

# David Alfredo Pacheco Tanaka

## List of Publications by Year in descending order

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106  
papers

3,563  
citations

101384

36  
h-index

155451

55  
g-index

108  
all docs

108  
docs citations

108  
times ranked

3097  
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of incorporation of graphene oxide and graphene nanoplatelets on mechanical and gas permeability properties of poly(lactic acid) films. <i>Polymer International</i> , 2013, 62, 33-40.	1.6	261
2	Preparation of palladium and silver alloy membrane on a porous $\gamma$ -alumina tube via simultaneous electroless plating. <i>Journal of Membrane Science</i> , 2005, 247, 21-27.	4.1	134
3	Hydrogen permeability study of the thin Pd-Ag alloy membranes in the temperature range across the $\gamma$ -phase transition. <i>Journal of Membrane Science</i> , 2006, 282, 370-374.	4.1	128
4	Reduced graphene oxide films as transparent counter-electrodes for dye-sensitized solar cells. <i>Solar Energy</i> , 2012, 86, 716-724.	2.9	111
5	CuO/ZnO catalysts for methanol steam reforming: The role of the support polarity ratio and surface area. <i>Applied Catalysis B: Environmental</i> , 2015, 174-175, 67-76.	10.8	107
6	Development of thin Pd-Ag supported membranes for fluidized bed membrane reactors including WGS related gases. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 3506-3519.	3.8	98
7	Fabrication of Hydrogen-Permeable Composite Membranes Packed with Palladium Nanoparticles. <i>Advanced Materials</i> , 2006, 18, 630-632.	11.1	83
8	Preparation and characterization of metallic supported thin Pd-Ag membranes for hydrogen separation. <i>Chemical Engineering Journal</i> , 2016, 305, 182-190.	6.6	83
9	Recent Advances in Pd-Based Membranes for Membrane Reactors. <i>Molecules</i> , 2017, 22, 51.	1.7	82
10	Techno-economic evaluation on a hybrid technology for low hydrogen concentration separation and purification from natural gas grid. <i>International Journal of Hydrogen Energy</i> , 2020, 46, 23417-23417.	3.8	76
11	Composite phenolic resin-based carbon molecular sieve membranes for gas separation. <i>Carbon</i> , 2011, 49, 4348-4358.	5.4	74
12	An investigation of thermal stability of thin palladium-silver alloy membranes for high temperature hydrogen separation. <i>Journal of Membrane Science</i> , 2011, 366, 212-219.	4.1	72
13	Palladium based membranes and membrane reactors for hydrogen production and purification: An overview of research activities at Tecnalia and TU/e. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 13763-13776.	3.8	70
14	Mixed Ionic-Electronic Conducting Membranes (MIEC) for Their Application in Membrane Reactors: A Review. <i>Processes</i> , 2019, 7, 128.	1.3	68
15	Growth of nano-textured graphene coatings across highly porous stainless steel supports towards corrosion resistant coatings. <i>Carbon</i> , 2015, 87, 395-408.	5.4	65
16	Pd-based metallic supported membranes: High-temperature stability and fluidized bed reactor testing. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 8706-8718.	3.8	60
17	Preparation and characterization of thin-film Pd-Ag supported membranes for high-temperature applications. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 13463-13478.	3.8	58
18	Preparation and characterization of ceramic supported ultra-thin ( $\sim 1 \mu\text{m}$ ) Pd-Ag membranes. <i>Journal of Membrane Science</i> , 2017, 528, 12-23.	4.1	57

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19	Preparation of "pore-fill" type Pd-YSZ-Al <sub>2</sub> O <sub>3</sub> composite membrane supported on Al <sub>2</sub> O <sub>3</sub> tube for hydrogen separation. <i>Journal of Membrane Science</i> , 2008, 320, 436-441.	4.1	56
20	ADSORPTION CHARACTERISTICS AND REMOVAL OF OXO-ANIONS OF ARSENIC AND SELENIUM ON THE POROUS POLYMERS LOADED WITH MONOCLINIC HYDROUS ZIRCONIUM OXIDE. <i>Separation Science and Technology</i> , 2001, 36, 103-111.	1.3	55
21	The influence of the support composition on the physicochemical and catalytic properties of Cu catalysts supported on Zirconia-Alumina for methanol steam reforming. <i>Applied Catalysis B: Environmental</i> , 2020, 277, 119243.	10.8	53
22	Composite-alumina-carbon molecular sieve membranes prepared from novolac resin and boehmite. Part II: Effect of the carbonization temperature on the gas permeation properties. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 3485-3496.	3.8	52
23	Direct route from ethanol to pure hydrogen through autothermal reforming in a membrane reactor: Experimental demonstration, reactor modelling and design. <i>Energy</i> , 2018, 143, 666-681.	4.5	51
24	Development of Pd-based double-skinned membranes for hydrogen production in fluidized bed membrane reactors. <i>Journal of Membrane Science</i> , 2018, 550, 536-544.	4.1	50
25	Syngas upgrading in a membrane reactor with thin Pd-alloy supported membrane. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 10883-10893.	3.8	49
26	The membrane-assisted chemical looping reforming concept for efficient H <sub>2</sub> production with inherent CO <sub>2</sub> capture: Experimental demonstration and model validation. <i>Applied Energy</i> , 2018, 215, 75-86.	5.1	49
27	Composite-alumina-carbon molecular sieve membranes prepared from novolac resin and boehmite. Part I: Preparation, characterization and gas permeation studies. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 5653-5663.	3.8	48
28	Adsorption and removal of oxo-anions of arsenic and selenium on the zirconium(iv) loaded polymer resin functionalized with diethylenetriamine-N,N,N',N'-polyacetic acid. <i>Journal of Environmental Monitoring</i> , 2000, 2, 550-555.	2.1	46
29	Fluidized Bed Membrane Reactors for Ultra Pure H <sub>2</sub> Production—A Step forward towards Commercialization. <i>Molecules</i> , 2016, 21, 376.	1.7	45
30	On concentration polarisation in a fluidized bed membrane reactor for biogas steam reforming: Modelling and experimental validation. <i>Chemical Engineering Journal</i> , 2018, 348, 232-243.	6.6	44
31	Importance of the support material in thin palladium composite membranes for steady hydrogen permeation at elevated temperatures. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 8632.	1.3	43
32	Boehmite-phenolic resin carbon molecular sieve membranes—Permeation and adsorption studies. <i>Chemical Engineering Research and Design</i> , 2014, 92, 2668-2680.	2.7	43
33	Preparation of porous chelating resin containing linear polymer ligand and the adsorption characteristics for harmful metal ions. <i>Reactive and Functional Polymers</i> , 2002, 53, 91-101.	2.0	41
34	Carbon-Al <sub>2</sub> O <sub>3</sub> -Ag composite molecular sieve membranes for gas separation. <i>Chemical Engineering Research and Design</i> , 2012, 90, 2338-2345.	2.7	40
35	Attrition-resistant membranes for fluidized-bed membrane reactors: Double-skin membranes. <i>Journal of Membrane Science</i> , 2018, 563, 419-426.	4.1	40
36	Hydrogen production with integrated CO <sub>2</sub> capture in a membrane assisted gas switching reforming reactor: Proof-of-Concept. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 6177-6190.	3.8	39

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37	Recent Advances on Carbon Molecular Sieve Membranes (CMSMs) and Reactors. <i>Processes</i> , 2016, 4, 29.	1.3	35
38	Thermodynamics of Calix(4)arene Esters. 1. Complexation of Alkyl p-tert-Butylcalix(4)arenetetraethanoates and Alkali-Metal Cations in Acetonitrile and in Benzonitrile. <i>The Journal of Physical Chemistry</i> , 1995, 99, 16776-16780.	2.9	34
39	Development of highly permeable ultra-thin Pd-based supported membranes. <i>Chemical Engineering Journal</i> , 2016, 305, 149-155.	6.6	34
40	Effect of sweep gas on hydrogen permeation of supported Pd membranes: Experimental and modeling. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 4228-4239.	3.8	34
41	In situ high-temperature X-ray diffraction study of thin palladium/ $\gamma$ -alumina composite membranes and their hydrogen permeation properties. <i>Journal of Membrane Science</i> , 2009, 335, 126-132.	4.1	33
42	From neutral to ionic species: amine $\pi$ -p-tert-butylcalix(n)arene (n= 6, 8) interaction. Electrochemical, thermodynamic and structural studies in benzonitrile. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1993, 89, 2727-2736.	1.7	32
43	Effect of Au addition on hydrogen permeation and the resistance to H <sub>2</sub> S on Pd-Ag alloy membranes. <i>Journal of Membrane Science</i> , 2017, 542, 329-341.	4.1	31
44	Fluorometric detection of fluoride ion by ligand exchange reaction with 3-hydroxyflavone coordinated to a zirconium(IV)-EDTA complex. <i>Perkin Transactions II RSC</i> , 2002, , 759-762.	1.1	30
45	Long-Term Stability of Thin-Film Pd-Based Supported Membranes. <i>Processes</i> , 2019, 7, 106.	1.3	30
46	Separation and concentration of trace Pb(II) by the porous resin loaded with $\gamma$ -zirconium phosphate crystals. <i>Reactive and Functional Polymers</i> , 2004, 58, 131-138.	2.0	27
47	Direct production of hydrogen peroxide from oxygen and hydrogen applying membrane-permeation mechanism. <i>Chemical Engineering Science</i> , 2010, 65, 436-440.	1.9	26
48	A Density Functional Study To Choose the Best Fluorophore for Photon-Induced Electron-Transfer (PET) Sensors. <i>Chemistry - A European Journal</i> , 2003, 9, 3920-3929.	1.7	25
49	Adsorption of fluoride ion on the zirconium(IV) complexes of the chelating resins functionalized with amine-N-acetate ligands. <i>Separation Science and Technology</i> , 2002, 37, 877-894.	1.3	24
50	Strong Interaction at the Palladium/Alumina Interface of Membrane during Hydrogen Permeation at Elevated Temperature. <i>Chemistry Letters</i> , 2008, 37, 1004-1005.	0.7	24
51	Advanced m-CHP fuel cell system based on a novel bio-ethanol fluidized bed membrane reformer. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 13970-13987.	3.8	24
52	Upgrading biogas with novel composite carbon molecular sieve (CCMS) membranes: Experimental and techno-economic assessment. <i>Chemical Engineering Journal</i> , 2020, 394, 124957.	6.6	24
53	Acid precipitation followed by microalgae ( <i>Chlorella vulgaris</i> ) cultivation as a new approach for poultry slaughterhouse wastewater treatment. <i>Bioresource Technology</i> , 2021, 335, 125284.	4.8	23
54	Equilibrium and kinetic studies on the complexation of boric acid with chromotropic acid. <i>Dalton Transactions RSC</i> , 2000, , 3136-3142.	2.3	22

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55	Preparation and Hydrogen Permeation Properties of Thin Pd-Au Alloy Membranes Supported on Porous $\alpha$ -Alumina Tube. <i>Materials Transactions</i> , 2008, 49, 449-452.	0.4	22
56	Silica Capillary with Thin Metal (Pd and Pt) Inner Wall: Application to Continuous Decomposition of Hydrogen Peroxide. <i>Chemistry Letters</i> , 2009, 38, 146-147.	0.7	22
57	Lower Temperature Dehydrogenation of Methylcyclohexane by Membrane-assisted Equilibrium Shift. <i>Chemistry Letters</i> , 2006, 35, 1372-1373.	0.7	21
58	Tailoring pore structure and surface chemistry of microporous Alumina-Carbon Molecular Sieve Membranes (Al-CMSMs) by altering carbonization temperature for optimal gas separation performance: An investigation using low-field NMR relaxation measurements. <i>Chemical Engineering Journal</i> , 2021, 424, 129313.	6.6	21
59	Complexation and removal of trace boron from aqueous solution by an anion exchange resin loaded with chromotropic acid (disodium 2,7-dihydroxynaphthalene-4,5-disulfonate). <i>Journal of the Chemical Society Dalton Transactions</i> , 1999, , 1639-1644.	1.1	20
60	Hydrogen permeation and stability in ultra-thin Pd Ru supported membranes. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 7455-7467.	3.8	20
61	Thermodynamics of protonation and complexation of EDTA derivatives and metal cations in water. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1998, 94, 3105-3110.	1.7	19
62	N <sub>2</sub> , He and CO <sub>2</sub> diffusion mechanism through nanoporous YSZ/ $\gamma$ -Al <sub>2</sub> O <sub>3</sub> layers and their use in a pore-filled membrane for hydrogen membrane reactors. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 8732-8744.	3.8	19
63	Catalytic nickel and nickel-copper alloy hollow-fiber membranes for the remediation of organic pollutants by electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2018, 6, 6904-6915.	5.2	18
64	Influence of H <sub>2</sub> S on the hydrogen flux of thin-film PdAgAu membranes. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 7303-7312.	3.8	18
65	New hydrophilic carbon molecular sieve membranes for bioethanol dehydration via pervaporation. <i>Chemical Engineering Journal</i> , 2022, 435, 134891.	6.6	18
66	Hydrogen permeation studies of composite supported alumina-carbon molecular sieves membranes: Separation of diluted hydrogen from mixtures with methane. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 19758-19767.	3.8	17
67	Emerging contaminants, SARS-COV-2 and wastewater treatment plants, new challenges to confront: A short review. <i>Bioresource Technology Reports</i> , 2021, 15, 100731.	1.5	17
68	Catalytic membrane reactor for the production of biofuels. <i>Catalysis Today</i> , 2016, 268, 37-45.	2.2	16
69	Thermodynamic and electrochemical aspects of the interactions of functionalised calix(4)arenes and metal cations in 'allosteric media'. <i>Pure and Applied Chemistry</i> , 1994, 66, 435-440.	0.9	15
70	Advances in membranes and membrane reactors for the Fischer-Tropsch synthesis process for biofuel production. <i>Reviews in Chemical Engineering</i> , 2022, 38, 55-76.	2.3	15
71	From molecules to electrolytes. Electrochemical and thermodynamic aspects of the interaction of phenol and resorcinol based calixarenes with amines. <i>Pure and Applied Chemistry</i> , 1993, 65, 415-422.	0.9	14
72	Preparation and characterization of crosslinked PVAL membranes loaded with boehmite nanoparticles for fuel cell applications. <i>Journal of Applied Polymer Science</i> , 2014, 131, .	1.3	14

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73	Simple hydrothermal synthesis method for tailoring the physicochemical properties of ZnO: morphology, surface area and polarity. RSC Advances, 2014, 4, 31166.	1.7	14
74	Comparison between carbon molecular sieve and Pd-Ag membranes in H <sub>2</sub> -CH <sub>4</sub> separation at high pressure. International Journal of Hydrogen Energy, 2020, 45, 28876-28892.	3.8	14
75	Controlled Heating of Palladium Dispersed Porous Alumina Tube and Continuous Oxidation of Ethylene Using Frequency-Variable Single-Mode Microwave Reactor. Industrial & Engineering Chemistry Research, 2014, 53, 1073-1078.	1.8	13
76	Unravelling the transport mechanism of pore-filled membranes for hydrogen separation. Separation and Purification Technology, 2018, 203, 41-47.	3.9	13
77	Simple detection of trace Pb <sup>2+</sup> by enrichment on cerium phosphate membrane filter coupled with color signaling. Analyst, The, 2005, 130, 1537.	1.7	12
78	Effect of β-cyclodextrin on the transfer of N1-substituted sulfonamides from water to chloroform. Journal of the Chemical Society, Faraday Transactions, 1992, 88, 1665-1668.	1.7	11
79	Thermodynamic and electrochemical aspects of p-tert-butylcalix[n]arenes (n=4, 6, 8) and their interactions with amines. Journal of Inclusion Phenomena and Macrocyclic Chemistry, 1994, 19, 371-387.	1.6	11
80	Systematic experimental assessment of concentration polarization and inhibition in Pd-based membranes for hydrogen purification. Fuel Processing Technology, 2021, 213, 106661.	3.7	10
81	First report on electrochemical, thermodynamic and structural aspects of the interaction of p-tert-butylcalix[8]arene and cryptands in benzonitrile. Journal of the Chemical Society Chemical Communications, 1992, , 855-856.	2.0	8
82	Morphology and N <sub>2</sub> Permeance of Sputtered Pd-Ag Ultra-Thin Film Membranes. Molecules, 2016, 21, 210.	1.7	8
83	Preparation of Porous Stainless Steel Hollow-Fibers through Multi-Modal Particle Size Sintering towards Pore Engineering. Membranes, 2017, 7, 40.	1.4	8
84	Water Adsorption Effect on Carbon Molecular Sieve Membranes in H <sub>2</sub> -CH <sub>4</sub> Mixture at High Pressure. Energies, 2020, 13, 3577.	1.6	7
85	Vapor/gas separation through carbon molecular sieve membranes: Experimental and theoretical investigation. International Journal of Hydrogen Energy, 2022, 47, 11385-11401.	3.8	7
86	Fabrication of supported palladium alloy membranes using electroless plating techniques. , 2015, , 83-99.		6
87	Effect of aluminium acetyl acetonate on the hydrogen and nitrogen permeation of carbon molecular sieves membranes. International Journal of Hydrogen Energy, 2022, 47, 14570-14579.	3.8	6
88	Alternative methods for cleaning membranes in water and wastewater treatment. Water Environment Research, 2022, 94, e10708.	1.3	6
89	Membranes utilization for biogas upgrading to synthetic natural gas. , 2019, , 245-274.		5
90	Metallic membranes for hydrogen separation. , 2020, , 1-29.		5

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91	On the use of double-skinned membranes to prevent chemical interaction between membranes and catalysts. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 20240-20244.	3.8	4
92	Switching of PET Fluorescence Signals Induced by Ligand Exchange Reactions of N-(9-Anthrylmethyl)amine on Cu(II) Complexes and Its Application to Postcolumn Detection of Glyphosate. <i>Analytical Sciences</i> , 2005, 21, 417-420.	0.8	3
93	Membrane Optimization and Process Condition Investigation for Enhancing the CO <sub>2</sub> Separation From Natural Gas. , 2018, , 469-509.		3
94	Membrane reactors using metallic membranes. , 2020, , 235-260.		3
95	Continuous Cultivation of Microalgae in Cattle Slaughterhouse Wastewater Treated with Hydrodynamic Cavitation. <i>Water (Switzerland)</i> , 2022, 14, 1288.	1.2	3
96	Switching of Terbium(III)-sensitized Luminescence by Ligand Exchange Reaction: Determination of Catecholamines. <i>Chemistry Letters</i> , 2002, 31, 722-723.	0.7	2
97	Preparation of Porous Carbon Spheres Dispersed with Pd-Ag Alloy Nanoparticles. <i>Chemistry Letters</i> , 2007, 36, 152-153.	0.7	2
98	Metallic porous supports and ceramic interface layer development for H <sub>2</sub> separation membranes. <i>Powder Metallurgy</i> , 2014, 57, 232-235.	0.9	2
99	Fusion Exhaust Gas Separation with a Carbon Molecular Sieve (CMS) Membrane. <i>InterCeram: International Ceramic Review</i> , 2019, 68, 14-17.	0.2	2
100	An overview of some recent european projects on metallic membranes. , 2020, , 313-379.		2
101	Aging Studies of Composite Alumina Carbon Molecular Sieve Membranes. <i>Procedia Engineering</i> , 2012, 44, 639-641.	1.2	1
102	Membrane reactors for autothermal reforming of methane, methanol, and ethanol. , 2015, , 61-98.		1
103	Ethanol Reforming in Thermally Coupled, Fluidized-Bed, Bubble Column, and Membrane Reactors. , 2019, , 355-382.		1
104	Loading of Crystalline .ALPHA.-zirconium Phosphate onto Porous Materials:-Preparation and Application to the Concentration of Trace Ions-. <i>Journal of Ion Exchange</i> , 2003, 14, 93-96.	0.1	1
105	Hydrogen Gas Diffusion Electrode Prepared from Porous Carbon Spheres Dispersed with Pd-Ag Alloy Nanoparticles. <i>Bulletin of the Chemical Society of Japan</i> , 2007, 80, 2243-2245.	2.0	0
106	Preparation and Characterization of Pd-Ag Alloy Membranes via Simultaneous Plating by Continuous Addition of Ag to the Electroless Plating Solution. <i>Procedia Engineering</i> , 2012, 44, 1002-1004.	1.2	0