

Patricia Luis

List of Publications by Year in descending order

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119
papers

7,049
citations

57758

44
h-index

62596

80
g-index

119
all docs

119
docs citations

119
times ranked

6534
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of the bio-inspired modification of low-cost membranes with TiO ₂ :ZnO as microbial fuel cell membranes. <i>Chemosphere</i> , 2022, 291, 132840.	8.2	10
2	Osmotic Membrane Distillation Crystallization of NaHCO ₃ . <i>Energies</i> , 2022, 15, 2682.	3.1	6
3	High-performance ZIF-8/biopolymer chitosan mixed-matrix pervaporation membrane for methanol/dimethyl carbonate separation. <i>Separation and Purification Technology</i> , 2022, 293, 121085.	7.9	13
4	Erythritol-based polyester loose nanofiltration membrane with fast water transport for efficient dye/salt separation. <i>Chemical Engineering Journal</i> , 2021, 406, 126796.	12.7	162
5	Immobilization of carbonic anhydrase for CO ₂ capture and its industrial implementation: A review. <i>Journal of CO₂ Utilization</i> , 2021, 47, 101475.	6.8	63
6	Electrophoretic nuclei assembly of MOFs in polyamide membranes for enhanced nanofiltration. <i>Desalination</i> , 2021, 512, 115125.	8.2	22
7	Sustainable management of landfill leachate concentrate via nanofiltration enhanced by one-step rapid assembly of metal-organic coordination complexes. <i>Water Research</i> , 2021, 204, 117633.	11.3	28
8	Integrated loose nanofiltration-electrodialysis process for sustainable resource extraction from high-salinity textile wastewater. <i>Journal of Hazardous Materials</i> , 2021, 419, 126505.	12.4	38
9	Experimental mass transfer comparison between vacuum and direct contact membrane distillation for the concentration of carbonate solutions. <i>Separation and Purification Technology</i> , 2021, 275, 119193.	7.9	21
10	Crystallization control via membrane distillation-crystallization: A review. <i>Desalination</i> , 2021, 519, 115315.	8.2	29
11	MOF-based membranes for pervaporation. <i>Separation and Purification Technology</i> , 2021, 278, 119233.	7.9	40
12	A Review on Ionic Liquid Gas Separation Membranes. <i>Membranes</i> , 2021, 11, 97.	3.0	80
13	Economic evaluation of salt recovery from wastewater via membrane distillation-crystallization. <i>Separation and Purification Technology</i> , 2020, 235, 116075.	7.9	34
14	Polyarylene thioether sulfone/sulfonated sulfone nanofiltration membrane with enhancement of rejection and permeability via molecular design. <i>Journal of Membrane Science</i> , 2020, 608, 118241.	8.2	19
15	Effect of (TiO ₂ : ZnO) ratio on the anti-fouling properties of bio-inspired nanofiltration membranes. <i>Separation and Purification Technology</i> , 2020, 251, 117280.	7.9	25
16	The challenges of reverse osmosis desalination: solutions in Jordan. <i>Water International</i> , 2020, 45, 112-124.	1.0	15
17	Predicted concentrations of anticancer drugs in the aquatic environment: What should we monitor and where should we treat?. <i>Journal of Hazardous Materials</i> , 2020, 392, 122330.	12.4	55
18	Top-Down Polyelectrolytes for Membrane-Based Post-Combustion CO ₂ Capture. <i>Molecules</i> , 2020, 25, 323.	3.8	16

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19	Separation of bio-based chemicals using pervaporation. Journal of Chemical Technology and Biotechnology, 2020, 95, 2311-2334.	3.2	12
20	Advanced Amino Acid-Based Technologies for CO ₂ Capture: A Review. Industrial & Engineering Chemistry Research, 2019, 58, 20181-20194.	3.7	88
21	Coupling of nanofiltration and UV, UV/TiO ₂ and UV/H ₂ O ₂ processes for the removal of anti-cancer drugs from real secondary wastewater effluent. Journal of Environmental Chemical Engineering, 2019, 7, 103351.	6.7	34
22	Composting and co-composting of coffee husk and pulp with source-separated municipal solid waste: a breakthrough in valorization of coffee waste. International Journal of Recycling of Organic Waste in Agriculture, 2019, 8, 263-277.	2.0	30
23	Treatment of anticancer drugs in hospital and wastewater effluents using nanofiltration. Separation and Purification Technology, 2019, 224, 273-280.	7.9	50
24	Conceptual model-based design and environmental evaluation of waste solvent technologies: Application to the separation of the mixture acetone-water. Separation Science and Technology, 2018, 53, 1791-1810.	2.5	10
25	Understanding coupling effects in pervaporation of multi-component mixtures. Separation and Purification Technology, 2018, 197, 95-106.	7.9	28
26	Advanced desalination of dye/NaCl mixtures by a loose nanofiltration membrane for digital ink-jet printing. Separation and Purification Technology, 2018, 197, 27-35.	7.9	144
27	Valorization of coffee byproducts for bioethanol production using lignocellulosic yeast fermentation and pervaporation. International Journal of Environmental Science and Technology, 2018, 15, 821-832.	3.5	21
28	Salt Recovery from Wastewater Using Membrane Distillation-Crystallization. Crystal Growth and Design, 2018, 18, 7275-7285.	3.0	23
29	Sorption and pervaporation study of methanol/dimethyl carbonate mixture with poly(etheretherketone) (PEEK-WC) membrane. Journal of Membrane Science, 2018, 567, 303-310.	8.2	32
30	Pervaporation. , 2018, , 71-102.		5
31	Gas permeation and supported liquid membranes. , 2018, , 103-151.		5
32	Membrane contactors. , 2018, , 153-208.		10
33	CO ₂ Capture by Alkaline Solution for Carbonate Production: A Comparison between a Packed Column and a Membrane Contactor. Applied Sciences (Switzerland), 2018, 8, 996.	2.5	38
34	Hybrid processes based on membrane technology. , 2018, , 301-343.		1
35	Membrane crystallization via membrane distillation. Chemical Engineering and Processing: Process Intensification, 2018, 123, 258-271.	3.6	77
36	Application of pervaporation in the bio-production of glycerol carbonate. Chemical Engineering and Processing: Process Intensification, 2018, 132, 127-136.	3.6	13

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37	Slurry photocatalytic membrane reactor technology for removal of pharmaceutical compounds from wastewater: Towards cytostatic drug elimination. <i>Science of the Total Environment</i> , 2017, 599-600, 612-626.	8.0	72
38	Mass and heat transfer study in osmotic membrane distillation-crystallization for CO ₂ valorization as sodium carbonate. <i>Separation and Purification Technology</i> , 2017, 176, 173-183.	7.9	28
39	The Potential of Membrane Technology for Treatment of Textile Wastewater. <i>Green Chemistry and Sustainable Technology</i> , 2017, , 349-380.	0.7	11
40	Recent Progress and Novel Applications in Enzymatic Conversion of Carbon Dioxide. <i>Energies</i> , 2017, 10, 473.	3.1	53
41	Remarkable Anti-Fouling Performance of TiO ₂ -Modified TFC Membranes with Mussel-Inspired Polydopamine Binding. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 81.	2.5	23
42	Tight ultrafiltration membranes for enhanced separation of dyes and Na ₂ SO ₄ during textile wastewater treatment. <i>Journal of Membrane Science</i> , 2016, 514, 217-228.	8.2	378
43	Intensified Distillation-Based Separation Processes: Recent Developments and Perspectives. <i>Chemical Engineering and Technology</i> , 2016, 39, 2183-2195.	1.5	20
44	Retrofitting of extractive distillation columns with high flux, low separation factor membranes: A way to reduce the energy demand?. <i>Chemical Engineering Research and Design</i> , 2016, 109, 127-140.	5.6	20
45	A comprehensive physico-chemical characterization of superhydrophilic loose nanofiltration membranes. <i>Journal of Membrane Science</i> , 2016, 501, 1-14.	8.2	93
46	Purification of biodiesel using a membrane contactor: Liquid-liquid extraction. <i>Fuel Processing Technology</i> , 2016, 142, 352-360.	7.2	29
47	Recovery of Na ₂ CO ₃ and Na ₂ SO ₄ from mixed solutions by membrane crystallization. <i>Chemical Engineering Research and Design</i> , 2016, 106, 315-326.	5.6	21
48	Comparison between exergy and energy analysis for biodiesel production. <i>Energy</i> , 2016, 98, 135-145.	8.8	20
49	Pervaporation membrane reactors. , 2016, , 331-381.		8
50	Conceptual model-based optimization and environmental evaluation of waste solvent technologies: Distillation/incineration versus distillation/pervaporation. <i>Separation and Purification Technology</i> , 2016, 158, 238-249.	7.9	19
51	Enhanced performance of a biomimetic membrane for Na ₂ CO ₃ crystallization in the scenario of CO ₂ capture. <i>Journal of Membrane Science</i> , 2016, 498, 75-85.	8.2	42
52	Effect of silica nanoparticles in mixed matrix membranes for pervaporation dehydration of acetic acid aqueous solution: plant-inspired dewatering systems. <i>Journal of Cleaner Production</i> , 2016, 112, 4879-4889.	9.3	61
53	Use of monoethanolamine (MEA) for CO ₂ capture in a global scenario: Consequences and alternatives. <i>Desalination</i> , 2016, 380, 93-99.	8.2	411
54	Overcoming any configuration limitation: an alternative operating mode for pervaporation and vapour permeation. <i>Journal of Chemical Technology and Biotechnology</i> , 2016, 91, 948-957.	3.2	8

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55	The driving force as key element to evaluate the pervaporation performance of multicomponent mixtures. Separation and Purification Technology, 2015, 148, 94-102.	7.9	36
56	Fractionation of direct dyes and salts in aqueous solution using loose nanofiltration membranes. Journal of Membrane Science, 2015, 477, 183-193.	8.2	355
57	Potential of Osmotic Membrane Crystallization Using Dense Membranes for Na ₂ CO ₃ Production in a CO ₂ Capture Scenario. Crystal Growth and Design, 2015, 15, 695-705.	3.0	24
58	Forward osmosis: understanding the hype. Reviews in Chemical Engineering, 2015, 31, 1-12.	4.4	71
59	Polyvinylidene fluoride dense membrane for the pervaporation of methyl acetate-methanol mixtures. Journal of Membrane Science, 2015, 482, 128-136.	8.2	23
60	Environmental evaluation of bipolar membrane electrodialysis for NaOH production from wastewater: Conditioning NaOH as a CO ₂ absorbent. Separation and Purification Technology, 2015, 144, 206-214.	7.9	81
61	Unraveling flux behavior of superhydrophilic loose nanofiltration membranes during textile wastewater treatment. Journal of Membrane Science, 2015, 493, 690-702.	8.2	203
62	Pervaporation modeling. , 2015, , 87-106.		7
63	Pervaporation membrane reactors (PVMRs) for esterification. , 2015, , 565-603.		5
64	Toward Resource Recovery from Textile Wastewater: Dye Extraction, Water and Base/Acid Regeneration Using a Hybrid NF-BMED Process. ACS Sustainable Chemistry and Engineering, 2015, 3, 1993-2001.	6.7	109
65	Pervaporation. , 2015, , 101-154.		18
66	Exergy analysis of energy-intensive production processes: advancing towards a sustainable chemical industry. Journal of Chemical Technology and Biotechnology, 2014, 89, 1288-1303.	3.2	55
67	Simulation and environmental evaluation of process design: Distillation vs. hybrid distillation-pervaporation for methanol/tetrahydrofuran separation. Applied Energy, 2014, 113, 565-575.	10.1	65
68	A cascaded pervaporation process for dehydration of acetic acid. Chemical Engineering Science, 2014, 105, 208-212.	3.8	15
69	Binary metal oxides for composite ultrafiltration membranes. Journal of Materials Chemistry A, 2014, 2, 7054-7064.	10.3	42
70	Integration of reverse osmosis and membrane crystallization for sodium sulphate recovery. Chemical Engineering and Processing: Process Intensification, 2014, 85, 57-68.	3.6	43
71	Pervaporation as a tool in chemical engineering: a new era?. Current Opinion in Chemical Engineering, 2014, 4, 47-53.	7.8	98
72	Membrane crystallization for the recovery of a pharmaceutical compound from waste streams. Chemical Engineering Research and Design, 2014, 92, 264-272.	5.6	29

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73	Separation of methanol-tetrahydrofuran mixtures by heteroazeotropic distillation and pervaporation. <i>AIChE Journal</i> , 2014, 60, 2584-2595.	3.6	20
74	Guidelines based on life cycle assessment for solvent selection during the process design and evaluation of treatment alternatives. <i>Green Chemistry</i> , 2014, 16, 3045-3063.	9.0	90
75	Preliminary Studies on Membrane Filtration for the Production of Potable Water: A Case of Tshaanda Rural Village in South Africa. <i>PLoS ONE</i> , 2014, 9, e105057.	2.5	17
76	Exergy as a tool for measuring process intensification in chemical engineering. <i>Journal of Chemical Technology and Biotechnology</i> , 2013, 88, 1951-1958.	3.2	16
77	Poly(vinylidene fluoride-co-hexafluoropropylene) (PVDF-co-HFP) hollow fiber membranes prepared from PVDF-co-HFP/PEG-600Mw/DMAC solution for membrane distillation. <i>Journal of Applied Polymer Science</i> , 2013, 129, 3304-3313.	2.6	33
78	Life cycle assessment of alternatives for waste-solvent valorization: batch and continuous distillation vs incineration. <i>International Journal of Life Cycle Assessment</i> , 2013, 18, 1048-1061.	4.7	31
79	Effect of impurities in the recovery of 1-(5-bromo-fur-2-yl)-2-bromo-2-nitroethane using nanofiltration. <i>Chemical Engineering and Processing: Process Intensification</i> , 2013, 70, 241-249.	3.6	9
80	The role of membranes in post-combustion CO ₂ capture. , 2013, 3, 318-337.		69
81	Technical viability and exergy analysis of membrane crystallization: Closing the loop of CO ₂ sequestration. <i>International Journal of Greenhouse Gas Control</i> , 2013, 12, 450-459.	4.6	39
82	Separation of methanol-n-butyl acetate mixtures by pervaporation: Potential of 10 commercial membranes. <i>Journal of Membrane Science</i> , 2013, 429, 1-12.	8.2	78
83	Novel binding procedure of TiO ₂ nanoparticles to thin film composite membranes via self-polymerized polydopamine. <i>Journal of Membrane Science</i> , 2013, 437, 179-188.	8.2	134
84	Membrane Crystallization of Sodium Carbonate for Carbon Dioxide Recovery: Effect of Impurities on the Crystal Morphology. <i>Crystal Growth and Design</i> , 2013, 13, 2362-2372.	3.0	59
85	Pesticides Removal by Filtration over Cactus Pear Leaves: A Cheap and Natural Method for Small-Scale Water Purification in Semi-Arid Regions. <i>Clean - Soil, Air, Water</i> , 2013, 41, 235-243.	1.1	11
86	Measurement of activity coefficients of mixtures by head-space gas chromatography: General procedure. <i>Journal of Chromatography A</i> , 2013, 1302, 111-117.	3.7	7
87	A Biologically Inspired Hydrophobic Membrane for Application in Pervaporation. <i>Langmuir</i> , 2013, 29, 1510-1516.	3.5	23
88	Separation of ethyl acetate-isooctane mixtures by pervaporation and pervaporation-based hybrid methods. <i>Chemical Engineering Journal</i> , 2012, 210, 252-262.	12.7	15
89	Considerations on the Use of Nanofiltration for Solvent Purification in the Oil Industry. <i>JAOCS, Journal of the American Oil Chemists' Society</i> , 2012, 89, 959-960.	1.9	4
90	Environmental and economic evaluation of SO ₂ recovery in a ceramic hollow fibre membrane contactor. <i>Chemical Engineering and Processing: Process Intensification</i> , 2012, 52, 151-154.	3.6	14

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91	Sorption and diffusivity study of acetic acid and water in polymeric membranes. Chemical Engineering Science, 2012, 78, 14-20.	3.8	22
92	Improved membrane structures for seawater desalination by studying the influence of sublayers. Desalination, 2012, 287, 317-325.	8.2	51
93	A new outlook on membrane enhancement with nanoparticles: The alternative of ZnO. Journal of Membrane Science, 2012, 389, 155-161.	8.2	355
94	Recent developments in membrane-based technologies for CO ₂ capture. Progress in Energy and Combustion Science, 2012, 38, 419-448.	31.2	439
95	Application of the mass-based UNIQUAC model to membrane systems: A critical revision. Journal of Chemical Thermodynamics, 2012, 48, 260-266.	2.0	8
96	The potential of head-space gas chromatography for VLE measurements. Journal of Chemical Thermodynamics, 2012, 49, 128-136.	2.0	18
97	Nanofiltration and nanostructured membranes—Should they be considered nanotechnology or not?. Journal of Hazardous Materials, 2012, 211-212, 275-280.	12.4	47
98	Effect of Membrane Filtration on Ozonation Efficiency for Removal of Atrazine from Surface Water. Industrial & Engineering Chemistry Research, 2011, 50, 8686-8692.	3.7	18
99	Performance of solvent resistant nanofiltration membranes for purification of residual solvent in the pharmaceutical industry: experiments and simulation. Green Chemistry, 2011, 13, 3476.	9.0	91
100	Absorption of coal combustion flue gases in ionic liquids using different membrane contactors. Desalination and Water Treatment, 2011, 27, 54-59.	1.0	51
101	Preparation of solvent stable polyphenylsulfone hollow fiber nanofiltration membranes. Journal of Membrane Science, 2011, 384, 89-96.	8.2	119
102	Effect of nanoparticle aggregation at low concentrations of TiO ₂ on the hydrophilicity, morphology, and fouling resistance of PES/TiO ₂ membranes. Journal of Colloid and Interface Science, 2011, 363, 540-550.	9.4	185
103	The potential of pervaporation for separation of acetic acid and water mixtures using polyphenylsulfone membranes. Chemical Engineering Journal, 2011, , .	12.7	12
104	Analysis of the Development of Membrane Technology for Gas Separation and CO ₂ Capture. ACS Symposium Series, 2011, , 7-26.	0.5	6
105	Novel polyphenylsulfone membrane for potential use in solvent nanofiltration. Journal of Membrane Science, 2011, 379, 60-68.	8.2	111
106	Performance of Nanofiltration Membranes for Solvent Purification in the Oil Industry. JAOCS, Journal of the American Oil Chemists' Society, 2011, 88, 1255-1261.	1.9	73
107	Non-dispersive absorption for CO ₂ capture: from the laboratory to industry. Journal of Chemical Technology and Biotechnology, 2011, 86, 769-775.	3.2	62
108	Modelling of a hollow fibre ceramic contactor for SO ₂ absorption. Separation and Purification Technology, 2010, 72, 174-179.	7.9	50

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109	Quantitative structure-activity relationships (QSARs) to estimate ionic liquids ecotoxicity EC50 (<i>Vibrio fischeri</i>). <i>Journal of Molecular Liquids</i> , 2010, 152, 28-33.	4.9	89
110	Long-range magnetic ordering in magnetic ionic liquid: Emim[FeCl ₄]. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 296006.	1.8	43
111	Intensification of Sulfur Dioxide Absorption: Environmental and Economic Optimization. <i>Computer Aided Chemical Engineering</i> , 2010, , 1003-1008.	0.5	2
112	Carbon Dioxide Capture from Flue Gases Using a Cross-Flow Membrane Contactor and the Ionic Liquid 1-Ethyl-3-methylimidazolium Ethylsulfate. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 11045-11051.	3.7	171
113	Zero solvent emission process for sulfur dioxide recovery using a membrane contactor and ionic liquids. <i>Journal of Membrane Science</i> , 2009, 330, 80-89.	8.2	105
114	Facilitated transport of CO ₂ and SO ₂ through Supported Ionic Liquid Membranes (SILMs). <i>Desalination</i> , 2009, 245, 485-493.	8.2	124
115	Hybrid Molecular QSAR Model for Toxicity Estimation: Application to Ionic Liquids. <i>Computer Aided Chemical Engineering</i> , 2009, 26, 63-67.	0.5	11
116	Sulfur dioxide non-dispersive absorption in N,N-dimethylaniline using a ceramic membrane contactor. <i>Journal of Chemical Technology and Biotechnology</i> , 2008, 83, 1570-1577.	3.2	17
117	Recovery of Sulfur Dioxide Using Non-Dispersive Absorption. <i>International Journal of Chemical Reactor Engineering</i> , 2007, 5, .	1.1	4
118	A novel group contribution method in the development of a QSAR for predicting the toxicity (<i>Vibrio</i>) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	8.0	134
119	Fluidized bed reactor for fluoride removal. <i>Chemical Engineering Journal</i> , 2005, 107, 113-117.	12.7	69