /Over<br>359, 136879. | 2.6 | 12 |
| 28 | Twisted ether-free polymer based alkaline membrane for high-performance water electrolysis. Journal of Power Sources, 2020, 480, 228805. | 4.0 | 46 |
| 29 | Membrane-Assisted Antisolvent Crystallization: Interfacial Mass-Transfer Simulation and Multistage Process Control. Industrial & Engineering Chemistry Research, 2020, 59, 10160-10171. | 1.8 | 13 |
| 30 | Interfacial microdroplet evaporative crystallization on 3D printed regular matrix platform. AICHE Journal, 2020, 66, e16280. | 1.8 | 6 |
| 31 | Efficiency Separation Process of H2/CO2/CH4 Mixtures by a Hollow Fiber Dual Membrane Separator. Processes, 2020, 8, 560. | 1.3 | 10 |
| 32 | A new long-side-chain sulfonated poly(2,6-dimethyl-1,4-phenylene oxide) (PPO) /polybenzimidazole (PBI) amphoteric membrane for vanadium redox flow battery. Chinese Journal of Chemical Engineering, 2020, 28, 1918-1924. | 1.7 | 11 |
| 33 | A Novel Process of H2/CO2 Membrane Separation of Shifted Syngas Coupled with Gasoil Hydrogenation. Processes, 2020, 8, 590. | 1.3 | 12 |
| 34 | Stretched ZIF-8@GO flake-like fillers via pre-Zn(II)-doping strategy to enhance CO2 permeation in mixed matrix membranes. Journal of Membrane Science, 2020, 601, 117934. | 4.1 | 35 |
| 35 | Hydrophilic/hydrophobic-bi-comb-shaped amphoteric membrane for vanadium redox flow battery. Journal of Membrane Science, 2020, 608, 118179. | 4.1 | 26 |
| 36 | Ionic liquid tuning nanocage size of MOFs through a two-step adsorption/infiltration strategy for enhanced gas screening of mixed-matrix membranes. Journal of Membrane Science, 2020, 605, 118101. | 4.1 | 59 |

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|---|---|---|---|
| 37 | Membrane separation system for coalâ€fired flue gas reclamation: Process planning and initial design. Canadian Journal of Chemical Engineering, 2019, 97, 717-726. | 0.9 | 2 |
| 38 | â€œFishnet-likeâ€•ion-selective nanochannels in advanced membranes for flow batteries. Journal of Materials Chemistry A, 2019, 7, 21112-21119. | 5.2 | 50 |
| 39 | Fabrication of defect-free MatrimidÂ® asymmetric membranes and the elevated temperature application for N2/SF6 separation. Journal of Membrane Science, 2019, 577, 258-265. | 4.1 | 17 |
| 40 | Membrane-based separation technologies: from polymeric materials to novel process: an outlook from China. Reviews in Chemical Engineering, 2019, 36, 67-105. | 2.3 | 28 |
| 41 | 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. | 4.1 | 66 |
| 42 | Long-branched and densely functionalized anion exchange membranes for fuel cells. Journal of Membrane Science, 2019, 581, 82-92. | 4.1 | 61 |
| 43 | Novel piperidinium functionalized anionic membrane for alkaline polymer electrolysis with excellent electrochemical properties. Journal of Membrane Science, 2019, 581, 283-292. | 4.1 | 55 |
| 44 | Novel Triple Tertiary Amine Polymer-Based Hydrogen Bond Network Inducing Highly Efficient Proton-Conducting Channels of Amphoteric Membranes for High-Performance Vanadium Redox Flow Battery. ACS Applied Materials & Interfaces, 2019, 11, 5003-5014. | 4.0 | 91 |
| 45 | Interfaceâ€based crystal particle autoselection via membrane crystallization: From scaling to process control. AICHE Journal, 2019, 65, 723-733. | 1.8 | 27 |
| 46 | Hydration structures of vanadium/oxovanadium cations in the presence of sulfuric acid: A molecular dynamics simulation study. Chemical Engineering Science, 2019, 195, 683-692. | 1.9 | 25 |
| 47 | A novel hollow fiber membraneâ€assisted antisolvent crystallization for enhanced mass transfer process control. AICHE Journal, 2019, 65, 734-744. | 1.8 | 29 |
| 48 | Enhanced performance of superhydrophobic polypropylene membrane with modified antifouling surface for high salinity water treatment. Separation and Purification Technology, 2019, 214, 11-20. | 3.9 | 62 |
| 49 | ZIF-8 heterogeneous nucleation and growth mechanism on Zn(II)-doped polydopamine for composite membrane fabrication. Separation and Purification Technology, 2019, 214, 95-103. | 3.9 | 22 |
| 50 | ZIFs-modified GO plates for enhanced CO2 separation performance of ethyl cellulose based mixed matrix membranesf. Separation and Purification Technology, 2019, 214, 87-94. | 3.9 | 50 |
| 51 | Graphic synthesis method for multi-technique integration separation sequences of multi-input refinery gases. Separation and Purification Technology, 2019, 214, 187-195. | 3.9 | 12 |
| 52 | Effect of Hydrogen-Bonding Interaction on the Arrangement and Dynamics of Water Confined in a Polyamide Membrane: A Molecular Dynamics Simulation. Journal of Physical Chemistry B, 2018, 122, 4719-4728. | 1.2 | 49 |
| 53 | Facile fabrication of reinforced homoporous MF membranes by in situ breath figure and thermal adhesion method on substrates. Journal of Membrane Science, 2018, 554, 291-299. | 4.1 | 9 |
| 54 | Hydrophilic side chain assisting continuous ion-conducting channels for anion exchange membranes. Journal of Membrane Science, 2018, 552, 286-294. | 4.1 | 71 |

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| 55 | Structural Characteristics of Hydrated Protons in Ion Conductive Channels: Synergistic Effect of the Sulfonate Group and Fluorine Studied by Molecular Dynamics Simulation. Journal of Physical Chemistry C, 2018, 122, 1982-1989. | 1.5 | 14 |
| 56 | A novel long-side-chain sulfonated poly(2,6-dimethyl-1,4-phenylene oxide) membrane for vanadium redox flow battery. International Journal of Hydrogen Energy, 2018, 43, 301-310. | 3.8 | 43 |
| 57 | Highly efficient tetrafluoroethylene recovery for batch polymerization system: Membrane preparation and process development. Journal of Membrane Science, 2018, 549, 403-410. | 4.1 | 2 |
| 58 | Integration of molecular dynamic simulation and free volume theory for modeling membrane VOC/gas separation. Frontiers of Chemical Science and Engineering, 2018, 12, 296-305. | 2.3 | 7 |
| 59 | Hybrid Control Mechanism of Crystal Morphology Modification for Ternary Solution Treatment via Membrane Assisted Crystallization. Crystal Growth and Design, 2018, 18, 934-943. | 1.4 | 21 |
| 60 | Understanding of imidazolium group hydration and polymer structure for hydroxide anion conduction in hydrated imidazolium-g-PPO membrane by molecular dynamics simulations. Chemical Engineering Science, 2018, 192, 1167-1176. | 1.9 | 40 |
| 61 | Tailored Robust Hydrogel Composite Membranes for Continuous Protein Crystallization with Ultrahigh Morphology Selectivity. ACS Applied Materials & Interfaces, 2018, 10, 26653-26661. | 4.0 | 19 |
| 62 | Modeling and simulation of mitigating membrane fouling under a baffle-filled turbulent flow with permeate boundary. Separation and Purification Technology, 2017, 179, 13-24. | 3.9 | 24 |
| 63 | Polyethyleneimineâ€grafted membranes for simultaneously adsorbing heavy metal ions and rejecting suspended particles in wastewater. AICHE Journal, 2017, 63, 4541-4548. | 1.8 | 28 |
| 64 | Formation Mechanism of the Spiral-Like Structure of a Hydrogen Bond Network Confined in a Fluorinated Nanochannel: A Molecular Dynamics Simulation. Journal of Physical Chemistry C, 2017, 121, 13840-13847. | 1.5 | 8 |
| 65 | Improvement of alkaline stability for hydroxide exchange membranes by the interactions between strongly polar nitrile groups and functional cations. Journal of Membrane Science, 2017, 533, 121-129. | 4.1 | 23 |
| 66 | A novel imidazolium-based amphoteric membrane for high-performance vanadium redox flow battery. Journal of Membrane Science, 2017, 544, 98-107. | 4.1 | 96 |
| 67 | Polyimide membrane system for tetrafluoroethylene recovery: Industrial plant, optimal operation and economic analysis. Separation and Purification Technology, 2017, 188, 468-475. | 3.9 | 4 |
| 68 | Enhancing mechanical stability and uniformity of 2-D continuous ZIF-8 membranes by Zn(II)-doped polydopamine modification. Journal of Membrane Science, 2017, 541, 101-107. | 4.1 | 21 |
| 69 | Molecular dynamics study of confined structure and diffusion of hydrated proton in HyfionÂ® perfluorosulfonic acid membranes. Chemical Engineering Science, 2017, 158, 234-244. | 1.9 | 19 |
| 70 | Constructing a rigid crosslinked structure for enhanced conductivity of imidazolium functionalized polysulfone hydroxide exchange membrane. International Journal of Hydrogen Energy, 2016, 41, 10923-10934. | 3.8 | 36 |
| 71 | Pressure swing adsorption/membrane hybrid processes for hydrogen purification with a high recovery. Frontiers of Chemical Science and Engineering, 2016, 10, 255-264. | 2.3 | 62 |
| 72 | Imidazole functionalized graphene oxide/PEBAX mixed matrix membranes for efficient CO2 capture. Separation and Purification Technology, 2016, 166, 171-180. | 3.9 | 150 |

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| 73 | Structural characteristics of hydrated protons in the conductive channels: effects of confinement and fluorination studied by molecular dynamics simulation. Physical Chemistry Chemical Physics, 2016, 18, 24198-24209. | 1.3 | 15 |
| 74 | Molecular dynamics simulation of the hydration structure and hydrogen bonding behavior of phenol in aqueous solution. Journal of Molecular Liquids, 2016, 221, 942-948. | 2.3 | 26 |
| 75 | Long-spacer-chain imidazolium functionalized poly(ether ether ketone) as hydroxide exchange membrane for fuel cell. International Journal of Hydrogen Energy, 2016, 41, 14982-14990. | 3.8 | 40 |
| 76 | Effective reclamation of vent gas in ethylbenzene dehydrogenation by coupling multi-stage circle absorption and membrane units. Separation and Purification Technology, 2016, 168, 265-274. | 3.9 | 12 |
| 77 | Membrane assisted cooling crystallization: Process model, nucleation, metastable zone, and crystal size distribution. AICHE Journal, 2016, 62, 829-841. | 1.8 | 46 |
| 78 | Dual-Membrane Module and Its Optimal Flow Pattern for H<sub>2</sub>/CO<sub>2</sub> Separation. Industrial & Engineering Chemistry Research, 2016, 55, 1064-1075. | 1.8 | 15 |
| 79 | The control and optimization of macro/micro-structure of ion conductive membranes for energy conversion and storage. Chinese Journal of Chemical Engineering, 2016, 24, 558-571. | 1.7 | 19 |
| 80 | Bis-ammonium immobilized polystyrenes with co-catalyzing functional end groups as efficient and reusable heterogeneous catalysts for synthesis of cyclic carbonate from CO<sub>2</sub> and epoxides. RSC Advances, 2016, 6, 2217-2224. | 1.7 | 25 |
| 81 | High solvent resistance PTFPMS/PEI hollow fiber composite membrane for gas separation. Applied Surface Science, 2016, 360, 164-173. | 3.1 | 31 |
| 82 | Particles deposition on microfiltration permeable boundary. Engineering Computations, 2015, 32, 1135-1152. | 0.7 | 2 |
| 83 | A novel membrane distillation response technology for nucleation detection, metastable zone width measurement and analysis. Chemical Engineering Science, 2015, 134, 671-680. | 1.9 | 27 |
| 84 | 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. | 2.1 | 18 |
| 85 | Further separation of HFC-23 and HCFC-22 by coupling multi-stage PDMS membrane unit to cryogenic distillation. Separation and Purification Technology, 2015, 156, 673-682. | 3.9 | 11 |
| 86 | Quaternary phosphonium-functionalized poly(ether ether ketone) as highly conductive and alkali-stable hydroxide exchange membrane for fuel cells. Journal of Membrane Science, 2014, 466, 220-228. | 4.1 | 63 |
| 87 | Cleaner recovery of tetrafluoroethylene by coupling residue-recycled polyimide membrane unit to distillation. Separation and Purification Technology, 2014, 124, 89-98. | 3.9 | 13 |
| 88 | Chemical potential analysis for directing the optimal design of gas membrane separation frameworks. Chemical Engineering Science, 2014, 107, 245-255. | 1.9 | 12 |