

J D Way, J Douglas Way

List of Publications by Year in descending order

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112
papers

5,394
citations

70961

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85405

71
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115
all docs

115
docs citations

115
times ranked

3452
citing authors

#	ARTICLE	IF	CITATIONS
1	INNOVATIONS IN PALLADIUM MEMBRANE RESEARCH. Separation and Purification Reviews, 2002, 31, 1-169.	0.8	574
2	Synthesis of porous-magnetic chitosan beads for removal of cadmium ions from wastewater. Industrial & Engineering Chemistry Research, 1993, 32, 2170-2178.	1.8	315
3	Preparation and characterization of a composite palladium-ceramic membrane. Industrial & Engineering Chemistry Research, 1993, 32, 3006-3013.	1.8	236
4	Palladium and palladium alloy membranes for hydrogen separation and production: History, fabrication strategies, and current performance. Separation and Purification Technology, 2010, 73, 59-64.	3.9	187
5	Pd and Pd-Cu membranes: inhibition of H permeation by HS. Journal of Membrane Science, 2005, 254, 49-62.	4.1	186
6	Liquid membrane transport: a survey. Journal of Membrane Science, 1982, 12, 239-259.	4.1	148
7	Gas permeation properties of poly(lactic acid). Journal of Membrane Science, 2001, 190, 243-251.	4.1	145
8	Facilitated transport of CO ₂ in ion exchange membranes. AIChE Journal, 1987, 33, 480-487.	1.8	132
9	Atomic layer controlled deposition of Al ₂ O ₃ films using binary reaction sequence chemistry. Applied Surface Science, 1996, 107, 128-136.	3.1	124
10	A New Preparation Technique for Pd/Alumina Membranes with Enhanced High-Temperature Stability. Industrial & Engineering Chemistry Research, 1999, 38, 1925-1936.	1.8	113
11	The influence of alloy composition on the H ₂ flux of composite Pd-Cu membranes. Desalination, 2002, 147, 411-416.	4.0	113
12	Hollow Fiber Inorganic Membranes for Gas Separations. Separation Science and Technology, 1992, 27, 29-41.	1.3	103
13	Influence of Alloy Composition and Membrane Fabrication on the Pressure Dependence of the Hydrogen Flux of Palladium-Copper Membranes. Industrial & Engineering Chemistry Research, 2003, 42, 5827-5835.	1.8	98
14	Unsupported palladium alloy foil membranes fabricated by electroless plating. Journal of Membrane Science, 2008, 316, 112-118.	4.1	94
15	The effect of air exposure on palladium-copper composite membranes. Applied Surface Science, 2005, 240, 85-104.	3.1	93
16	The effects of thermal annealing on commercial Nafion® membranes. Journal of Membrane Science, 2007, 298, 190-201.	4.1	86
17	Efficient Ammonia Decomposition in a Catalytic Membrane Reactor To Enable Hydrogen Storage and Utilization. ACS Sustainable Chemistry and Engineering, 2019, 7, 5975-5985.	3.2	84
18	Catalytic decomposition of ammonia in a membrane reactor. Journal of Membrane Science, 1994, 96, 259-274.	4.1	83

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19	Palladium-copper membranes for hydrogen separation. Separation and Purification Technology, 2017, 186, 39-44.	3.9	77
20	3-Aminopropyltriethoxysilane functionalized inorganic membranes for high temperature CO ₂ /N ₂ separation. Journal of Membrane Science, 2011, 369, 139-147.	4.1	76
21	Modification of Porous Alumina Membranes Using Al ₂ O ₃ Atomic Layer Controlled Deposition. Chemistry of Materials, 1997, 9, 707-714.	3.2	73
22	Application of a Pd-Ru composite membrane to hydrogen production in a high temperature membrane reactor. Separation and Purification Technology, 2015, 147, 388-397.	3.9	70
23	Palladium-ruthenium membranes for hydrogen separation fabricated by electroless co-deposition. International Journal of Hydrogen Energy, 2009, 34, 6484-6491.	3.8	69
24	High flux palladium-copper composite membranes for hydrogen separations. Desalination, 2006, 193, 224-229.	4.0	62
25	Effects of Water Gas Shift Gases on Pd-Cu Alloy Membrane Surface Morphology and Separation Properties. Industrial & Engineering Chemistry Research, 2004, 43, 4188-4198.	1.8	60
26	Synthesis of γ -Mo ₂ C Thin Films. ACS Applied Materials & Interfaces, 2011, 3, 517-521.	4.0	60
27	Sulfur tolerant PdAu and PdAuPt alloy hydrogen separation membranes. Journal of Membrane Science, 2012, 405-406, 11-19.	4.1	59
28	PdAu and PdAuAg composite membranes for hydrogen separation from synthetic water-gas shift streams containing hydrogen sulfide. Journal of Membrane Science, 2014, 465, 167-176.	4.1	59
29	Palladium-gold membranes in mixed gas streams with hydrogen sulfide: Effect of alloy content and fabrication technique. Journal of Membrane Science, 2011, 378, 35-41.	4.1	58
30	Identification of thermally stable Pd-alloy composite membranes for high temperature applications. Journal of Membrane Science, 2014, 466, 151-160.	4.1	58
31	Single component and mixed gas transport in a silica hollow fiber membrane. Journal of Membrane Science, 1995, 104, 27-42.	4.1	56
32	The effects of fabrication and annealing on the structure and hydrogen permeation of Pd-Au binary alloy membranes. Journal of Membrane Science, 2009, 340, 227-233.	4.1	56
33	Steam methane reforming in a PdAu membrane reactor: Long-term assessment. International Journal of Hydrogen Energy, 2016, 41, 10193-10201.	3.8	56
34	Carbon dioxide selective mixed-matrix membranes formulation and characterization using rubbery substituted polyphosphazene. Journal of Membrane Science, 2008, 324, 151-161.	4.1	53
35	Diffusion of Atomic Hydrogen through V-Ni Alloy Membranes under Nondilute Conditions. Journal of Physical Chemistry C, 2012, 116, 1512-1518.	1.5	51
36	Effect of external mass-transfer resistance on facilitated transport. Industrial & Engineering Chemistry Fundamentals, 1986, 25, 450-452.	0.7	49

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37	Competitive facilitated transport of acid gases in perfluorosulfonic acid membranes. <i>Journal of Membrane Science</i> , 1989, 46, 309-324.	4.1	46
38	Chemical Separations with Liquid Membranes: An Overview. <i>ACS Symposium Series</i> , 1996, , 1-10.	0.5	46
39	Characterization of silicone rubber membrane materials at low temperature and low pressure conditions. <i>Journal of Membrane Science</i> , 2006, 272, 125-136.	4.1	44
40	Silane modified inorganic membranes: Effects of silane surface structure. <i>Journal of Membrane Science</i> , 2005, 259, 34-46.	4.1	43
41	Predicting, Fabricating, and Permeability Testing of Free-Standing Ternary Palladium-Copper-Gold Membranes for Hydrogen Separation. <i>Journal of Physical Chemistry C</i> , 2010, 114, 17173-17180.	1.5	43
42	A mathematical model of a catalytic membrane reactor for the decomposition of NH ₃ . <i>Journal of Membrane Science</i> , 1993, 77, 265-282.	4.1	40
43	Pd-Pt/YSZ composite membranes for hydrogen separation from synthetic water-gas shift streams. <i>Journal of Membrane Science</i> , 2013, 437, 257-264.	4.1	40
44	A comparison of the performance and stability of Pd/BCC metal composite membranes for hydrogen purification. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 19009-19017.	3.8	39
45	Reactive polymer membranes for ethylene/ethane separation. <i>Journal of Membrane Science</i> , 1997, 136, 111-120.	4.1	38
46	Injectable and microporous scaffold of densely-packed, growth factor-encapsulating chitosan microgels. <i>Carbohydrate Polymers</i> , 2016, 152, 792-801.	5.1	37
47	Dense Carbide/Metal Composite Membranes for Hydrogen Separations Without Platinum Group Metals. <i>Advanced Materials</i> , 2011, 23, 3585-3589.	11.1	36
48	Development of a model surface flow membrane by modification of porous γ -alumina with octadecyltrichlorosilane. <i>Separation and Purification Technology</i> , 2001, 25, 195-210.	3.9	35
49	Silver doped Nafion-poly(pyrrole) membranes for facilitated permeation of liquid-phase olefins. <i>Journal of Membrane Science</i> , 2001, 189, 271-279.	4.1	34
50	Selective transport of gaseous carbon monoxide through liquid membranes using an iron(II) macrocyclic complex. <i>Inorganic Chemistry</i> , 1985, 24, 1147-1152.	1.9	31
51	The dehydration of nitric acid using pervaporation and a nafion perfluorosulfonate/perfluorocarboxylate bilayer membrane. <i>Journal of Membrane Science</i> , 2002, 203, 155-166.	4.1	31
52	The role (or lack thereof) of nitrogen or ammonia adsorption-induced hydrogen flux inhibition on palladium membrane performance. <i>Journal of Membrane Science</i> , 2016, 514, 65-72.	4.1	31
53	A sorption rate hypothesis for the increase in H ₂ permeability of palladium-silver (Pd-Ag) membranes caused by air oxidation. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 583-593.	3.8	30
54	Development of a Model Surface Flow Membrane by Modification of Porous Vycor Glass with a Fluorosilane. <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 3033-3040.	1.8	29

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55	Effects of heat treatment in air on hydrogen sorption over Pd-Ag and Pd-Au membrane surfaces. Journal of Membrane Science, 2012, 403-404, 78-83.	4.1	29
56	Rapid annealing of sequentially plated Pd-Au composite membranes using high pressure hydrogen. Journal of Membrane Science, 2016, 513, 197-205.	4.1	28
57	Ammonia separation from N ₂ and H ₂ over LTA zeolitic imidazolate framework membranes. Journal of Membrane Science, 2021, 623, 119078.	4.1	28
58	Effects of fabrication technique upon material properties and permeation characteristics of palladium-gold alloy membranes for hydrogen separations. Gold Bulletin, 2010, 43, 287-297.	3.2	27
59	Mechanistic studies of hydrogen transport through Mo ₂ C/V composite membranes. Journal of Membrane Science, 2013, 427, 150-154.	4.1	27
60	Effects of cross-linking and spacer groups on beta-cyclodextrin bonded liquid chromatographic separation. Korean Journal of Chemical Engineering, 2004, 21, 465-468.	1.2	25
61	Synthesis and Characterization of Perfluorinated Carboxylate/Sulfonate Ionomer Membranes for Separation and Solid Electrolyte Applications. Chemistry of Materials, 2007, 19, 4576-4584.	3.2	25
62	Low Voltage Electrochemical Process for Direct Carbon Dioxide Sequestration. Journal of the Electrochemical Society, 2012, 159, B627-B628.	1.3	24
63	The influence of heat treatment on the thermal stability of Pd composite membranes. Journal of Membrane Science, 2015, 494, 113-120.	4.1	22
64	Fabrication and operational considerations of hydrogen permeable Mo ₂ C/V metal membranes and improvement with application of Pd. Journal of Membrane Science, 2018, 549, 559-566.	4.1	22
65	An Apparatus for the Measurement of Gas Fluxes through Immobilized Liquid Membranes. Separation Science and Technology, 1984, 19, 21-32.	1.3	21
66	A theoretical comparison of facilitated transport and solution-diffusion membrane modules for gas separation. Separation and Purification Technology, 1988, 2, 65-71.	0.3	21
67	Facilitated Transport. , 1992, , 833-866.		21
68	The Effect of Heating Rate and Gas Atmosphere on Template Decomposition in Silicalite-1. Industrial & Engineering Chemistry Research, 2001, 40, 4844-4849.	1.8	19
69	Application of TiC in Vanadium-Based Hydrogen Membranes. Industrial & Engineering Chemistry Research, 2018, 57, 16084-16094.	1.8	19
70	Physical characterization of 0.5 μm cut-off sintered stainless steel membranes. Journal of Membrane Science, 2003, 213, 13-23.	4.1	16
71	Identifying Metal Alloys with High Hydrogen Permeability Using High Throughput Theory and Experimental Testing. Journal of Physical Chemistry Letters, 2011, 2, 3040-3044.	2.1	16
72	Glass frit sealing method for macroscopic defects in Pd-based composite membranes with application in catalytic membrane reactors. Separation and Purification Technology, 2017, 172, 68-75.	3.9	16

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73	Barium-Promoted Ruthenium Catalysts on Yttria-Stabilized Zirconia Supports for Ammonia Synthesis. ACS Sustainable Chemistry and Engineering, 2019, 7, 18038-18047.	3.2	16
74	The relationship between proton conductivity and water permeability in composite carboxylate/sulfonate perfluorinated ionomer membranes. Journal of Power Sources, 2007, 172, 57-66.	4.0	15
75	Inhibition of hydrogen flux in palladium membranes by pressure-induced restructuring of the membrane surface. Journal of Membrane Science, 2017, 535, 70-78.	4.1	15
76	Compact ammonia reforming at low temperature using catalytic membrane reactors. Journal of Membrane Science, 2022, 644, 120147.	4.1	15
77	An experimental and techno-economic assessment of solar reforming for H ₂ production. International Journal of Hydrogen Energy, 2016, 41, 14583-14595.	3.8	14
78	Separation of Isomeric Xylenes Using Cyclodextrin-Modified Ceramic Membranes. Industrial & Engineering Chemistry Research, 2003, 42, 1243-1252.	1.8	13
79	Experimental and Theoretical Insights into the Potential of V ₂ O ₃ Surface Coatings for Hydrogen Permeable Vanadium Membranes. Journal of Physical Chemistry C, 2018, 122, 3488-3496.	1.5	13
80	Apparent activation energy for hydrogen permeation and its relation to the composition of homogeneous PdAu alloy thin-film membranes. Separation and Purification Technology, 2018, 191, 370-374.	3.9	13
81	PREPARATION AND TESTING OF CARBON/SILICALITE-1 COMPOSITE MEMBRANES. Chemical Engineering Communications, 2004, 191, 665-681.	1.5	12
82	Investigation of the carrier saturation in facilitated transport of unsaturated hydrocarbons. Journal of Membrane Science, 2005, 250, 277-282.	4.1	12
83	The influence of temperature on the sorption and permeability of CO ₂ in poly(fluoroalkoxyphosphazene) membranes. Journal of Membrane Science, 2009, 344, 199-203.	4.1	12
84	Design and operational considerations of catalytic membrane reactors for ammonia synthesis. AIChE Journal, 2021, 67, e17259.	1.8	12
85	Dehydration of nitric acid using perfluoro carboxylate ionomer membranes. Journal of Membrane Science, 2005, 249, 65-73.	4.1	11
86	Optimizing the synthesis of composite polyvinylidene dichloride-based selective surface flow carbon membranes for gas separation. Journal of Membrane Science, 2011, 369, 243-249.	4.1	11
87	PdAu/YSZ composite hydrogen separation membranes with enhanced stability in the presence of CO. Journal of Membrane Science, 2020, 611, 118371.	4.1	11
88	Nitric Acid Dehydration Using Mixed Perfluorosulfonate and -carboxylate Ionomer Membranes. Industrial & Engineering Chemistry Research, 2005, 44, 3672-3680.	1.8	9
89	Galvanic hydrogen pumping performance of copper electrodes fabricated by electroless plating on a BaZr _{0.9} Ce _{0.1} O ₃ -proton-conducting ceramic membrane. Solid State Ionics, 2018, 317, 256-262.	1.3	9
90	Liquid chromatographic separation of xylene isomers on β -cyclodextrin bonded phases. Korean Journal of Chemical Engineering, 2002, 19, 876-879.	1.2	7

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91	Fabrication of reducing atmosphere electrodes (fuel electrodes) by electroless plating of copper on BaZr _{0.9} xCe _x Y _{0.1} O ₃ A proton-conducting ceramic. International Journal of Hydrogen Energy, 2017, 42, 16911-16919.	3.8	7
92	High temperature deuterium enrichment using TiC coated vanadium membranes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	7
93	Ceramic/Metal-Supported, Tubular, Molten Carbonate Membranes for High-Temperature CO ₂ Separations. Industrial & Engineering Chemistry Research, 2020, 59, 13706-13715.	1.8	7
94	Description of Facilitated Transport and Environmental Applications. , 1994, , 317-342.		7
95	Characterization of Substituted Polyphosphazene Membranes ~ Pure and Mixed Gas Results. Industrial & Engineering Chemistry Research, 2006, 45, 6570-6577.	1.8	6
96	Dual-Surface-Modified Reverse-Selective Membranes. Industrial & Engineering Chemistry Research, 2007, 46, 7246-7252.	1.8	6
97	Reduction of Mg from a MgO/MgAl ₂ O ₄ support by atomic hydrogen permeation through thin-film Pd membranes. Journal of Membrane Science, 2017, 541, 312-320.	4.1	6
98	Dense Inorganic Membranes for Hydrogen Separation. , 2017, , 271-363.		4
99	High performance fuel electrodes fabricated by electroless plating of copper on BaZr _{0.8} Ce _{0.1} Y _{0.1} O ₃ proton-conducting ceramic. Journal of Power Sources, 2017, 365, 399-407.	4.0	4
100	Separation of Ethylene from Ethane Using Perfluorosulfonic Acid Ion-Exchange Membranes. ACS Symposium Series, 1996, , 270-285.	0.5	3
101	Gas Transport in a Microporous Silica Membrane. , 1996, , .		3
102	Removal of Water from Aqueous Nitric Acid Using Bifunctional Perfluorinated Ionomer Membranes. Industrial & Engineering Chemistry Research, 2007, 46, 6032-6040.	1.8	3
103	Concentration and temperature dependence on diffusivities of CO ₂ and N ₂ for poly(dimethyl,.) Tj ETQq1 1 0.784314,rgBT /Oylock 1	1.8	3
104	Palladium-Copper and Palladium-Gold Alloy Composite Membranes for Hydrogen Separations. , 2009, , 221-239.		3
105	Determination of mechanisms via computational chemistry for xylene and hydroxynaphthalene separations on beta-cyclodextrin. Molecular Physics, 2004, 102, 183-189.	0.8	2
106	Effects of Carrier Mobility on Carrier Saturation Phenomenon in Facilitated Transport Membranes. Industrial & Engineering Chemistry Research, 2006, 45, 8213-8216.	1.8	2
107	Un-supported Palladium Alloy Membranes for the Production of Hydrogen. , 2009, , 203-219.		2
108	A study of direct loading of beta-cyclodextrins on glass beads as chromatographie separators. Korean Journal of Chemical Engineering, 2003, 20, 528-531.	1.2	1

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109	A Tribute to Norman N. Li. ACS Symposium Series, 1996, , 11-15.	0.5	0
110	Aqueous Ion Transport Studies in Stainless Steel Membranes. Industrial & Engineering Chemistry Research, 2003, 42, 2853-2860.	1.8	0
111	Membranes on Mars for In-Situ Resource Utilization Processes. , 2004, , .		0
112	Functionalized Inorganic Membranes for High-Temperature CO ₂ /N ₂ Separation. Green Chemistry and Sustainable Technology, 2014, , 223-245.	0.4	0