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	Recent developments in membrane-based technologies for CO2 capture. Progress in Energy and Combustion Science, 2012, 38, 419-448.	31.2	439
2	Use of monoethanolamine (MEA) for CO 2 capture in a global scenario: Consequences and alternatives. Desalination, 2016, 380, 93-99.	8.2	411
3	Tight ultrafiltration membranes for enhanced separation of dyes and Na2SO4 during textile wastewater treatment. Journal of Membrane Science, 2016, 514, 217-228.	8.2	378
4	A new outlook on membrane enhancement with nanoparticles: The alternative of ZnO. Journal of Membrane Science, 2012, 389, 155-161.	8.2	355
5	Fractionation of direct dyes and salts in aqueous solution using loose nanofiltration membranes. Journal of Membrane Science, 2015, 477, 183-193.	8.2	355
6	Unraveling flux behavior of superhydrophilic loose nanofiltration membranes during textile wastewater treatment. Journal of Membrane Science, 2015, 493, 690-702.	8.2	203
7	Effect of nanoparticle aggregation at low concentrations of TiO2 on the hydrophilicity, morphology, and fouling resistance of PESâ€“TiO2 membranes. Journal of Colloid and Interface Science, 2011, 363, 540-550.	9.4	185
8	Carbon Dioxide Capture from Flue Gases Using a Cross-Flow Membrane Contactor and the Ionic Liquid 1-Ethyl-3-methylimidazolium Ethylsulfate. Industrial & Engineering Chemistry Research, 2010, 49, 11045-11051.	3.7	171
9	Erythritol-based polyester loose nanofiltration membrane with fast water transport for efficient dye/salt separation. Chemical Engineering Journal, 2021, 406, 126796.	12.7	162
10	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
11	A novel group contribution method in the development of a QSAR for predicting the toxicity (Vibrio) Tj ETQq1 1 0.784314 rgBT /Over	6.0	134
12	Novel binding procedure of TiO2 nanoparticles to thin film composite membranes via self-polymerized polydopamine. Journal of Membrane Science, 2013, 437, 179-188.	8.2	134
13	Facilitated transport of CO2 and SO2 through Supported Ionic Liquid Membranes (SILMs). Desalination, 2009, 245, 485-493.	8.2	124
14	Preparation of solvent stable polyphenylsulfone hollow fiber nanofiltration membranes. Journal of Membrane Science, 2011, 384, 89-96.	8.2	119
15	Novel polyphenylsulfone membrane for potential use in solvent nanofiltration. Journal of Membrane Science, 2011, 379, 60-68.	8.2	111
16	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
17	Zero solvent emission process for sulfur dioxide recovery using a membrane contactor and ionic liquids. Journal of Membrane Science, 2009, 330, 80-89.	8.2	105
18	Pervaporation as a tool in chemical engineering: a new era?. Current Opinion in Chemical Engineering, 2014, 4, 47-53.	7.8	98

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19	A comprehensive physico-chemical characterization of superhydrophilic loose nanofiltration membranes. Journal of Membrane Science, 2016, 501, 1-14.	8.2	93
20	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
21	Guidelines based on life cycle assessment for solvent selection during the process design and evaluation of treatment alternatives. Green Chemistry, 2014, 16, 3045-3063.	9.0	90
22	Quantitative structureâ€“activity relationships (QSARs) to estimate ionic liquids ecotoxicity EC50 (Vibrio fischeri). Journal of Molecular Liquids, 2010, 152, 28-33.	4.9	89
23	Advanced Amino Acid-Based Technologies for CO₂ Capture: A Review. Industrial & Engineering Chemistry Research, 2019, 58, 20181-20194.	3.7	88
24	Environmental evaluation of bipolar membrane electrodialysis for NaOH production from wastewater: Conditioning NaOH as a CO2 absorbent. Separation and Purification Technology, 2015, 144, 206-214.	7.9	81
25	A Review on Ionic Liquid Gas Separation Membranes. Membranes, 2021, 11, 97.	3.0	80
26	Separation of methanolâ€“n-butyl acetate mixtures by pervaporation: Potential of 10 commercial membranes. Journal of Membrane Science, 2013, 429, 1-12.	8.2	78
27	Membrane crystallization via membrane distillation. Chemical Engineering and Processing: Process Intensification, 2018, 123, 258-271.	3.6	77
28	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
29	Slurry photocatalytic membrane reactor technology for removal of pharmaceutical compounds from wastewater: Towards cytostatic drug elimination. Science of the Total Environment, 2017, 599-600, 612-626.	8.0	72
30	Forward osmosis: understanding the hype. Reviews in Chemical Engineering, 2015, 31, 1-12.	4.4	71
31	Fluidized bed reactor for fluoride removal. Chemical Engineering Journal, 2005, 107, 113-117.	12.7	69
32	The role of membranes in post-combustion CO₂capture. , 2013, 3, 318-337.		69
33	Simulation and environmental evaluation of process design: Distillation vs. hybrid distillationâ€“pervaporation for methanol/tetrahydrofuran separation. Applied Energy, 2014, 113, 565-575.	10.1	65
34	Immobilization of carbonic anhydrase for CO2 capture and its industrial implementation: A review. Journal of CO2 Utilization, 2021, 47, 101475.	6.8	63
35	Nonâ€dispersive absorption for CO₂ capture: from the laboratory to industry. Journal of Chemical Technology and Biotechnology, 2011, 86, 769-775.	3.2	62
36	Effect of silica nanoparticles in mixed matrix membranes for pervaporation dehydration of acetic acid aqueous solution: plant-inspired dewatering systems. Journal of Cleaner Production, 2016, 112, 4879-4889.	9.3	61

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37	Membrane Crystallization of Sodium Carbonate for Carbon Dioxide Recovery: Effect of Impurities on the Crystal Morphology. Crystal Growth and Design, 2013, 13, 2362-2372.	3.0	59
38	Exergy analysis of energyâ€intensive production processes: advancing towards a sustainable chemical industry. Journal of Chemical Technology and Biotechnology, 2014, 89, 1288-1303.	3.2	55
39	Predicted concentrations of anticancer drugs in the aquatic environment: What should we monitor and where should we treat?. Journal of Hazardous Materials, 2020, 392, 122330.	12.4	55
40	Recent Progress and Novel Applications in Enzymatic Conversion of Carbon Dioxide. Energies, 2017, 10, 473.	3.1	53
41	Absorption of coal combustion flue gases in ionic liquids using different membrane contactors. Desalination and Water Treatment, 2011, 27, 54-59.	1.0	51
42	Improved membrane structures for seawater desalination by studying the influence of sublayers. Desalination, 2012, 287, 317-325.	8.2	51
43	Modelling of a hollow fibre ceramic contactor for SO2 absorption. Separation and Purification Technology, 2010, 72, 174-179.	7.9	50
44	Treatment of anticancer drugs in hospital and wastewater effluents using nanofiltration. Separation and Purification Technology, 2019, 224, 273-280.	7.9	50
45	Nanofiltration and nanostructured membranesâ€"Should they be considered nanotechnology or not?. Journal of Hazardous Materials, 2012, 211-212, 275-280.	12.4	47
46	Long-range magnetic ordering in magnetic ionic liquid: Emim[FeCl4]. Journal of Physics Condensed Matter, 2010, 22, 296006.	1.8	43
47	Integration of reverse osmosis and membrane crystallization for sodium sulphate recovery. Chemical Engineering and Processing: Process Intensification, 2014, 85, 57-68.	3.6	43
48	Binary metal oxides for composite ultrafiltration membranes. Journal of Materials Chemistry A, 2014, 2, 7054-7064.	10.3	42
49	Enhanced performance of a biomimetic membrane for Na2CO3 crystallization in the scenario of CO2 capture. Journal of Membrane Science, 2016, 498, 75-85.	8.2	42
50	MOF-based membranes for pervaporation. Separation and Purification Technology, 2021, 278, 119233.	7.9	40
51	Technical viability and exergy analysis of membrane crystallization: Closing the loop of CO2 sequestration. International Journal of Greenhouse Gas Control, 2013, 12, 450-459.	4.6	39
52	CO2 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
53	Integrated loose nanofiltration-electrodialysis process for sustainable resource extraction from high-salinity textile wastewater. Journal of Hazardous Materials, 2021, 419, 126505.	12.4	38
54	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

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55	Coupling of nanofiltration and UV, UV/TiO2 and UV/H2O2 processes for the removal of anti-cancer drugs from real secondary wastewater effluent. Journal of Environmental Chemical Engineering, 2019, 7, 103351.	6.7	34
56	Economic evaluation of salt recovery from wastewater via membrane distillation-crystallization. Separation and Purification Technology, 2020, 235, 116075.	7.9	34
57	Poly(vinylidene fluorideâ€‹coâ€‹hexafluoropropylene) (PVDFâ€‹coâ€‹HFP) hollow fiber membranes prepared from PVDFâ€‹coâ€‹HFP/PEGâ€‹600Mw/DMAC solution for membrane distillation. Journal of Applied Polymer Science, 2013, 129, 3304-3313.	2.6	33
58	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
59	Life cycle assessment of alternatives for waste-solvent valorization: batch and continuous distillation vs incineration. International Journal of Life Cycle Assessment, 2013, 18, 1048-1061.	4.7	31
60	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
61	Membrane crystallization for the recovery of a pharmaceutical compound from waste streams. Chemical Engineering Research and Design, 2014, 92, 264-272.	5.6	29
62	Purification of biodiesel using a membrane contactor: Liquidâ€“liquid extraction. Fuel Processing Technology, 2016, 142, 352-360.	7.2	29
63	Crystallization control via membrane distillation-crystallization: A review. Desalination, 2021, 519, 115315.	8.2	29
64	Mass and heat transfer study in osmotic membrane distillation-crystallization for CO2 valorization as sodium carbonate. Separation and Purification Technology, 2017, 176, 173-183.	7.9	28
65	Understanding coupling effects in pervaporation of multi-component mixtures. Separation and Purification Technology, 2018, 197, 95-106.	7.9	28
66	Sustainable management of landfill leachate concentrate via nanofiltration enhanced by one-step rapid assembly of metal-organic coordination complexes. Water Research, 2021, 204, 117633.	11.3	28
67	Effect of (TiO2: ZnO) ratio on the anti-fouling properties of bio-inspired nanofiltration membranes. Separation and Purification Technology, 2020, 251, 117280.	7.9	25
68	Potential of Osmotic Membrane Crystallization Using Dense Membranes for Na₂CO₃ Production in a CO₂ Capture Scenario. Crystal Growth and Design, 2015, 15, 695-705.	3.0	24
69	A Biologically Inspired Hydrophobic Membrane for Application in Pervaporation. Langmuir, 2013, 29, 1510-1516.	3.5	23
70	Polyvinylidene fluoride dense membrane for the pervaporation of methyl acetateâ€“methanol mixtures. Journal of Membrane Science, 2015, 482, 128-136.	8.2	23
71	Remarkable Anti-Fouling Performance of TiO2-Modified TFC Membranes with Mussel-Inspired Polydopamine Binding. Applied Sciences (Switzerland), 2017, 7, 81.	2.5	23
72	Salt Recovery from Wastewater Using Membrane Distillationâ€“Crystallization. Crystal Growth and Design, 2018, 18, 7275-7285.	3.0	23

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73	Sorption and diffusivity study of acetic acid and water in polymeric membranes. Chemical Engineering Science, 2012, 78, 14-20.	3.8	22
74	Electrophoretic nuclei assembly of MOFs in polyamide membranes for enhanced nanofiltration. Desalination, 2021, 512, 115125.	8.2	22
75	Recovery of Na2CO3 and Na2SO4 from mixed solutions by membrane crystallization. Chemical Engineering Research and Design, 2016, 106, 315-326.	5.6	21
76	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
77	Experimental mass transfer comparison between vacuum and direct contact membrane distillation for the concentration of carbonate solutions. Separation and Purification Technology, 2021, 275, 119193.	7.9	21
78	Separation of methanolâ€tetrahydrofuran mixtures by heteroazeotropic distillation and pervaporation. AICHE Journal, 2014, 60, 2584-2595.	3.6	20
79	Intensified Distillationâ€Based Separation Processes: Recent Developments and Perspectives. Chemical Engineering and Technology, 2016, 39, 2183-2195.	1.5	20
80	Retrofitting of extractive distillation columns with high flux, low separation factor membranes: A way to reduce the energy demand?. Chemical Engineering Research and Design, 2016, 109, 127-140.	5.6	20
81	Comparison between exergy and energy analysis for biodiesel production. Energy, 2016, 98, 135-145.	8.8	20
82	Conceptual model-based optimization and environmental evaluation of waste solvent technologies: Distillation/incineration versus distillation/pervaporation. Separation and Purification Technology, 2016, 158, 238-249.	7.9	19
83	Polyarylene thioether sulfone/sulfonated sulfone nanofiltration membrane with enhancement of rejection and permeability via molecular designâ˜†. Journal of Membrane Science, 2020, 608, 118241.	8.2	19
84	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
85	The potential of head-space gas chromatography for VLE measurements. Journal of Chemical Thermodynamics, 2012, 49, 128-136.	2.0	18
86	Pervaporation. , 2015, , 101-154.		18
87	Sulfur dioxide nonâ€dispersive absorption in N,Nâ€dimethylaniline using a ceramic membrane contactor. Journal of Chemical Technology and Biotechnology, 2008, 83, 1570-1577.	3.2	17
88	Preliminary Studies on Membrane Filtration for the Production of Potable Water: A Case of Tshaanda Rural Village in South Africa. PLoS ONE, 2014, 9, e105057.	2.5	17
89	Exergy as a tool for measuring process intensification in chemical engineering. Journal of Chemical Technology and Biotechnology, 2013, 88, 1951-1958.	3.2	16
90	Top-Down Polyelectrolytes for Membrane-Based Post-Combustion CO2 Capture. Molecules, 2020, 25, 323.	3.8	16

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91	Separation of ethyl acetateâ€“isooctane mixtures by pervaporation and pervaporation-based hybrid methods. Chemical Engineering Journal, 2012, 210, 252-262.	12.7	15
92	A cascaded pervaporation process for dehydration of acetic acid. Chemical Engineering Science, 2014, 105, 208-212.	3.8	15
93	The challenges of reverse osmosis desalination: solutions in Jordan. Water International, 2020, 45, 112-124.	1.0	15
94	Environmental and economic evaluation of SO2 recovery in a ceramic hollow fibre membrane contactor. Chemical Engineering and Processing: Process Intensification, 2012, 52, 151-154.	3.6	14
95	Application of pervaporation in the bio-production of glycerol carbonate. Chemical Engineering and Processing: Process Intensification, 2018, 132, 127-136.	3.6	13
96	High-performance ZIF-8/biopolymer chitosan mixed-matrix pervaporation membrane for methanol/dimethyl carbonate separation. Separation and Purification Technology, 2022, 293, 121085.	7.9	13
97	The potential of pervaporation for separation of acetic acid and water mixtures using polyphenylsulfone membranes. Chemical Engineering Journal, 2011, , .	12.7	12
98	Separation of bioâ€based chemicals using pervaporation. Journal of Chemical Technology and Biotechnology, 2020, 95, 2311-2334.	3.2	12
99	Hybrid Molecular QSAR Model for Toxicity Estimation: Application to Ionic Liquids. Computer Aided Chemical Engineering, 2009, 26, 63-67.	0.5	11
100	Pesticides Removal by Filtration over Cactus Pear Leaves: A Cheap and Natural Method for Smallâ€Scale Water Purification in Semiâ€Arid Regions. Clean - Soil, Air, Water, 2013, 41, 235-243.	1.1	11
101	The Potential of Membrane Technology for Treatment of Textile Wastewater. Green Chemistry and Sustainable Technology, 2017, , 349-380.	0.7	11
102	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
103	Membrane contactors. , 2018, , 153-208.		10
104	Effect of the bio-inspired modification of low-cost membranes with TiO2:ZnO as microbial fuel cell membranes. Chemosphere, 2022, 291, 132840.	8.2	10
105	Effect of impurities in the recovery of 1-(5-bromo-fur-2-il)-2-bromo-2-nitroethane using nanofiltration. Chemical Engineering and Processing: Process Intensification, 2013, 70, 241-249.	3.6	9
106	Application of the mass-based UNIQUAC model to membrane systems: A critical revision. Journal of Chemical Thermodynamics, 2012, 48, 260-266.	2.0	8
107	Pervaporation membrane reactors. , 2016, , 331-381.		8
108	Overcoming any configuration limitation: an alternative operating mode for pervaporation and vapour permeation. Journal of Chemical Technology and Biotechnology, 2016, 91, 948-957.	3.2	8

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109	Measurement of activity coefficients of mixtures by head-space gas chromatography: General procedure. Journal of Chromatography A, 2013, 1302, 111-117.	3.7	7
110	Pervaporation modeling. , 2015, , 87-106.		7
111	Analysis of the Development of Membrane Technology for Gas Separation and CO₂Capture. ACS Symposium Series, 2011, , 7-26.	0.5	6
112	Osmotic Membrane Distillation Crystallization of NaHCO3. Energies, 2022, 15, 2682.	3.1	6
113	Pervaporation membrane reactors (PVMRs) for esterification. , 2015, , 565-603.		5
114	Pervaporation. , 2018, , 71-102.		5
115	Gas permeation and supported liquid membranes. , 2018, , 103-151.		5
116	Recovery of Sulfur Dioxide Using Non-Dispersive Absorption. International Journal of Chemical Reactor Engineering, 2007, 5, .	1.1	4
117	Considerations on the Use of Nanofiltration for Solvent Purification in the Oil Industry. JAOCS, Journal of the American Oil Chemists' Society, 2012, 89, 959-960.	1.9	4
118	Intensification of Sulfur Dioxide Absorption: Environmental and Economic Optimization. Computer Aided Chemical Engineering, 2010, , 1003-1008.	0.5	2
119	Hybrid processes based on membrane technology. , 2018, , 301-343.		1