

Jiang Tao Liu

List of Publications by Year in descending order

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72
papers

8,135
citations

50244

46
h-index

82499

72
g-index

72
all docs

72
docs citations

72
times ranked

5786
citing authors

#	ARTICLE	IF	CITATIONS
1	Mixed matrix membranes (MMMs) comprising organic polymers with dispersed inorganic fillers for gas separation. <i>Progress in Polymer Science</i> , 2007, 32, 483-507.	11.8	1,570
2	Evolution of polymeric hollow fibers as sustainable technologies: Past, present, and future. <i>Progress in Polymer Science</i> , 2012, 37, 1401-1424.	11.8	375
3	Polymeric membranes for the hydrogen economy: Contemporary approaches and prospects for the future. <i>Journal of Membrane Science</i> , 2009, 327, 18-31.	4.1	313
4	Emerging forward osmosis (FO) technologies and challenges ahead for clean water and clean energy applications. <i>Current Opinion in Chemical Engineering</i> , 2012, 1, 246-257.	3.8	303
5	Highly Water-Soluble Magnetic Nanoparticles as Novel Draw Solute in Forward Osmosis for Water Reuse. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 5869-5876.	1.8	266
6	Double-Skinned Forward Osmosis Membranes for Reducing Internal Concentration Polarization within the Porous Sublayer. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 4824-4831.	1.8	256
7	Natural gas purification and olefin/paraffin separation using thermal cross-linkable co-polyimide/ZIF-8 mixed matrix membranes. <i>Journal of Membrane Science</i> , 2013, 444, 173-183.	4.1	245
8	High-Performance Thermally Self-Cross-Linked Polymer of Intrinsic Microporosity (PIM-1) Membranes for Energy Development. <i>Macromolecules</i> , 2012, 45, 1427-1437.	2.2	241
9	Advanced Porous Materials in Mixed Matrix Membranes. <i>Advanced Materials</i> , 2018, 30, e1802401.	11.1	229
10	A review of polymeric composite membranes for gas separation and energy production. <i>Progress in Polymer Science</i> , 2019, 97, 101141.	11.8	219
11	Precise Molecular Sieving Architectures with Janus Pathways for Both Polar and Nonpolar Molecules. <i>Advanced Materials</i> , 2018, 30, 1705933.	11.1	190
12	Progress in pressure retarded osmosis (PRO) membranes for osmotic power generation. <i>Progress in Polymer Science</i> , 2015, 51, 1-27.	11.8	171
13	Self-standing and flexible covalent organic framework (COF) membranes for molecular separation. <i>Science Advances</i> , 2020, 6, .	4.7	168
14	The ionic liquid [EMIM]OAc as a solvent to fabricate stable polybenzimidazole membranes for organic solvent nanofiltration. <i>Green Chemistry</i> , 2014, 16, 1383-1392.	4.6	154
15	Anti-Fouling Behavior of Hyperbranched Polyglycerol-Grafted Poly(ether sulfone) Hollow Fiber Membranes for Osmotic Power Generation. <i>Environmental Science & Technology</i> , 2014, 48, 9898-9907.	4.6	148
16	Osmotic power generation by pressure retarded osmosis using seawater brine as the draw solution and wastewater retentate as the feed. <i>Journal of Membrane Science</i> , 2015, 479, 148-158.	4.1	148
17	Grafting thermally labile molecules on cross-linkable polyimide to design membrane materials for natural gas purification and CO ₂ capture. <i>Energy and Environmental Science</i> , 2011, 4, 201-208.	15.6	129
18	Highly Robust Thin-Film Composite Pressure Retarded Osmosis (PRO) Hollow Fiber Membranes with High Power Densities for Renewable Salinity-Gradient Energy Generation. <i>Environmental Science & Technology</i> , 2013, 47, 8070-8077.	4.6	124

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19	Design of robust hollow fiber membranes with high power density for osmotic energy production. <i>Chemical Engineering Journal</i> , 2014, 241, 457-465.	6.6	123
20	UV-irradiation-induced rearranged PIM-1 Polymeric Membranes for Advanced Hydrogen Purification and Production. <i>Advanced Energy Materials</i> , 2012, 2, 1456-1466.	10.2	118
21	Cross-linked mixed matrix membranes (MMMs) consisting of amine-functionalized multi-walled carbon nanotubes and P84 polyimide for organic solvent nanofiltration (OSN) with enhanced flux. <i>Journal of Membrane Science</i> , 2018, 548, 319-331.	4.1	116
22	Suppression of aging and plasticization in highly permeable polymers. <i>Polymer</i> , 2015, 77, 377-386.	1.8	114
23	Zwitterionic polymers grafted poly(ether sulfone) hollow fiber membranes and their antifouling behaviors for osmotic power generation. <i>Journal of Membrane Science</i> , 2016, 497, 142-152.	4.1	113
24	Energy recovery by pressure retarded osmosis (PRO) in SWRO-PRO integrated processes. <i>Applied Energy</i> , 2016, 162, 687-698.	5.1	102
25	Molecularly-porous ultrathin membranes for highly selective organic solvent nanofiltration. <i>Nature Communications</i> , 2020, 11, 5882.	5.8	101
26	Outer-Selective Pressure-Retarded Osmosis Hollow Fiber Membranes from Vacuum-Assisted Interfacial Polymerization for Osmotic Power Generation. <i>Environmental Science & Technology</i> , 2013, 47, 13167-13174.	4.6	98
27	Polyelectrolyte functionalized lamellar graphene oxide membranes on polypropylene support for organic solvent nanofiltration. <i>Carbon</i> , 2017, 122, 604-613.	5.4	92
28	Natural gas purification and olefin/paraffin separation using cross-linkable 6FDA-Durene/DABA co-polyimides grafted with β , γ , and δ -cyclodextrin. <i>Journal of Membrane Science</i> , 2012, 390-391, 141-151.	4.1	84
29	Polyamide-imide nanofiltration hollow fiber membranes with elongation-induced nanopore evolution. <i>AIChE Journal</i> , 2010, 56, 1481-1494.	1.8	82
30	Molecularly tunable thin-film nanocomposite membranes with enhanced molecular sieving for organic solvent forward osmosis. <i>Nature Communications</i> , 2020, 11, 1198.	5.8	77
31	Thin-film composite (TFC) hollow fiber membrane with double-polyamide active layers for internal concentration polarization and fouling mitigation in osmotic processes. <i>Journal of Membrane Science</i> , 2017, 523, 497-504.	4.1	73
32	Metal ion modified PIM-1 and its application for propylene/propane separation. <i>Journal of Membrane Science</i> , 2016, 515, 36-44.	4.1	72
33	Smart covalent organic networks (CONs) with on-off-on-light-switchable pores for molecular separation. <i>Science Advances</i> , 2020, 6, eabb3188.	4.7	71
34	Facile fabrication of solvent resistant thin film composite membranes by interfacial crosslinking reaction between polyethylenimine and dibromo-p-xylene on polybenzimidazole substrates. <i>Journal of Membrane Science</i> , 2018, 560, 115-124.	4.1	70
35	Flexible thermally treated 3D PIM-CD molecular sieve membranes exceeding the upper bound line for propylene/propane separation. <i>Journal of Materials Chemistry A</i> , 2017, 5, 4583-4595.	5.2	69
36	Highly permeable and aging resistant 3D architecture from polymers of intrinsic microporosity incorporated with beta-cyclodextrin. <i>Journal of Membrane Science</i> , 2017, 523, 92-102.	4.1	67

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37	Physical aging and carbon dioxide plasticization of thin polyimide films in mixed gas permeation. <i>Journal of Membrane Science</i> , 2014, 450, 457-468.	4.1	66
38	Cross-linked mixed matrix membranes consisting of carboxyl-functionalized multi-walled carbon nanotubes and P84 polyimide for organic solvent nanofiltration (OSN). <i>Separation and Purification Technology</i> , 2017, 186, 243-254.	3.9	66
39	Robust and high performance pressure retarded osmosis hollow fiber membranes for osmotic power generation. <i>AIChE Journal</i> , 2014, 60, 1107-1119.	1.8	65
40	Functionalization of cellulose dialysis membranes for chiral separation using beta-cyclodextrin immobilization. <i>Journal of Membrane Science</i> , 2007, 290, 78-85.	4.1	63
41	Zwitterions coated hollow fiber membranes with enhanced antifouling properties for osmotic power generation from municipal wastewater. <i>Water Research</i> , 2016, 104, 389-396.	5.3	62
42	Membrane fouling and anti-fouling strategies using RO retentate from a municipal water recycling plant as the feed for osmotic power generation. <i>Water Research</i> , 2016, 88, 144-155.	5.3	62
43	The accelerated CO ₂ plasticization of ultra-thin polyimide films and the effect of surface chemical cross-linking on plasticization and physical aging. <i>Journal of Membrane Science</i> , 2003, 225, 125-134.	4.1	60
44	Enhanced propylene/propane separation by carbonaceous membrane derived from poly (aryl ether) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 47, 1857-1866.	5.4	60
45	Facile fabrication of sulfonated polyphenylenesulfone (sPPSU) membranes with high separation performance for organic solvent nanofiltration. <i>Journal of Membrane Science</i> , 2018, 549, 550-558.	4.1	56
46	Advanced Anti-Fouling Membranes for Osmotic Power Generation from Wastewater via Pressure Retarded Osmosis (PRO). <i>Environmental Science & Technology</i> , 2018, 52, 6686-6694.	4.6	50
47	Infiltrating molecular gatekeepers with coexisting molecular solubility and 3D-intrinsic porosity into a microporous polymer scaffold for gas separation. <i>Journal of Materials Chemistry A</i> , 2020, 8, 6196-6209.	5.2	47
48	Hybrid pressure retarded osmosis membrane distillation (PRO-MD) process for osmotic power and clean water generation. <i>Environmental Science: Water Research and Technology</i> , 2015, 1, 507-515.	1.2	45
49	C ₂ and C ₃ hydrocarbon separations in poly(1,5-naphthalene-2,2-bis(3,4-phthalic) hexafluoropropane) diimide (6FDA-1,5-NDA) dense membranes. <i>Journal of Membrane Science</i> , 2002, 210, 55-64.	4.1	43
50	Natural gas purification and olefin/paraffin separation using cross-linkable dual-layer hollow fiber membranes comprising β ₂ -Cyclodextrin. <i>Journal of Membrane Science</i> , 2012, 423-424, 392-403.	4.1	42
51	Fabrication of defect-free thin-film nanocomposite (TFN) membranes for reverse osmosis desalination. <i>Desalination</i> , 2021, 516, 115230.	4.0	41
52	Green Synthesis of Thin-Film Composite Membranes for Organic Solvent Nanofiltration. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 11541-11548.	3.2	40
53	A solution-processable and ultra-permeable conjugated microporous thermoset for selective hydrogen separation. <i>Nature Communications</i> , 2020, 11, 1633.	5.8	40
54	Hollow fiber membrane lumen modified by polyzwitterionic grafting. <i>Journal of Membrane Science</i> , 2017, 522, 1-11.	4.1	38

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55	Synthesis and properties of transparent polyimides derived from trans- and cis-1,4-bis(3,4-dicarboxyphenoxy)cyclohexane dianhydrides. <i>Journal of Polymer Research</i> , 2013, 20, 1.	1.2	36
56	Structural Tuning of Polymers of Intrinsic Microporosity via the Copolymerization with Macrocyclic 4-tert-butylcalix[4]arene for Enhanced Gas Separation Performance. <i>Advanced Sustainable Systems</i> , 2018, 2, 1800044.	2.7	34
57	Synthesis of high performance phenolphthalein-based cardo poly(ether ketone imide)s via aromatic nucleophilic substitution polymerization. <i>Polymer</i> , 2015, 70, 30-37.	1.8	26
58	Rapid fabrication of fluorinated covalent organic polymer membranes for organic solvent nanofiltration. <i>Journal of Membrane Science</i> , 2022, 648, 120345.	4.1	24
59	Analysis of flux reduction behaviors of PRO hollow fiber membranes: Experiments, mechanisms, and implications. <i>Journal of Membrane Science</i> , 2016, 505, 1-14.	4.1	23
60	Synthesis of organosoluble and light-colored cardo polyimides via aromatic nucleophilic substitution polymerization. <i>Polymers for Advanced Technologies</i> , 2015, 26, 1519-1527.	1.6	20
61	Oriented Zeolitic Imidazolate Framework (ZIF) Nanocrystal Films for Molecular Separation Membranes. <i>ACS Applied Nano Materials</i> , 2020, 3, 3839-3846.	2.4	20
62	Preparation, characterization, and properties of poly(thioether ether imide)s from isomeric bis(chlorophthalimide)s and 4,4'-thiobisbenzenethiol. <i>Polymers for Advanced Technologies</i> , 2014, 25, 329-337.	1.6	19
63	Influence of crystalline polyimide hard block on the properties of poly(imide siloxane) copolymers. <i>Polymer</i> , 2015, 56, 229-236.	1.8	19
64	Reinforcing hydration layer on membrane surface via nano-capturing and hydrothermal crosslinking for fouling reduction. <i>Journal of Membrane Science</i> , 2022, 644, 120076.	4.1	18
65	Rapid in-situ growth of covalent organic frameworks on hollow fiber substrates with Janus-like characteristics for efficient organic solvent nanofiltration. <i>Separation and Purification Technology</i> , 2022, 294, 121166.	3.9	16
66	Preparation, characterization, and properties of poly(thioether imide)s from isomeric bis(chlorophthalimide)s and bithiophenols. <i>High Performance Polymers</i> , 2016, 28, 64-74.	0.8	11
67	Synthesis of organosoluble and transparent phenolphthalein-based cardo poly(ether sulfone imide)s via aromatic nucleophilic substitution polymerization. <i>High Performance Polymers</i> , 2016, 28, 1263-1271.	0.8	9
68	Plasticization-enhanced trimethylbenzene functionalized polyethersulfone hollow fiber membranes for propylene and propane separation. <i>Journal of Membrane Science</i> , 2022, 647, 120293.	4.1	7
69	Preparation, characterization, and properties of poly(thioether ether imide)s from isomeric bis(chlorophthalimide)s and bis(4-mercaptophenyl) ether. <i>High Performance Polymers</i> , 2015, 27, 112-121.	0.8	6
70	Crystal Structure and Thermodecomposition Kinetics of Mn(II) Complex with 1-Phenyl-3-Methyl-4-Benzoyl-5-Pyrazolone. <i>Journal of Chemical Crystallography</i> , 2010, 40, 58-63.	0.5	5
71	The optimization of contact interface between metal/MoS ₂ FETs by oxygen plasma treatment. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 9660-9665.	1.1	3
72	Synthesis and characterization of high performance poly(thioether imide)s via aromatic nucleophilic substitution reaction of isomeric AB-type monomers. <i>Polymer Bulletin</i> , 2015, 72, 3269-3282.	1.7	2