

Heqing Jiang

List of Publications by Year in descending order

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94
papers

3,670
citations

126907

33
h-index

144013

57
g-index

101
all docs

101
docs citations

101
times ranked

3110
citing authors

#	ARTICLE	IF	CITATIONS
1	Improved light-harvesting and thermal management for efficient solar-driven water evaporation using 3D photothermal cones. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9874-9881.	10.3	266
2	A facile nanocomposite strategy to fabricate a rGO@MWCNT photothermal layer for efficient water evaporation. <i>Journal of Materials Chemistry A</i> , 2018, 6, 963-971.	10.3	256
3	Simultaneous Production of Hydrogen and Synthesis Gas by Combining Water Splitting with Partial Oxidation of Methane in a Hollow-Fiber Membrane Reactor. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 9341-9344.	13.8	204
4	CO ₂ -Stable and Cobalt-Free Dual-Phase Membrane for Oxygen Separation. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 759-763.	13.8	190
5	Direct Decomposition of Nitrous Oxide to Nitrogen by In-Situ Oxygen Removal with a Perovskite Membrane. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 2983-2986.	13.8	130
6	A Coupling Strategy to Produce Hydrogen and Ethylene in a Membrane Reactor. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 5656-5660.	13.8	115
7	Novel Cobalt-Free, Noble Metal-Free Oxygen-Permeable 40Pr _{0.6} Sr _{0.4} FeO _{3-δ} @60Ce _{0.9} Pr _{0.1} O _{2-δ} Dual-Phase Membrane. <i>Chemistry of Materials</i> , 2012, 24, 2148-2154.	11.3	113
8	Natural Gas to Fuels and Chemicals: Improved Methane Aromatization in an Oxygen-Permeable Membrane Reactor. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 13794-13797.	13.8	111
9	Performance of a ceramic membrane reactor with high oxygen flux Ta-containing perovskite for the partial oxidation of methane to syngas. <i>Journal of Membrane Science</i> , 2010, 350, 154-160.	8.2	105
10	Synthesis of copper nanoparticles containing diamond-like carbon films by electrochemical method. <i>Electrochemistry Communications</i> , 2006, 8, 262-266.	4.7	83
11	CO ₂ -Tolerant Oxygen-Permeable Fe ₂ O ₃ -Ce _{0.9} Gd _{0.1} O _{2-δ} Dual Phase Membranes. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 13508-13517.	3.7	69
12	Phase Stability and Permeation Behavior of a Dead-End Ba _{0.5} Sr _{0.5} Co _{0.8} Fe _{0.2} O _{3-δ} Tube Membrane in High-Purity Oxygen Production. <i>Chemistry of Materials</i> , 2011, 23, 4765-4772.	6.7	66
13	A GO-Induced Assembly Strategy To Repair MOF Nanosheet-Based Membrane for Efficient H ₂ /CO ₂ Separation. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 990-997.	8.0	63
14	Rapid Self-Assembly of Oligo(o-phenylenediamine) into One-Dimensional Structures through a Facile Reprecipitation Route. <i>Langmuir</i> , 2006, 22, 3358-3361.	3.5	62
15	Influence of the preparation methods on the microstructure and oxygen permeability of a CO ₂ -stable dual phase membrane. <i>AIChE Journal</i> , 2011, 57, 2738-2745.	3.6	57
16	Polyamide membrane with an ultrathin GO interlayer on macroporous substrate for minimizing internal concentration polarization in forward osmosis. <i>Chemical Engineering Journal</i> , 2021, 412, 128607.	12.7	57
17	Simultaneous overcome of the equilibrium limitations in BSCF oxygen-permeable membrane reactors: Water splitting and methane coupling. <i>Catalysis Today</i> , 2012, 193, 2-7.	4.4	52
18	One-pot synthesis of mesoporous Cu ³⁺ -Al ₂ O ₃ as bifunctional catalyst for direct dimethyl ether synthesis. <i>Microporous and Mesoporous Materials</i> , 2012, 164, 3-8.	4.4	52

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19	B-site La-doped BaFe _{0.95} xLa _x Zr _{0.05} O ₃ perovskite-type membranes for oxygen separation. Journal of Materials Chemistry A, 2013, 1, 746-751.	10.3	52
20	A Facile and General Strategy to Deposit Polypyrrole on Various Substrates for Efficient Solar-Driven Evaporation. Advanced Sustainable Systems, 2019, 3, 1800108.	5.3	52
21	Controllable amorphization engineering on bimetallic metal-organic frameworks for ultrafast oxygen evolution reaction. Chemical Engineering Journal, 2021, 418, 129330.	12.7	51
22	Hydrogen Production by Water Dissociation in Surface-Modified BaCo _x Fe _y Zr _{1-x-y} O ₃ Hollow-Fiber Membrane Reactor with Improved Oxygen Permeation. Chemistry - A European Journal, 2010, 16, 7898-7903.	3.3	50
23	Ordered Mesoporous Alumina and Their Composites Based on Evaporation Induced Self-Assembly for Adsorption and Catalysis. Chemistry of Materials, 2020, 32, 3-26.	6.7	50
24	Roadmap for Sustainable Mixed Ionic-Electronic Conducting Membranes. Advanced Functional Materials, 2022, 32, .	14.9	49
25	Highly effective NO decomposition by in situ removal of inhibitor oxygen using an oxygen transporting membrane. Chemical Communications, 2009, , 6738.	4.1	48
26	A simple route to incorporate redox mediator into carbon nanotubes/Nafion composite film and its application to determine NADH at low potential. Talanta, 2007, 74, 132-139.	5.5	46
27	Enhanced durability and activity of the perovskite electrocatalyst Pr _{0.5} Ba _{0.5} CoO ₃ by Ca doping for the oxygen evolution reaction at room temperature. Chemical Communications, 2017, 53, 5132-5135.	4.1	46
28	Designed Nanostructured Pt Film for Electrocatalytic Activities by Underpotential Deposition Combined Chemical Replacement Techniques. Journal of Physical Chemistry B, 2005, 109, 15264-15271.	2.6	45
29	Improved water dissociation and nitrous oxide decomposition by in situ oxygen removal in perovskite catalytic membrane reactor. Catalysis Today, 2010, 156, 187-190.	4.4	41
30	Microstructure regulation of polyamide nanocomposite membrane by functional mesoporous polymer for high-efficiency desalination. Journal of Membrane Science, 2020, 597, 117783.	8.2	41
31	Oxygen Transport Membrane for Thermochemical Conversion of Water and Carbon Dioxide into Synthesis Gas. ACS Sustainable Chemistry and Engineering, 2017, 5, 8657-8662.	6.7	40
32	Ethane aromatization and evolution of carbon deposits over nanosized and microsized Zn/ZSM-5 catalysts. Catalysis Science and Technology, 2020, 10, 835-843.	4.1	40
33	A novel route to improve methane aromatization by using a simple composite catalyst. Chemical Communications, 2018, 54, 10343-10346.	4.1	37
34	Small molecules as cross-linkers: fabrication of carbon nanotubes/thionine self-assembled multilayers on amino functionalized surfaces. Chemical Communications, 2005, , 5560.	4.1	34
35	High-Purity Oxygen Production from Air Using Perovskite Hollow Fiber Membranes. Industrial & Engineering Chemistry Research, 2010, 49, 9377-9384.	3.7	32
36	Multifunctional perovskite oxide for efficient solar-driven evaporation and energy-saving regeneration. Nano Energy, 2020, 70, 104538.	16.0	32

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37	Coupling solar-driven interfacial evaporation with forward osmosis for continuous water treatment. <i>Exploration</i> , 2022, 2, .	11.0	29
38	Rapid glycine-nitrate combustion synthesis of the CO ₂ -stable dual phase membrane 40Mn1.5Co1.5O4 for CO ₂ capture via an oxy-fuel process. <i>Journal of Membrane Science</i> , 2012, 423-424, 450-458.	8.2	28
39	Solar-Intensified Ultrafiltration System Based on Porous Photothermal Membrane for Efficient Water Treatment. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 4889-4896.	6.7	27
40	Coupling of N ₂ O decomposition with CO ₂ reforming of CH ₄ in novel cobalt-free BaFe _{0.9} Zr _{0.05} Al _{0.05} O ₃ oxygen transport membrane reactor. <i>Chemical Engineering Journal</i> , 2016, 305, 176-181.	12.7	26
41	Nanocomposite membranes embedded with dopamine-melanin nanospheres for enhanced interfacial compatibility and nanofiltration performance. <i>Separation and Purification Technology</i> , 2020, 242, 116816.	7.9	26
42	MOF-Mediated Interfacial Polymerization to Fabricate Polyamide Membranes with a Homogeneous Nanoscale Striped Turing Structure for CO ₂ /CH ₄ Separation. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 18380-18388.	8.0	26
43	Multifunctional Nickel Sulfide Nanosheet Arrays for Solar-Intensified Oxygen Evolution Reaction. <i>Small</i> , 2020, 16, e2002550.	10.0	25
44	Hydrogen Purification through a Highly Stable Dual-Phase Oxygen-Permeable Membrane. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 5204-5208.	13.8	24
45	Chemical Environment-Induced Mixed Conductivity of Titanate as a Highly Stable Oxygen Transport Membrane. <i>IScience</i> , 2019, 19, 955-964.	4.1	23
46	Methane conversion to syngas and hydrogen in a dual-phase Ce _{0.8} Sm _{0.2} O ₂ -Sr ₂ Fe _{1.5} Mo _{0.5} O ₅ membrane reactor with improved stability. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 14478-14485.	7.1	22
47	Wettable photothermal hollow fibers arrays for efficient solar-driven desalination under omnidirectional illumination without salt precipitation. <i>Materials Today Energy</i> , 2020, 16, 100391.	4.7	22
48	A nanosized metal-organic framework confined inside a functionalized mesoporous polymer: an efficient CO ₂ adsorbent with metal defects. <i>Journal of Materials Chemistry A</i> , 2018, 6, 17220-17226.	10.3	20
49	Innovative steam methane reforming for coproducing CO-free hydrogen and syngas in proton conducting membrane reactor. <i>AIChE Journal</i> , 2019, 65, e16740.	3.6	20
50	Syngas Production by Biogas Reforming in a Redox-Stable and CO ₂ -Tolerant Oxygen Transporting Membrane Reactor. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 10134-10141.	3.7	19
51	Oxygen permeability and structural stability of a novel tantalum-doped perovskite BaCo _{0.7} Fe _{0.2} Ta _{0.1} O ₃ . <i>AIChE Journal</i> , 2010, 56, 604-610.	3.6	17
52	Temperature-Induced Structural Reorganization of W-Doped Ba _{0.5} Sr _{0.5} Co _{0.8} Fe _{0.2} O ₃ Composite Membranes for Air Separation. <i>Chemistry of Materials</i> , 2019, 31, 7487-7492.	6.7	17
53	High-purity oxygen production by a dead-end Ba _{0.5} Sr _{0.5} Co _{0.8} Fe _{0.2} O ₃ tube membrane. <i>Catalysis Today</i> , 2012, 193, 95-100.	4.4	16
54	Nitrogen-doped Sr ₂ Fe _{1.5} Mo _{0.5} O ₆ perovskite as an efficient and stable catalyst for hydrogen evolution reaction. <i>Materials Today Energy</i> , 2021, 20, 100695.	4.7	16

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55	Facile deposition of copper-doped diamond-like carbon nanocomposite films by a liquid-phase electrochemical route. <i>Chemical Communications</i> , 2004, , 2196.	4.1	14
56	Spontaneous Formation of Two-Dimensional Gold Networks at the Air-Water Interface and Their Application in Surface-Enhanced Raman Scattering (SERS). <i>Crystal Growth and Design</i> , 2007, 7, 1771-1776.	3.0	14
57	Coupled cobalt oxide/hollow carbon sphere as an efficient electrocatalyst for the oxygen reduction reaction. <i>RSC Advances</i> , 2016, 6, 34159-34164.	3.6	14
58	A mixed-valent Cu ^I /Cu ^{II} metal-organic framework with selective chemical sensing properties. <i>CrystEngComm</i> , 2016, 18, 8683-8687.	2.6	14
59	Cobalt-free dual-phase oxygen transporting membrane reactor for the oxidative dehydrogenation of ethane. <i>Separation and Purification Technology</i> , 2019, 211, 966-971.	7.9	14
60	Bilayer rGO-Based Photothermal Evaporator for Efficient Solar-Driven Water Purification. <i>Chemistry - A European Journal</i> , 2021, 27, 17428-17436.	3.3	14
61	Codoping Strategy To Improve Stability and Permeability of Ba _{0.6} Sr _{0.4} FeO _{3-δ} -Based Perovskite Membranes. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 10386-10393.	3.7	13
62	A hybrid composite catalyst of Fe ₃ O ₄ nanoparticles-based carbon for electrochemical reduction of oxygen. <i>New Journal of Chemistry</i> , 2017, 41, 4959-4965.	2.8	13
63	Nitrogen Production by Efficiently Removing Oxygen From Air Using a Perovskite Hollow-Fiber Membrane With Porous Catalytic Layer. <i>Frontiers in Chemistry</i> , 2018, 6, 329.	3.6	13
64	Hydrogen permeation through dual-phase ceramic membrane derived from automatic phase-separation of SrCe _{0.5} Fe _{0.5} O _{3-δ} precursor. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 4625-4634.	7.1	13
65	Simultaneous production of synthesis gases H ₂ /N ₂ and H ₂ /CO in a dual-phase mixed conducting membrane reactor. <i>Catalysis Today</i> , 2019, 331, 2-6.	4.4	12
66	Novel MgO/hollow carbon sphere composites for CO ₂ adsorption. <i>New Journal of Chemistry</i> , 2018, 42, 5674-5679.	2.8	11
67	Phase stability and oxygen permeability of Fe-based BaFe _{0.9} Mg _{0.05} X _{0.05} O ₃ (X = Zr, Ce, Ca) membranes for air separation. <i>Separation and Purification Technology</i> , 2019, 220, 176-182.	7.9	10
68	Gd-doped ceria enhanced triple-conducting membrane for efficient hydrogen separation. <i>Separation and Purification Technology</i> , 2021, 256, 117798.	7.9	10
69	A reduced pressure-assisted vapor penetration of ionic liquid into the laminated graphene oxide membranes for efficient CO ₂ separation. <i>Separation and Purification Technology</i> , 2022, 287, 120514.	7.9	10
70	Polyethyleneimine-Mediated Polyamide Composite Membrane with High Permselectivity for Forward Osmosis. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2000818.	3.6	9
71	Barium Titanate as a Highly Stable Oxygen Permeable Membrane Reactor for Hydrogen Production from Thermal Water Splitting. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 11147-11154.	6.7	9
72	A facile and economic route assisted by trace tannic acid to construct a high-performance thin film composite NF membrane for desalination. <i>Environmental Science: Water Research and Technology</i> , 2021, 7, 956-968.	2.4	9

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73	Effect of reduction-oxidation treatment on structure and catalytic properties of ordered mesoporous Cu-Mg-Al composite oxides. <i>Science Bulletin</i> , 2015, 60, 1108-1113.	9.0	8
74	Mesoporous HZSM-5 Supported Zn Catalyst for Improved Ethane Aromatization. <i>Catalysis Letters</i> , 2020, 150, 3495-3504.	2.6	8
75	Comparative study on the catalytic behaviors of zeolites with different diffusion limitation in ethane aromatization. <i>Microporous and Mesoporous Materials</i> , 2021, 315, 110926.	4.4	8
76	An Efficient Oxygen Activation Route for Improved Ammonia Oxidation through an Oxygen-Permeable Catalytic Membrane. <i>ChemCatChem</i> , 2014, 6, 1190-1194.	3.7	7
77	Enhanced H ₂ production by using La _{5.5} WO _{11.25} -La _{0.8} Sr _{0.2} FeO ₃ mixed oxygen ion-proton-electron triple-conducting membrane. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 33143-33151.	7.1	7
78	A general strategy for fabricating polymer/nanofiller composite membranes with enhanced CO ₂ /N ₂ separation performance. <i>Journal of Cleaner Production</i> , 2022, 350, 131468.	9.3	7
79	Zn ion-modulated polyamide membrane with enhanced facilitated transport effect for CO ₂ separation. <i>Separation and Purification Technology</i> , 2022, 292, 121051.	7.9	7
80	Catalytic Membrane Reactors for Chemical Upgrading and Pollution Control. <i>Chemie-Ingenieur-Technik</i> , 2011, 83, 2219-2228.	0.8	6
81	Effect of reduction temperature on the structure and catalytic performance of mesoporous Ni ₂ FeAl ₂ O ₃ in oxidative dehydrogenation of ethane. <i>New Journal of Chemistry</i> , 2020, 44, 18994-19001.	2.8	6
82	Simultaneous production of pure nitrogen and syngas in BaCe _{0.5} Fe _{0.5} O ₃ membrane reactor. <i>Catalysis Today</i> , 2021, 364, 125-131.	4.4	6
83	Multifunctional reduced graphene oxide film as electrocatalysts and photothermal layer for broad spectrum solar-enhanced oxygen evolution reaction. <i>Materials Today Energy</i> , 2022, 25, 100966.	4.7	6
84	Catalytic Abatement of Nitrous Oxide Coupled with Ethane Oxidehydrogenation over Mesoporous Cr/Al ₂ O ₃ Catalyst. <i>Catalysts</i> , 2017, 7, 137.	3.5	5
85	A permeation model study of oxygen transport kinetics of Ba _x Sr _{1-x} Co _{0.8} Fe _{0.2} O ₃ . <i>AIChE Journal</i> , 2020, 66, e16291.	3.6	5
86	Hydrogen Purification through a Highly Stable Dual-Phase Oxygen-Permeable Membrane. <i>Angewandte Chemie</i> , 2021, 133, 5264-5268.	2.0	5
87	Single-Hole Hollow Carbon Nanospheres via a Poly(ethylene glycol)-Assisted Emulsion-Templating Strategy for Intensified Liquid-Phase Adsorption. <i>Chemistry of Materials</i> , 2022, 34, 3715-3723.	6.7	5
88	Improved ethane conversion to ethylene and aromatics over a Zn/ZSM-5 and CaMnO ₃ composite catalyst. <i>Journal of Energy Chemistry</i> , 2020, 51, 161-166.	12.9	4
89	Geopolymerization: a promising technique for membrane synthesis. <i>Materials Research Express</i> , 2021, 8, 112002.	1.6	4
90	Crosslinking improved ion transport in polymer inclusion membrane-electrodialysis process and the underlying mechanism. <i>AIChE Journal</i> , 2022, 68, e17397.	3.6	3

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91	Enhanced solar-driven evaporation process via f-MWCNTs/PVDF photothermal membrane for forward osmosis draw solution recovery. <i>Nanotechnology</i> , 2021, 32, 375703.	2.6	2
92	Membrane Catalysis: N ₂ O Decomposition over La _{0.2} Sr _{0.8} Ti _{0.2} Fe _{0.8} O ₃ Membrane with Oxygen Permeability. <i>Chemie-Ingenieur-Technik</i> , 2022, 94, 70-77.	0.8	2
93	Cover Picture: Direct Decomposition of Nitrous Oxide to Nitrogen by In Situ Oxygen Removal with a Perovskite Membrane (<i>Angew. Chem. Int. Ed.</i> 16/2009). <i>Angewandte Chemie - International Edition</i> , 2009, 48, 2807-2807.	13.8	1
94	Facile Deposition of Copper-Doped Diamond-Like Carbon Nanocomposite Films by a Liquid-Phase Electrochemical Route.. <i>ChemInform</i> , 2005, 36, no.	0.0	0