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	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
2	Additive manufacturing for adsorptionâ€related applicationsâ€"A review. Journal of Advanced Manufacturing and Processing, 2022, 4, .	1.4	13
3	Shaping of ZIF-8 and MIL-53(Al) adsorbents for CH4/N2 separation. Microporous and Mesoporous Materials, 2022, 331, 111648.	2.2	14
4	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
5	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
6	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
7	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
8	A Complete Heterogeneous Model for the Production of n-Propyl Propionate Using a Simulated Moving Bed Reactor. Separations, 2022, 9, 43.	1.1	3
9	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
10	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
11	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
12	Atmospheric water harvesting on MIL-100(Fe) upon a cyclic adsorption process. Separation and Purification Technology, 2022, 290, 120803.	3.9	12
13	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
14	Vinyl Chloride Recovery in a Multitubular Adsorber on Maxsorb Carbon. Industrial & Engineering Chemistry Research, 2022, 61, 9433-9442.	1.8	4
15	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
16	Ethylene/ethane separation by gas-phase SMB in binderfree zeolite 13X monoliths. Chemical Engineering Science, 2021, 229, 116006.	1.9	19
17	Adsorption material composition and process optimization, a systematical approach based on Deep Learning. IFAC-PapersOnLine, 2021, 54, 43-48.	0.5	2
18	Optimal Design of SMB Units: A Novel Strategy Based on Particles Swarm Optimization. IFAC-PapersOnLine, 2021, 54, 548-553.	0.5	1

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19	Design and Optimization for Simulated Moving Bed: Varicol Approach. IFAC-PapersOnLine, 2021, 54, 542-547.	0.5	1
20	Abnormal Operation Tracking through Big-Data-Based Gram–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
21	Current Developments of Carbon Capture Storage and/or Utilization–Looking for Net-Zero Emissions Defined in the Paris Agreement. Energies, 2021, 14, 2406.	1.6	47
22	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
23	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
24	Optimal fragrances formulation using a deep learning neural network architecture: A novel systematic approach. Computers and Chemical Engineering, 2021, 150, 107344.	2.0	11
25	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
26	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
27	MIL-160(Al) MOF's potential in adsorptive water harvesting. Adsorption, 2021, 27, 213-226.	1.4	18
28	A Hybrid Modeling Framework for Membrane Separation Processes: Application to Lithium-Ion Recovery from Batteries. Processes, 2021, 9, 1939.	1.3	4
29	From a Pareto Front to Pareto Regions: A Novel Standpoint for Multiobjective Optimization. Mathematics, 2021, 9, 3152.	1.1	7
30	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
31	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
32	Recovery of vinyl chloride from by‐streams of polyvinyl chloride production by TPSA in a multitubular adsorber. AICHE Journal, 2020, 66, e16899.	1.8	5
33	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
34	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
35	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
36	Bovine serum albumin and myoglobin separation by size exclusion SMB. Journal of Chromatography A, 2020, 1628, 461431.	1.8	9

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37	Perspectives of Scaling Up the Use of Zeolites for Selective Separations from Lab to Industry. Structure and Bonding, 2020, , 145-194.	1.0	0
38	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
39	Development of Hybrid Materials with Activated Carbon and Zeolite 13X for CO_2 Capture from Flue Gases by Electric Swing Adsorption. Industrial & Engineering Chemistry Research, 2020, 59, 12197-12211.	1.8	29
40	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
41	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
42	Pervaporation and Sorption Enhanced Reactive Cyclic Processes: The Butyl Acrylate Case Study. Industrial & Engineering Chemistry Research, 2020, 59, 2817-2827.	1.8	1
43	Solketal Production in a Fixed Bed Adsorptive Reactor through the Ketalization of Glycerol. Industrial & Engineering Chemistry Research, 2020, 59, 2805-2816.	1.8	14
44	C_2/C_3 Hydrocarbon Separation by Pressure Swing Adsorption on MIL-100(Fe). Industrial & Engineering Chemistry Research, 2020, 59, 10568-10582.	1.8	15
45	Modelling of a pressure swing adsorption unit by deep learning and artificial Intelligence tools. Chemical Engineering Science, 2020, 224, 115801.	1.9	27
46	Butyl acrylate production: A review on process intensification strategies. Chemical Engineering and Processing: Process Intensification, 2019, 142, 107563.	1.8	8
47	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
48	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
49	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
50	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
51	High purity ethane/ethylene separation by gas phase simulated moving bed using ZIFâ€‘8 adsorbent. AICHE Journal, 2019, 65, e16619.	1.8	26
52	CO2 Storage on Zeolites and Other Adsorbents. Green Energy and Technology, 2019, , 359-381.	0.4	4
53	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
54	Removal of Fluoride from Water by a Continuous Electrocoagulation Process. Industrial & Engineering Chemistry Research, 2019, 58, 5314-5321.	1.8	26

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55	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
56	Modeling the electrocoagulation process for the treatment of contaminated water. Chemical Engineering Science, 2019, 197, 379-385.	1.9	45
57	Electrical conductive 3D-printed monolith adsorbent for CO_2 capture. Microporous and Mesoporous Materials, 2019, 278, 403-413.	2.2	72
58	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
59	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
60	New hybrid composite honeycomb monolith with 13X zeolite and activated carbon for CO_2 capture. Adsorption, 2018, 24, 249-265.	1.4	47
61	Resorcinolâ€"formaldehyde carbon xerogel as selective adsorbent of carbon dioxide present on biogas. Adsorption, 2018, 24, 169-177.	1.4	12
62	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
63	Towards polymer grade ethylene production with Cu-BTC: gas-phase SMB versus PSA. Adsorption, 2018, 24, 203-219.	1.4	14
64	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
65	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
66	Chromatographic studies of n-Propyl Propionate: Adsorption equilibrium, modelling and uncertainties determination. Computers and Chemical Engineering, 2018, 119, 371-382.	2.0	15
67	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
68	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
69	Separation of tartronic and glyceric acids by simulated moving bed chromatography. Journal of Chromatography A, 2018, 1563, 62-70.	1.8	15
70	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
71	Selection of a stationary phase for the chromatographic separation of organic acids obtained from bioglycerol oxidation. Adsorption, 2017, 23, 627-638.	1.4	6
72	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

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73	Separation of CO 2 /N 2 on binderless 5A zeolite. Journal of CO2 Utilization, 2017, 20, 224-233.	3.3	64
74	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
75	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
76	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
77	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
78	Performance Evaluation of Pervaporation Technology for Process Intensification of Butyl Acrylate Synthesis. Industrial & Engineering Chemistry Research, 2017, 56, 13064-13074.	1.8	17
79	Cryogenic pressure temperature swing adsorption process for natural gas upgrade. Separation and Purification Technology, 2017, 173, 339-356.	3.9	55
80	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
81	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
82	Development of gasâ€phase SMB technology for light olefin/paraffin separations. AICHE Journal, 2016, 62, 2490-2500.	1.8	31
83	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
84	Stability of an Al-Fumarate MOF and Its Potential for CO_2 Capture from Wet Stream. Industrial & Engineering Chemistry Research, 2016, 55, 2134-2143.	1.8	63
85	Copper based materials for water-gas shift equilibrium displacement. Applied Catalysis B: Environmental, 2016, 189, 199-209.	10.8	23
86	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
87	How to Overcome the Waterâ€"Gasâ€Shift Equilibrium using a Conventional Nickel Reformer Catalyst. Energy Technology, 2015, 3, 1205-1216.	1.8	10
88	Methanol production by biâ€reforming. Canadian Journal of Chemical Engineering, 2015, 93, 510-526.	0.9	33
89	Ethane/ethylene separation on a copper benzene-1,3,5-tricarboxylate MOF. Separation and Purification Technology, 2015, 149, 445-456.	3.9	72
90	Adsorption of Pure and Binary CO_2, CH_4, and N_2 Gas Components on Activated Carbon Beads. Journal of Chemical & Engineering Data, 2015, 60, 2684-2693.	1.0	89

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91	Syngas Purification by Porous Amino-Functionalized Titanium Terephthalate MIL-125. Energy & Fuels, 2015, 29, 4654-4664.	2.5	48
92	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
93	Gas-phase simulated moving bed: Propane/propylene separation on 13X zeolite. Journal of Chromatography A, 2015, 1423, 136-148.	1.8	47
94	Methane purification by adsorptive processes on MIL-53(Al). Chemical Engineering Science, 2015, 124, 79-95.	1.9	60
95	Evaluation of carbon dioxide–nitrogen separation through fixed bed measurements and simulations. Adsorption, 2014, 20, 945-957.	1.4	20
96	Adsorption Equilibrium and Kinetics of Methane and Nitrogen on Carbon Molecular Sieve. Industrial & Engineering Chemistry Research, 2014, 53, 16840-16850.	1.8	50
97	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
98	Gas phase SMB for propane/propylene separation using enhanced 13X zeolite beads. Adsorption, 2014, 20, 61-75.	1.4	21
99	Light olefins/paraffins separation with 13X zeolite binderless beads. Separation and Purification Technology, 2014, 133, 452-475.	3.9	97
100	CO₂/CH₄ Separation by Adsorption using Nanoporous Metal organic Framework Copper‐Benzene‐1,3,5‐tricarboxylate Tablet. Chemical Engineering and Technology, 2013, 36, 1231-1239.	0.9	34
101	H2 purification by pressure swing adsorption using CuBTC. Separation and Purification Technology, 2013, 118, 744-756.	3.9	85
102	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
103	Simulation of Methane Steam Reforming Enhanced by <i>in Situ</i> CO₂ Sorption Using K₂CO₃-Promoted Hydrotalcites for H₂ Production. Energy & Fuels, 2013, 27, 4457-4470.	2.5	23
104	New 13X zeolite for propylene/propane separation by vacuum swing adsorption. Separation and Purification Technology, 2013, 103, 60-70.	3.9	62
105	Pressure Swing Adsorption Process in Coal to Fischer–Tropsch Fuels with CO₂ Capture. Energy & Fuels, 2012, 26, 1246-1253.	2.5	14
106	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
107	Propylene/propane separation by vacuum swing adsorption using Cu-BTC spheres. Separation and Purification Technology, 2012, 90, 109-119.	3.9	85
108	Propane/propylene separation by adsorption using shaped copper trimesate MOF. Microporous and Mesoporous Materials, 2012, 157, 101-111.	2.2	82

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109	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
110	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
111	Pressure swing adsorption for CO2 capture in Fischer-Tropsch fuels production from biomass. Adsorption, 2011, 17, 443-452.	1.4	17
112	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
113	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
114	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
115	Adsorption of H_2, CO_2, CH_4, CO, N_2 and H_2O in Activated Carbon and Zeolite for Hydrogen Production. Separation Science and Technology, 2009, 44, 1045-1073.	1.3	158
116	Enhancing Capacity of Activated Carbons for Hydrogen Purification. Industrial & Engineering Chemistry Research, 2009, 48, 3978-3990.	1.8	29
117	A parametric study of layered bed PSA for hydrogen purification. Chemical Engineering Science, 2008, 63, 5258-5273.	1.9	188
118	Adsorption Equilibrium and Kinetics of Water Vapor on Different Adsorbents. Industrial & Engineering Chemistry Research, 2008, 47, 7019-7026.	1.8	74
119	Adsorption of Off‐Gases from Steam Methane Reforming (H_2, CO_2,) Tj ETQq1 1 0.784314 rgBT /Overlock 2008, 43, 1338-1364.	1.3	81
120	Modeling Carbon Mask Adsorptive Filters. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 147-153.	0.1	0
121	Experimental and Simulation Studies of TAME Synthesis in a Fixed-Bed Reactor. Industrial & Engineering Chemistry Research, 2007, 46, 1105-1113.	1.8	9
122	BREAKTHROUGH BEHAVIOR OF WATER VAPOR ON ACTIVATED CARBON FILTERS. , 2006, , 357-360.		0
123	Simulation of toxic gases and vapours removal by activated carbon filters. Chemical Engineering Science, 2002, 57, 1621-1626.	1.9	12
124	Simulation of Toxic Gases and Vapours Removal by Activated Carbon Filters. Chemie-Ingenieur-Technik, 2001, 73, 771-771.	0.4	0
125	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
126	Recycling of Lithium‐Ion Batteries – Modeling Using Flat Sheet Supported Liquid Membranes. Chemical Engineering and Technology, 0, , .	0.9	1