Ana M Ribeiro

List of Publications by Year
in descending order

126 papers	3,369 citations	126708 33 h-index	174990 52 g-index
126 all docs	126 docs citations	126 times ranked	2949 citing authors

#	Article	IF	Citations
1	A parametric study of layered bed PSA for hydrogen purification. Chemical Engineering Science, 2008, 63, 5258-5273.	1.9	188
2	Adsorption of H₂, CO₂, CH₄, CO, N₂and H₂O in Activated Carbon and Zeolite for Hydrogen Production. Separation Science and Technology, 2009, 44, 1045-1073.	1.3	158
3	Hydrogen Production via Sorption Enhanced Steam Methane Reforming Process Using Ni/CaO Multifunctional Catalyst. Industrial & Engineering Chemistry Research, 2011, 50, 13662-13671.	1.8	98
4	Light olefins/paraffins separation with 13X zeolite binderless beads. Separation and Purification Technology, 2014, 133, 452-475.	3.9	97
5	Adsorption of Pure and Binary CO₂, CH₄, and N₂ Gas Components on Activated Carbon Beads. Journal of Chemical & Engineering Data, 2015, 60, 2684-2693.	1.0	89
6	Propylene/propane separation by vacuum swing adsorption using Cu-BTC spheres. Separation and Purification Technology, 2012, 90, 109-119.	3.9	85
7	H2 purification by pressure swing adsorption using CuBTC. Separation and Purification Technology, 2013, 118, 744-756.	3.9	85
8	Propane/propylene separation by adsorption using shaped copper trimesate MOF. Microporous and Mesoporous Materials, 2012, 157, 101-111.	2.2	82
9	Adsorption of Offâ€Gases from Steam Methane Reforming (H₂, CO₂,) Tj ETQq1 1 0.784314 rgBT /Overlock 1 2008, 43, 1338-1364.	1.3	81
10	Adsorption Equilibrium and Kinetics of Water Vapor on Different Adsorbents. Industrial & Engineering Chemistry Research, 2008, 47, 7019-7026.	1.8	74
11	Ethane/ethylene separation on a copper benzene-1,3,5-tricarboxylate MOF. Separation and Purification Technology, 2015, 149, 445-456.	3.9	72
12	Electrical conductive 3D-printed monolith adsorbent for CO2 capture. Microporous and Mesoporous Materials, 2019, 278, 403-413.	2.2	72
13	PSA design for stoichiometric adjustment of bio-syngas for methanol production and co-capture of carbon dioxide. Chemical Engineering Journal, 2010, 163, 355-363.	6.6	66
14	Separation of CO 2 /N 2 on binderless 5A zeolite. Journal of CO2 Utilization, 2017, 20, 224-233.	3.3	64
15	Stability of an Al-Fumarate MOF and Its Potential for CO₂ Capture from Wet Stream. Industrial & Engineering Chemistry Research, 2016, 55, 2134-2143.	1.8	63
16	New 13X zeolite for propylene/propane separation by vacuum swing adsorption. Separation and Purification Technology, 2013, 103, 60-70.	3.9	62
17	Separation of C3/C4 hydrocarbon mixtures by adsorption using a mesoporous iron MOF: MIL-100(Fe). Microporous and Mesoporous Materials, 2012, 153, 178-190.	2.2	60
18	Methane purification by adsorptive processes on MIL-53(Al). Chemical Engineering Science, 2015, 124, 79-95.	1.9	60

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19	Cryogenic pressure temperature swing adsorption process for natural gas upgrade. Separation and Purification Technology, 2017, 173, 339-356.	3.9	55
20	Adsorption Equilibrium and Kinetics of Methane and Nitrogen on Carbon Molecular Sieve. Industrial & Engineering Chemistry Research, 2014, 53, 16840-16850.	1.8	50
21	Electrocoagulation process for the removal of co-existent fluoride, arsenic and iron from contaminated drinking water. Separation and Purification Technology, 2018, 197, 237-243.	3.9	50
22	Four beds pressure swing adsorption for hydrogen purification: Case of humid feed and activated carbon beds. AICHE Journal, 2009, 55, 2292-2302.	1.8	48
23	Syngas Purification by Porous Amino-Functionalized Titanium Terephthalate MIL-125. Energy & Fuels, 2015, 29, 4654-4664.	2.5	48
24	Solketal Production from Glycerol Ketalization with Acetone: Catalyst Selection and Thermodynamic and Kinetic Reaction Study. Industrial & Engineering Chemistry Research, 2019, 58, 17746-17759.	1.8	48
25	Gas-phase simulated moving bed: Propane/propylene separation on 13X zeolite. Journal of Chromatography A, 2015, 1423, 136-148.	1.8	47
26	New hybrid composite honeycomb monolith with 13X zeolite and activated carbon for CO2 capture. Adsorption, 2018, 24, 249-265.	1.4	47
27	Current Developments of Carbon Capture Storage and/or Utilizationâ€“Looking for Net-Zero Emissions Defined in the Paris Agreement. Energies, 2021, 14, 2406.	1.6	47
28	Carbon dioxide removal for methane upgrade by a VSA process using an improved 13X zeolite. Fuel Processing Technology, 2016, 143, 185-194.	3.7	46
29	Adsorption equilibrium and kinetics of carbon dioxide, methane and nitrogen on binderless zeolite 4A adsorbents. Microporous and Mesoporous Materials, 2019, 277, 105-114.	2.2	46
30	Modeling the electrocoagulation process for the treatment of contaminated water. Chemical Engineering Science, 2019, 197, 379-385.	1.9	45
31	Biogas upgrading by selective adsorption onto CO 2 activated carbon from wood pellets. Journal of Environmental Chemical Engineering, 2017, 5, 1386-1393.	3.3	41
32	Pressure swing adsorption process for the separation of nitrogen and propylene with a MOF adsorbent MIL-100(Fe). Separation and Purification Technology, 2013, 110, 101-111.	3.9	39
33	CO₂/CH₄ Separation by Adsorption using Nanoporous Metal organic Framework Copperâ€Benzeneâ€1,3,5â€tricarboxylate Tablet. Chemical Engineering and Technology, 2013, 36, 1231-1239.	0.9	34
34	Methanol production by biâ€reforming. Canadian Journal of Chemical Engineering, 2015, 93, 510-526.	0.9	33
35	Development of gasâ€phase SMB technology for light olefin/paraffin separations. AICHE Journal, 2016, 62, 2490-2500.	1.8	31
36	Enhancing Capacity of Activated Carbons for Hydrogen Purification. Industrial & Engineering Chemistry Research, 2009, 48, 3978-3990.	1.8	29

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37	Optimization strategies for chiral separation by true moving bed chromatography using Particles Swarm Optimization (PSO) and new Parallel PSO variant. Computers and Chemical Engineering, 2019, 123, 344-356.	2.0	29
38	Development of Hybrid Materials with Activated Carbon and Zeolite 13X for CO₂ Capture from Flue Gases by Electric Swing Adsorption. Industrial & Engineering Chemistry Research, 2020, 59, 12197-12211.	1.8	29
39	Enrichment of low-grade methane gas from nitrogen mixture by VPSA with CO2 displacement process: Modeling and experiment. Chemical Engineering Journal, 2020, 380, 122509.	6.6	28
40	Modelling of a pressure swing adsorption unit by deep learning and artificial Intelligence tools. Chemical Engineering Science, 2020, 224, 115801.	1.9	27
41	High purity ethane/ethylene separation by gas phase simulated moving bed using ZIFâ€8 adsorbent. AIChE Journal, 2019, 65, e16619.	1.8	26
42	Removal of Fluoride from Water by a Continuous Electrocoagulation Process. Industrial & Engineering Chemistry Research, 2019, 58, 5314-5321.	1.8	26
43	Enrichment of ventilation air methane by adsorption with displacement chromatography technology: Experiment and numerical simulation. Chemical Engineering Science, 2016, 149, 215-228.	1.9	25
44	Separation and recovery of polyphenols and carbohydrates from Eucalyptus bark extract by ultrafiltration/diafiltration and adsorption processes. Separation and Purification Technology, 2017, 183, 96-105.	3.9	24
45	Artificial Intelligence-oriented economic non-linear model predictive control applied to a pressure swing adsorption unit: Syngas purification as a case study. Separation and Purification Technology, 2021, 276, 119333.	3.9	24
46	Syngas Stoichiometric Adjustment for Methanol Production and Co-Capture of Carbon Dioxide by Pressure Swing Adsorption. Separation Science and Technology, 2012, 47, 850-866.	1.3	23
47	Simulation of Methane Steam Reforming Enhanced by in Situ CO₂ Sorption Using K₂CO₃-Promoted Hydrotalcites for H₂ Production. Energy & Fuels, 2013, 27, 4457-4470.	2.5	23
48	Copper based materials for water-gas shift equilibrium displacement. Applied Catalysis B: Environmental, 2016, 189, 199-209.	10.8	23
49	Microstructure effect of carbon materials on the low-concentration methane adsorption separation from its mixture with nitrogen. Adsorption, 2018, 24, 357-369.	1.4	23
50	Effect of Ion Exchange on the Adsorption of Steam Methane Reforming Off-Gases on Zeolite 13X. Journal of Chemical & Engineering Data, 2010, 55, 184-195.	1.0	21
51	Gas phase SMB for propane/propylene separation using enhanced 13X zeolite beads. Adsorption, 2014, 20, 61-75.	1.4	21
52	Evaluation of carbon dioxideâ€“nitrogen separation through fixed bed measurements and simulations. Adsorption, 2014, 20, 945-957.	1.4	20
53	A quasi-virtual online analyser based on an artificial neural networks and offline measurements to predict purities of raffinate/extract in simulated moving bed processes. Applied Soft Computing Journal, 2018, 67, 29-47.	4.1	19
54	Ethylene/ethane separation by gas-phase SMB in binderfree zeolite 13X monoliths. Chemical Engineering Science, 2021, 229, 116006.	1.9	19

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55	MIL-160(Al) MOFâ€™s potential in adsorptive water harvesting. Adsorption, 2021, 27, 213-226.	1.4	18
56	Pressure swing adsorption for CO2 capture in Fischer-Tropsch fuels production from biomass. Adsorption, 2011, 17, 443-452.	1.4	17
57	Performance Evaluation of Pervaporation Technology for Process Intensification of Butyl Acrylate Synthesis. Industrial & Engineering Chemistry Research, 2017, 56, 13064-13074.	1.8	17
58	Optimization of a True Moving Bed unit and determination of its feasible operating region using a novel Sliding Particle Swarm Optimization. Computers and Industrial Engineering, 2019, 135, 368-381.	3.4	17
59	Big Data-Based Optimization of a Pressure Swing Adsorption Unit for Syngas Purification: On Mapping Uncertainties from a Metaheuristic Technique. Industrial & Engineering Chemistry Research, 2020, 59, 14037-14047.	1.8	17
60	Downstream processing of an oxidized industrial kraft liquor by membrane fractionation for vanillin and syringaldehyde recovery. Separation and Purification Technology, 2018, 197, 360-371.	3.9	15
61	Chromatographic studies of n-Propyl Propionate: Adsorption equilibrium, modelling and uncertainties determination. Computers and Chemical Engineering, 2018, 119, 371-382.	2.0	15
62	Separation of tartronic and glyceric acids by simulated moving bed chromatography. Journal of Chromatography A, 2018, 1563, 62-70.	1.8	15
63	C₂/C₃ Hydrocarbon Separation by Pressure Swing Adsorption on MIL-100(Fe). Industrial & Engineering Chemistry Research, 2020, 59, 10568-10582.	1.8	15
64	Pressure Swing Adsorption Process in Coal to Fischerâ€“Tropsch Fuels with CO₂ Capture. Energy & Fuels, 2012, 26, 1246-1253.	2.5	14
65	Towards polymer grade ethylene production with Cu-BTC: gas-phase SMB versus PSA. Adsorption, 2018, 24, 203-219.	1.4	14
66	Chromatographic studies of n-Propyl Propionate, Part II: Synthesis in a fixed bed adsorptive reactor, modelling and uncertainties determination. Computers and Chemical Engineering, 2019, 128, 164-173.	2.0	14
67	Adsorption Equilibrium of Carbon Dioxide, Methane, Nitrogen, Carbon Monoxide, and Hydrogen on UiO-66(Zr)_(COOH)₂. Journal of Chemical & Engineering Data, 2019, 64, 4724-4732.	1.0	14
68	Solketal Production in a Fixed Bed Adsorptive Reactor through the Ketalization of Glycerol. Industrial & Engineering Chemistry Research, 2020, 59, 2805-2816.	1.8	14
69	Artificial Intelligence and Cyber-Physical Systems: A Review and Perspectives for the Future in the Chemical Industry. AI, 2021, 2, 429-443.	2.1	14
70	Shaping of ZIF-8 and MIL-53(Al) adsorbents for CH4/N2 separation. Microporous and Mesoporous Materials, 2022, 331, 111648.	2.2	14
71	Dynamics of a True Moving Bed separation process: Linear model identification and advanced process control. Journal of Chromatography A, 2017, 1504, 112-123.	1.8	13
72	From Carbon Molecular Sieves to VOCs filters: Carbon gels with tailored porosity for hexane isomers adsorption and separation. Microporous and Mesoporous Materials, 2018, 270, 161-167.	2.2	13

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73	Water vapor harvesting by a (P)TSA process with MIL-125(Ti)_NH2 as adsorbent. Separation and Purification Technology, 2020, 237, 116336.	3.9	13
74	Dynamics of a True Moving Bed Reactor: Synthesis of n-Propyl Propionate and an alternative optimization method. Chemical Engineering and Processing: Process Intensification, 2020, 148, 107821.	1.8	13
75	Additive manufacturing for adsorptionâ€related applicationsâ€”A review. Journal of Advanced Manufacturing and Processing, 2022, 4, .	1.4	13
76	Simulation of toxic gases and vapours removal by activated carbon filters. Chemical Engineering Science, 2002, 57, 1621-1626.	1.9	12
77	Synthesis, Pelleting, and Performance Evaluation of a Novel K-Promoted Î³-Alumina/MgAl-Layered Double Oxide Composite Adsorbent for Warm Gas H₂/CO₂ Separation. Industrial & Engineering Chemistry Research, 2015, 54, 7154-7163.	1.8	12
78	Synthesis of the Biofuel Additive 1,1â€Diethoxybutane in a Fixedâ€Bed Column with Amberlystâ€15 Wet. Chemical Engineering and Technology, 2016, 39, 1509-1518.	0.9	12
79	Resorcinolâ€“formaldehyde carbon xerogel as selective adsorbent of carbon dioxide present on biogas. Adsorption, 2018, 24, 169-177.	1.4	12
80	A novel standpoint of Pressure Swing Adsorption processes multi-objective optimization: An approach based on feasible operation region mapping. Chemical Engineering Research and Design, 2022, 178, 590-601.	2.7	12
81	Atmospheric water harvesting on MIL-100(Fe) upon a cyclic adsorption process. Separation and Purification Technology, 2022, 290, 120803.	3.9	12
82	Dynamics of a True Moving Bed separation process: Effect of operating variables on performance indicators using orthogonalization method. Computers and Chemical Engineering, 2016, 86, 5-17.	2.0	11
83	Adsorption of vanillic and syringic acids onto a macroporous polymeric resin and recovery with ethanol:water (90:10 %V/V) solution. Separation and Purification Technology, 2019, 217, 108-117.	3.9	11
84	Optimal fragrances formulation using a deep learning neural network architecture: A novel systematic approach. Computers and Chemical Engineering, 2021, 150, 107344.	2.0	11
85	Propylene/Nitrogen Separation in a By-Stream of the Polypropylene Production: From Pilot Test and Model Validation to Industrial Scale Process Design and Optimization. Industrial & Engineering Chemistry Research, 2014, 53, 9199-9213.	1.8	10
86	How to Overcome the Waterâ€“Gasâ€Shift Equilibrium using a Conventional Nickel Reformer Catalyst. Energy Technology, 2015, 3, 1205-1216.	1.8	10
87	Experimental and Simulation Studies of TAME Synthesis in a Fixed-Bed Reactor. Industrial & Engineering Chemistry Research, 2007, 46, 1105-1113.	1.8	9
88	A robustly model predictive control strategy applied in the control of a simulated industrial polyethylene polymerization process. Computers and Chemical Engineering, 2020, 133, 106664.	2.0	9
89	Bovine serum albumin and myoglobin separation by size exclusion SMB. Journal of Chromatography A, 2020, 1628, 461431.	1.8	9
90	From an Optimal Point to an Optimal Region: A Novel Methodology for Optimization of Multimodal Constrained Problems and a Novel Constrained Sliding Particle Swarm Optimization Strategy. Mathematics, 2021, 9, 1808.	1.1	9

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91	Butyl acrylate production: A review on process intensification strategies. Chemical Engineering and Processing: Process Intensification, 2019, 142, 107563.	1.8	8
92	Machine Learning-Based Dynamic Modeling for Process Engineering Applications: A Guideline for Simulation and Prediction from Perceptron to Deep Learning. Processes, 2022, 10, 250.	1.3	8
93	Transient analysis of true/simulated moving bed reactors: A case study on the synthesis of n-Propyl propionate. Computers and Chemical Engineering, 2020, 137, 106820.	2.0	7
94	Global Approach for Simulated Moving Bed Model Identification: Design of Experiments, Uncertainty Evaluation, and Optimization Strategy Assessment. Industrial & Engineering Chemistry Research, 2021, 60, 7904-7916.	1.8	7
95	A First Approach towards Adsorption-Oriented Physics-Informed Neural Networks: Monoclonal Antibody Adsorption Performance on an Ion-Exchange Column as a Case Study. ChemEngineering, 2022, 6, 21.	1.0	7
96	A novel nested loop optimization problem based on deep neural networks and feasible operation regions definition for simultaneous material screening and process optimization. Chemical Engineering Research and Design, 2022, 180, 243-253.	2.7	7
97	From a Pareto Front to Pareto Regions: A Novel Standpoint for Multiobjective Optimization. Mathematics, 2021, 9, 3152.	1.1	7
98	Selection of a stationary phase for the chromatographic separation of organic acids obtained from bioglycerol oxidation. Adsorption, 2017, 23, 627-638.	1.4	6
99	Dynamic response to process disturbancesâ€"A comparison between TMB/SMB models in transient regime. Computers and Chemical Engineering, 2017, 99, 230-244.	2.0	6
100	Modeling and Simulation of a TPSA System for a Vinyl Chloride/Nitrogen Separation from Industrial Streams. Industrial & Engineering Chemistry Research, 2018, 57, 14223-14232.	1.8	6
101	Synthesis gas adjustment by low temperature sorption enhanced water-gas shift reaction through a copper-zeolite 13X hybrid material. Chemical Engineering and Processing: Process Intensification, 2017, 121, 97-110.	1.8	5
102	Recovery of vinyl chloride from byâ€streams of polyvinyl chloride production by TPSA in a multitubular adsorber. AICHE Journal, 2020, 66, e16899.	1.8	5
103	Adsorption equilibrium of water vapor onto activated carbon, activated alumina, carbon and alumina impregnated with hygroscopic salt. Turkish Journal of Chemistry, 0, , .	0.5	4
104	CO2 Storage on Zeolites and Other Adsorbents. Green Energy and Technology, 2019, , 359-381.	0.4	4
105	A Hybrid Modeling Framework for Membrane Separation Processes: Application to Lithium-Ion Recovery from Batteries. Processes, 2021, 9, 1939.	1.3	4
106	A long short-term memory based Quasi-Virtual Analyzer for dynamic real-time soft sensing of a Simulated Moving Bed unit. Applied Soft Computing Journal, 2022, 116, 108318.	4.1	4
107	Methane/nitrogen separation by SMB using $${ext{UiO - 66(Zr)}}_{ext{(COOH)}}_{{2}}$$. Brazilian Journal of Chemical Engineering, 2022, 39, 973-990.	0.7	4
108	Mapping Uncertainties of Soft-Sensors Based on Deep Feedforward Neural Networks through a Novel Monte Carlo Uncertainties Training Process. Processes, 2022, 10, 409.	1.3	4

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109	Using scientific machine learning to develop universal differential equation for multicomponent adsorption separation systems. Canadian Journal of Chemical Engineering, 2022, 100, 2279-2290.	0.9	4
110	Vinyl Chloride Recovery in a Multitubular Adsorber on Maxsorb Carbon. Industrial & Engineering Chemistry Research, 2022, 61, 9433-9442.	1.8	4
111	Process reâ€intensification strategy for butyl acrylate manufacturing: Enhancement, scalingâ€up and economical evaluation. Journal of Advanced Manufacturing and Processing, 2020, 2, .	1.4	3
112	A Complete Heterogeneous Model for the Production of n-Propyl Propionate Using a Simulated Moving Bed Reactor. Separations, 2022, 9, 43.	1.1	3
113	Novel Switch Stabilizing Model Predictive Control Strategy Applied in the Control of a Simulated Moving Bed for the Separation of Bi-Naphthol Enantiomers. Industrial & Engineering Chemistry Research, 2020, 59, 1979-1988.	1.8	2
114	Adsorption material composition and process optimization, a systematical approach based on Deep Learning. IFAC-PapersOnLine, 2021, 54, 43-48.	0.5	2
115	Bulk recovery and purification of vinyl chloride/nitrogen mixtures by MT-TPVSA using activated carbon carbotech DGK. Fluid Phase Equilibria, 2022, 562, 113547.	1.4	2
116	Explicit equation for the determination of the overall mass transfer coefficient in a hollow fiber membrane contactor. Chemical Engineering Science, 2017, 166, 210-219.	1.9	1
117	Pervaporation and Sorption Enhanced Reactive Cyclic Processes: The Butyl Acrylate Case Study. Industrial & Engineering Chemistry Research, 2020, 59, 2817-2827.	1.8	1
118	Optimal Design of SMB Units: A Novel Strategy Based on Particles Swarm Optimization. IFAC-PapersOnLine, 2021, 54, 548-553.	0.5	1
119	Design and Optimization for Simulated Moving Bed: Varicol Approach. IFAC-PapersOnLine, 2021, 54, 542-547.	0.5	1
120	Abnormal Operation Tracking through Big-Data-Based Gramâ€“Schmidt Orthogonalization: Production of n-Propyl Propionate in a Simulated Moving-Bed Reactor: A Case Study. Industrial & Engineering Chemistry Research, 2021, 60, 4060-4071.	1.8	1
121	Recycling of Lithiumâ€Ion Batteries â€“ Modeling Using Flat Sheet Supported Liquid Membranes. Chemical Engineering and Technology, 0, , .	0.9	1
122	Simulation of Toxic Gases and Vapours Removal by Activated Carbon Filters. Chemie-Ingenieur-Technik, 2001, 73, 771-771.	0.4	0
123	Perspectives of Scaling Up the Use of Zeolites for Selective Separations from Lab to Industry. Structure and Bonding, 2020, , 145-194.	1.0	0
124	Modeling and optimization of a continuous electrocoagulation process using an artificial intelligence approach. Water Science and Technology: Water Supply, 2022, 22, 643-658.	1.0	0
125	BREAKTHROUGH BEHAVIOR OF WATER VAPOR ON ACTIVATED CARBON FILTERS. , 2006, , 357-360.		0
126	Modeling Carbon Mask Adsorptive Filters. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 147-153.	0.1	0