

# JosÃ© Paulo Mota

## List of Publications by Year in descending order

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Version: 2024-02-01

127  
papers

3,154  
citations

136950

32  
h-index

206112

48  
g-index

128  
all docs

128  
docs citations

128  
times ranked

2828  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of activated carbons produced from Maize Cob Waste for adsorption-based CO <sub>2</sub> separation and biogas upgrading. Journal of Environmental Chemical Engineering, 2022, 10, 107065. Modelling $\langle \text{mml:math} \text{xmlns:mml}="http://www.w3.org/1998/Math/MathML" \text{altimg}="si14.svg">\langle \text{mml:mrow}>\langle \text{mml:msub}>\langle \text{mml:mrow}>\langle \text{mml:mi} \text{mathvariant}="normal">C\langle \text{mml:mi} \text{mathvariant}="normal">O\langle \text{mml:mi}>\langle \text{mml:mrow}>\langle \text{mml:mn}>2\langle \text{mml:mn}>\langle \text{mml:msub}>\langle \text{mml:mrow}>\langle \text{mml:math}>$	6.7	24
2	absorption in aqueous solutions of cholinium lysinate ionic liquid. Chemical Engineering Journal, 2021, 421, 127875.	12.7	7
3	Structure and thermodynamics of empty clathrate hydrates below the freezing point of water. Physical Chemistry Chemical Physics, 2021, 23, 16033-16043.	2.8	2
4	Adsorption of Carbon Dioxide, Methane, and Nitrogen on Zn(dcpa) Metal-Organic Framework. Energies, 2021, 14, 5598.	3.1	7
5	3D-printed hybrid zeolitic/carbonaceous electrically conductive adsorbent structures. Chemical Engineering Research and Design, 2021, 174, 442-453.	5.6	17
6	Cr-based MOF/IL composites as fillers in mixed matrix membranes for CO <sub>2</sub> separation. Separation and Purification Technology, 2021, 276, 119303.	7.9	34
7	Surface Area and Porosity of Co <sub>3</sub> (ndc) <sub>3</sub> (dabco) Metal-Organic Framework and Its Methane Storage Capacity: A Combined Experimental and Simulation Study. Journal of Physical Chemistry C, 2021, 125, 2411-2423.	3.1	7
8	Batch chromatography with recycle lag. Physical realization and experimental validation. Journal of Chromatography A, 2020, 1623, 461211.	3.7	4
9	Extrusion and Characterization of High Si/Al Ratio ZSM-5 Using Silica Binder. Energies, 2020, 13, 1201.	3.1	8
10	Equilibrium and Transport Distributions of a DNA Dodecamer in Hydrophilic Nanopores. Materials Today: Proceedings, 2020, 20, 249-264.	1.8	0
11	Adsorption of fluorinated greenhouse gases on activated carbons: evaluation of their potential for gas separation. Journal of Chemical Technology and Biotechnology, 2020, 95, 1892-1905.	3.2	34
12	Batch chromatography with recycle lag. Concept and design. Journal of Chromatography A, 2020, 1623, 461199.	3.7	1
13	Cryogenic neon adsorption on Co <sub>3</sub> (ndc) <sub>3</sub> (dabco) metal-organic framework. Microporous and Mesoporous Materials, 2020, 298, 110055.	4.4	8
14	Binderless shaped metal-organic framework particles: Impact on carbon dioxide adsorption. Microporous and Mesoporous Materials, 2019, 275, 111-121.	4.4	36
15	Absorption of Fluorinated Greenhouse Gases Using Fluorinated Ionic Liquids. Industrial & Engineering Chemistry Research, 2019, 58, 20769-20778.	3.7	55
16	Neon Adsorption on HKUST-1 and UiO-66 Metal-Organic Frameworks over Wide Pressure and Temperature Ranges. Journal of Chemical & Engineering Data, 2019, 64, 5407-5414.	1.9	7
17	Biomethane production through anaerobic co-digestion with Maize Cob Waste based on a biorefinery concept: A review. Journal of Environmental Management, 2019, 249, 109351.	7.8	22
18	Low-Temperature Thermodynamic Study of the Metastable Empty Clathrate Hydrates Using Molecular Simulations. ACS Earth and Space Chemistry, 2019, 3, 789-799.	2.7	9

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19	Ionic Liquid-Impregnated Metal-Organic Frameworks for CO <sub>2</sub> /CH <sub>4</sub> Separation. ACS Applied Nano Materials, 2019, 2, 7933-7950.	5.0	51
20	New dual colorimetric/fluorimetric probes for Hg <sup>2+</sup> detection & extraction based on mesoporous SBA-16 nanoparticles containing porphyrin or rhodamine chromophores. Dyes and Pigments, 2019, 161, 427-437.	3.7	26
21	CO <sub>2</sub> /N <sub>2</sub> gas separation using Fe(BTC)-based mixed matrix membranes: A view on the adsorptive and filler properties of metal-organic frameworks. Separation and Purification Technology, 2018, 202, 174-184.	7.9	39
22	Maize cob waste pre-treatments to enhance biogas production through co-anaerobic digestion with OFMSW. Waste Management, 2018, 72, 193-205.	7.4	24
23	Two-column relay simulated moving-bed process for gas-phase separations. Separation and Purification Technology, 2017, 182, 19-28.	7.9	9
24	Structural Transitions in the MIL-53(Al) Metal-Organic Framework upon Cryogenic Hydrogen Adsorption. Journal of Physical Chemistry C, 2017, 121, 24252-24263.	3.1	17
25	Dynamics of B-DNA in Electrically Charged Solid Nanopores. Journal of Physical Chemistry C, 2017, 121, 16568-16575.	3.1	2
26	Nonlinear Control for Infinite-dimensional Process Systems: Fault-tolerant distributed application for Heat Exchangers * *This work was partly supported by FCT (Portugal) under project UID/CEC/50021/2013.. IFAC-PapersOnLine, 2017, 50, 6723-6728.	0.9	0
27	Conformational Thermodynamics of DNA Strands in Hydrophilic Nanopores. Journal of Physical Chemistry C, 2016, 120, 20357-20367.	3.1	5
28	Conformational Thermodynamics of DNA Strands in Hydrophilic Nanopores. Journal of Physical Chemistry B, 2016, , .	2.6	0
29	Experimental and computational study of ethane and ethylene adsorption in the MIL-53(Al) metal organic framework. Microporous and Mesoporous Materials, 2016, 230, 154-165.	4.4	37
30	Effect of dead volumes on the performance of an industrial-scale simulated moving-bed Parex unit for p-xylene purification. AIChE Journal, 2016, 62, 241-255.	3.6	11
31	Rational development of two flowthrough purification strategies for adenovirus type 5 and retro virus-like particles. Journal of Chromatography A, 2015, 1426, 91-101.	3.7	19
32	Improving the downstream processing of vaccine and gene therapy vectors with continuous chromatography. Pharmaceutical Bioprocessing, 2015, 3, 489-505.	0.8	14
33	Development, Construction, and Operation of a Multisample Volumetric Apparatus for the Study of Gas Adsorption Equilibrium. Journal of Chemical Education, 2015, 92, 757-761.	2.3	13
34	Improved virus purification processes for vaccines and gene therapy. Biotechnology and Bioengineering, 2015, 112, 843-857.	3.3	105
35	Modeling and simulation of an industrial-scale parex process. AIChE Journal, 2015, 61, 1345-1363.	3.6	25
36	Robust design of adenovirus purification by two-column, simulated moving-bed, size-exclusion chromatography. Journal of Biotechnology, 2015, 213, 109-119.	3.8	35

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37	Nanoscopic Characterization of DNA within Hydrophobic Pores: Thermodynamics and Kinetics. Biochemical Engineering Journal, 2015, 104, 41-47.	3.6	9
38	Adsorption equilibrium of carbon dioxide and nitrogen on the MIL-53(Al) metal organic framework. Separation and Purification Technology, 2015, 141, 150-159.	7.9	52
39	Adsorption Equilibrium and Kinetics of the Parex' Feed and Desorbent Streams from Batch Experiments. Chemical Engineering and Technology, 2014, 37, 1541-1551.	1.5	14
40	Endohedral confinement of a DNA dodecamer onto pristine carbon nanotubes and the stability of the canonical B form. Journal of Chemical Physics, 2014, 140, 225103.	3.0	17
41	Free energy landscapes of the encapsulation mechanism of DNA nucleobases onto carbon nanotubes. RSC Advances, 2014, 4, 1310-1321.	3.6	15
42	A Tribute to a Global Scientist: Preface to the Professor Alvaro Egido Rodrigues Festschrift. Industrial & Engineering Chemistry Research, 2014, 53, 15301-15302.	3.7	0
43	Impact of grafting on the design of new membrane adsorbers for adenovirus purification. Journal of Biotechnology, 2014, 181, 1-11.	3.8	20
44	Adenovirus purification by two-column, size-exclusion, simulated countercurrent chromatography. Journal of Chromatography A, 2014, 1347, 111-121.	3.7	48
45	Evaluation of Novel Large Cut-Off Ultrafiltration Membranes for Adenovirus Serotype 5 (Ad5) Concentration. PLoS ONE, 2014, 9, e115802.	2.5	22
46	Mixing by chaotic advection in a magneto-hydrodynamic driven flow. Physics of Fluids, 2013, 25, .	4.0	5
47	Relay simulated moving bed chromatography: Concept and design criteria. Journal of Chromatography A, 2012, 1260, 132-142.	3.7	20
48	A study of mixing by chaotic advection in two three-dimensional open flows. Chemical Engineering Science, 2012, 81, 179-190.	3.8	10
49	Adsorbent Evaluation Based on Experimental Breakthrough Curves: Separation of Xylene from C <sub>8</sub> Isomers. Chemical Engineering and Technology, 2012, 35, 1777-1785.	1.5	23
50	On chaotic advection in a static mixer. Chemical Engineering Journal, 2012, 187, 289-298.	12.7	41
51	Fixed-bed adsorption of aromatic C8 isomers: Breakthrough experiments, modeling and simulation. Separation and Purification Technology, 2012, 90, 246-256.	7.9	23
52	Adsorption Equilibria of Light Organics on Single-Walled Carbon Nanotube Heterogeneous Bundles: Thermodynamical Aspects. Journal of Physical Chemistry C, 2011, 115, 2622-2629.	3.1	9
53	Experimental and Theoretical Studies of Supercritical Methane Adsorption in the MIL-53(Al) Metal Organic Framework. Journal of Physical Chemistry C, 2011, 115, 20628-20638.	3.1	33
54	The role of the intermolecular potential on the dynamics of ethylene confined in cylindrical nanopores. RSC Advances, 2011, 1, 270.	3.6	10

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55	Sorption characterization and actuation of a gas-gap heat switch. <i>Sensors and Actuators A: Physical</i> , 2011, 171, 324-331.	4.1	9
56	Rational design and optimization of downstream processes of virus particles for biopharmaceutical applications: Current advances. <i>Biotechnology Advances</i> , 2011, 29, 869-878.	11.7	59
57	Modelling and Simulation of a Complete Supercritical Fluid Extraction Plant with Countercurrent Fractionation Column. <i>Separation Science and Technology</i> , 2011, 46, 2088-2098.	2.5	6
58	Impact of ligand density on the optimization of ion-exchange membrane chromatography for viral vector purification. <i>Biotechnology and Bioengineering</i> , 2011, 108, 1347-1359.	3.3	32
59	Stokes flow heat transfer in an annular, rotating heat exchanger. <i>Applied Thermal Engineering</i> , 2011, 31, 1499-1507.	6.0	9
60	A Molecular Simulation Study of Propane and Propylene Adsorption onto Single-Walled Carbon Nanotube Bundles. <i>Journal of Nanoscience and Nanotechnology</i> , 2010, 10, 2537-2546.	0.9	7
61	Analysis of adsorption of a baculovirus bioreaction bulk on an ion-exchange surface by surface plasmon resonance. <i>Journal of Biotechnology</i> , 2010, 148, 171-181.	3.8	9
62	Modeling protein binding and elution over a chromatographic surface probed by surface plasmon resonance. <i>Journal of Chromatography A</i> , 2010, 1217, 2032-2041.	3.7	16
63	Computational-fluid-dynamics study of a Kenics static mixer as a heat exchanger for supercritical carbon dioxide. <i>Journal of Supercritical Fluids</i> , 2010, 55, 107-115.	3.2	58
64	Streamlined, two-column, simulated countercurrent chromatography for binary separation. <i>Journal of Chromatography A</i> , 2010, 1217, 3382-3391.	3.7	24
65	Chiral separation by two-column, semi-continuous, open-loop simulated moving-bed chromatography. <i>Journal of Chromatography A</i> , 2010, 1217, 5407-5419.	3.7	21
66	A new multicolumn, open-loop process for center-cut separation by solvent-gradient chromatography. <i>Journal of Chromatography A</i> , 2010, 1217, 8257-8269.	3.7	37
67	Adsorption of light alkanes and alkenes onto single-walled carbon nanotube bundles: Langmuirian analysis and molecular simulations. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2010, 357, 43-52.	4.7	29
68	Application of CFD in the study of supercritical fluid extraction with structured packing: Wet pressure drop calculations. <i>Journal of Supercritical Fluids</i> , 2009, 50, 61-68.	3.2	56
69	Determination of the surface area and porosity of carbon nanotube bundles from a Langmuirian analysis of sub- and supercritical adsorption data. <i>Carbon</i> , 2009, 47, 948-956.	10.3	42
70	Thermodynamics of adsorption of light alkanes and alkenes in single-walled carbon nanotube bundles. <i>Physical Review B</i> , 2009, 79, .	3.2	32
71	Anion-exchange membrane chromatography for purification of rotavirus-like particles. <i>Journal of Membrane Science</i> , 2008, 311, 270-283.	8.2	83
72	Adsorption of natural gas and biogas components on activated carbon. <i>Separation and Purification Technology</i> , 2008, 62, 281-296.	7.9	211

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73	On-line enantiomeric analysis using high-performance liquid chromatography in chiral separation by simulated moving bed. Journal of Chromatography A, 2008, 1189, 292-301.	3.7	15
74	Two-column simulated moving-bed process for binary separation. Journal of Chromatography A, 2008, 1180, 42-52.	3.7	17
75	Determination of competitive isotherms of enantiomers by a hybrid inverse method using overloaded band profiles and the periodic state of the simulated moving-bed process. Journal of Chromatography A, 2008, 1189, 302-313.	3.7	10
76	Static mixers as heat exchangers in supercritical fluid extraction processes. Journal of Supercritical Fluids, 2008, 43, 477-483.	3.2	17
77	Application of CFD in the study of supercritical fluid extraction with structured packing: Dry pressure drop calculations. Journal of Supercritical Fluids, 2008, 47, 17-24.	3.2	45
78	Adsorbed Natural Gas Technology. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 177-192.	0.2	5
79	Regioselective Competitive Adsorption of Water and Organic Vapor Mixtures on Pristine Single-Walled Carbon Nanotube Bundles. Langmuir, 2008, 24, 5746-5754.	3.5	28
80	Heat-Transfer Enhancement by Chaotic Advection in the Eccentric Helical Annular Flow. Journal of Heat Transfer, 2008, 130, .	2.1	3
81	Waste Conversion into Activated Carbon for Heavy Metal Removal from Waste Water. NATO Science for Peace and Security Series C: Environmental Security, 2008, , 133-146.	0.2	2
82	Single-Column Simulated Moving-Bed Process with Recycle Lag: Analysis and Applications. Adsorption Science and Technology, 2007, 25, 647-659.	3.2	14
83	Hybrid Membrane/PSA Processes for CO <sub>2</sub> /N <sub>2</sub> Separation. Adsorption Science and Technology, 2007, 25, 693-715.	3.2	5
84	Gas Separation by a Novel Hybrid Membrane/Pressure Swing Adsorption Process. Industrial & Engineering Chemistry Research, 2007, 46, 5723-5733.	3.7	37
85	Optimal Design and Experimental Assessment of Time-Variable Simulated Moving Bed for Gas Separation. Industrial & Engineering Chemistry Research, 2007, 46, 6978-6988.	3.7	14
86	Practical Modeling of Heterogeneous Bundles of Single-Walled Carbon Nanotubes for Adsorption Applications: Estimating the Fraction of Open-Ended Nanotubes in Samples. Journal of Physical Chemistry C, 2007, 111, 13747-13755.	3.1	30
87	Synchronous and asynchronous SMB processes for gas separation. AIChE Journal, 2007, 53, 1192-1203.	3.6	27
88	Optimal design of simulated moving-bed processes under flow rate uncertainty. AIChE Journal, 2007, 53, 2630-2642.	3.6	16
89	Optimization of heat-transfer rate into time-periodic two-dimensional Stokes flows. International Journal for Numerical Methods in Fluids, 2007, 53, 915-931.	1.6	12
90	Experimental assessment of simulated moving bed and varicol processes using a single-column setup. Journal of Chromatography A, 2007, 1142, 69-80.	3.7	38

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91	Optimal design and experimental validation of synchronous, asynchronous and flow-modulated, simulated moving-bed processes using a single-column setup. Journal of Chromatography A, 2007, 1162, 14-23.	3.7	19
92	Simplified gauge-cell method and its application to the study of capillary phase transition of propane in carbon nanotubes. Adsorption, 2007, 13, 21-32.	3.0	19
93	Non-isothermal dynamic model of a supercritical fluid extraction packed column. Journal of Supercritical Fluids, 2007, 41, 20-30.	3.2	14
94	Theoretical and Experimental Investigation of Morphology and Temperature Effects on Adsorption of Organic Vapors in Single-Walled Carbon Nanotubes. Journal of Physical Chemistry B, 2006, 110, 7640-7647.	2.6	93
95	MIXING ENHANCEMENT BY FREQUENCY-SELECTIVE CHAOTIC ADVECTION IN A 3-D TIME-PERIODIC STOKES FLOW. Chemical Engineering Communications, 2006, 193, 743-753.	2.6	5
96	Use of Single-Column Models for Efficient Computation of the Periodic State of a Simulated Moving-Bed Process. Industrial & Engineering Chemistry Research, 2006, 45, 5314-5325.	3.7	33
97	Adsorption site analysis of impurity embedded single-walled carbon nanotube bundles. Carbon, 2006, 44, 2376-2383.	10.3	85
98	Optimal design and operation of a certain class of asynchronous simulated moving bed processes. Journal of Chromatography A, 2006, 1132, 76-89.	3.7	29
99	Heat Transfer Enhancement in Annular Stokes Flows. Journal of Enhanced Heat Transfer, 2006, 13, 197-214.	1.1	2
100	Dynamic model of a supercritical carbon dioxide heat exchanger. Journal of Supercritical Fluids, 2005, 35, 167-173.	3.2	16
101	Simulating the Two Phase Flow on Column Trays. Chemical Engineering Research and Design, 2005, 83, 1410-1424.	5.6	11
102	Single-column simulated-moving-bed process with recycle lag. AIChE Journal, 2005, 51, 1641-1653.	3.6	52
103	Molecular Simulation of Gas Separation by Equilibrium-Based Adsorption Processes. Adsorption, 2005, 11, 319-324.	3.0	3
104	Automatic Filtering and Reodorization of Adsorbed Natural Gas Storage Systems. Adsorption, 2005, 11, 905-910.	3.0	7
105	Structural Characterization of Single-Walled Carbon Nanotube Bundles by Experiment and Molecular Simulation. Langmuir, 2005, 21, 896-904.	3.5	104
106	Dynamic model of a countercurrent packed column operating at high pressure conditions. Journal of Supercritical Fluids, 2004, 32, 183-192.	3.2	19
107	Dynamic modelling of an adsorption storage tank using a hybrid approach combining computational fluid dynamics and process simulation. Computers and Chemical Engineering, 2004, 28, 2421-2431.	3.8	26
108	Molecular Simulation of Adsorption Processes. 1. Isothermal Stirred-tank Adsorber. Molecular Simulation, 2004, 30, 387-396.	2.0	5



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109	Optimization of mixing protocol in a 3-d time-periodic stokes flow. Computer Aided Chemical Engineering, 2004, , 271-276.	0.5	0
110	Chaotic advection in a three-dimensional stokes flow. AIChE Journal, 2003, 49, 2749-2758.	3.6	15
111	Chaotic advection and heat transfer enhancement in Stokes flows. International Journal of Heat and Fluid Flow, 2003, 24, 310-321.	2.4	27
112	Enantioselective Hydrolysis of ameso-Diester Using Pig Liver Esterase in a Two-Phase Stirred Tank Reactor. Industrial & Engineering Chemistry Research, 2003, 42, 5516-5525.	3.7	9
113	Dynamic modelling of an adsorption storage tank using a hybrid approach combining computational fluid dynamics and process simulation. Computer Aided Chemical Engineering, 2003, 14, 797-802.	0.5	0
114	Towards the atomistic description of equilibrium-based separation processes. 1. Isothermal stirred-tank adsorber. Computer Aided Chemical Engineering, 2003, 14, 791-796.	0.5	0
115	On-line monitoring and control of a biological denitrification process for drinking-water treatment. Computer Aided Chemical Engineering, 2003, 14, 1079-1084.	0.5	0
116	On the optimization of mixing protocol in a certain class of three-dimensional Stokes flows. Physics of Fluids, 2003, 15, 1505.	4.0	20
117	Simulation of a new hybrid membrane/pressure swing adsorption process for gas separation. Desalination, 2002, 148, 275-280.	8.2	40
118	IMPROVING DISCHARGE PERFORMANCE OF ADSORBED NATURAL GAS VEHICULAR STORAGE SYSTEMS. , 2000, , .		0
119	Natural convection heat transfer in horizontal eccentric elliptic annuli containing saturated porous media. International Journal of Heat and Mass Transfer, 2000, 43, 4367-4379.	4.8	51
120	Calculations of Multicomponent Adsorption-Column Dynamics Combining the Potential and Ideal Adsorbed Solution Theories. Industrial & Engineering Chemistry Research, 2000, 39, 2459-2467.	3.7	10
121	Impact of gas composition on natural gas storage by adsorption. AIChE Journal, 1999, 45, 986-996.	3.6	50
122	Natural convection heat transfer in the annular region between porous confocal ellipses. International Journal for Numerical Methods in Fluids, 1999, 31, 513-522.	1.6	11
123	On the reduction of natural convection heat transfer in horizontal eccentric annuli containing saturated porous media. International Journal of Numerical Methods for Heat and Fluid Flow, 1997, 7, 401-416.	2.8	9
124	Charge dynamics of a methane adsorption storage system: Intraparticle diffusional effects. Adsorption, 1997, 3, 117-125.	3.0	40
125	On the numerical solution of partial differential equations with two spatial scales. Computers and Chemical Engineering, 1997, 21, 387-397.	3.8	10
126	Dynamics of natural gas adsorption storage systems employing activated carbon. Carbon, 1997, 35, 1259-1270.	10.3	105



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127	A simulation model of a high-capacity methane adsorptive storage system. Adsorption, 1995, 1, 17-27.	3.0	55