

Carlos A Grande

List of Publications by Citations

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121
papers

6,334
citations

45
h-index

76
g-index

128
ext. papers

7,134
ext. citations

4.9
avg, IF

6.09
L-index

#	Paper	IF	Citations
121	Adsorption Equilibrium of Methane, Carbon Dioxide, and Nitrogen on Zeolite 13X at High Pressures. <i>Journal of Chemical & Engineering Data</i> , 2004 , 49, 1095-1101	2.8	864
120	Separation of CH ₄ /CO ₂ /N ₂ mixtures by layered pressure swing adsorption for upgrade of natural gas. <i>Chemical Engineering Science</i> , 2006 , 61, 3893-3906	4.4	218
119	Vanillin production from lignin oxidation in a batch reactor. <i>Chemical Engineering Research and Design</i> , 2010 , 88, 1024-1032	5.5	209
118	Removal of Carbon Dioxide from Natural Gas by Vacuum Pressure Swing Adsorption. <i>Energy & Fuels</i> , 2006 , 20, 2648-2659	4.1	194
117	CO ₂ sorption on hydrotalcite and alkali-modified (K and Cs) hydrotalcites at high temperatures. <i>Separation and Purification Technology</i> , 2008 , 62, 137-147	8.3	189
116	Metal Organic Framework Adsorbent for Biogas Upgrading. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 6333-6335	3.9	157
115	A parametric study of layered bed PSA for hydrogen purification. <i>Chemical Engineering Science</i> , 2008 , 63, 5258-5273	4.4	154
114	Activated carbon for hydrogen purification by pressure swing adsorption: Multicomponent breakthrough curves and PSA performance. <i>Chemical Engineering Science</i> , 2011 , 66, 303-317	4.4	133
113	Adsorption of H ₂ , CO ₂ , CH ₄ , CO, N ₂ and H ₂ O in Activated Carbon and Zeolite for Hydrogen Production. <i>Separation Science and Technology</i> , 2009 , 44, 1045-1073	2.5	131
112	Upgrade of Methane from Landfill Gas by Pressure Swing Adsorption. <i>Energy & Fuels</i> , 2005 , 19, 2545-2555	4.2	129
111	Adsorption equilibria and kinetics of CO ₂ and N ₂ on activated carbon beads. <i>Chemical Engineering Journal</i> , 2010 , 160, 398-407	14.7	125
110	Multi-bed Vacuum Pressure Swing Adsorption for carbon dioxide capture from flue gas. <i>Separation and Purification Technology</i> , 2011 , 81, 307-317	8.3	122
109	Carbon dioxide/nitrogen separation through adsorption on activated carbon in a fixed bed. <i>Chemical Engineering Journal</i> , 2011 , 169, 11-19	14.7	122
108	Advances in Pressure Swing Adsorption for Gas Separation. <i>ISRN Chemical Engineering</i> , 2012 , 2012, 1-13		109
107	Adsorption of CO ₂ , CH ₄ , and N ₂ in Activated Carbon Honeycomb Monolith. <i>Journal of Chemical & Engineering Data</i> , 2008 , 53, 2311-2317	2.8	104
106	UiO-67-type Metal-Organic Frameworks with Enhanced Water Stability and Methane Adsorption Capacity. <i>Inorganic Chemistry</i> , 2016 , 55, 1986-91	5.1	94
105	Propane/Propylene Separation by Pressure Swing Adsorption Using Zeolite 4A. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 8815-8829	3.9	94

104	Adsorption of salicylic acid onto polymeric adsorbents and activated charcoal. <i>Reactive and Functional Polymers</i> , 2004 , 60, 203-213	4.6	87
103	Biogas to Fuel by Vacuum Pressure Swing Adsorption I. Behavior of Equilibrium and Kinetic-Based Adsorbents. <i>Industrial & Engineering Chemistry Research</i> , 2007 , 46, 4595-4605	3.9	80
102	Adsorption and Diffusion of H ₂ , CO, CH ₄ , and CO ₂ in BPL Activated Carbon and 13X Zeolite: Evaluation of Performance in Pressure Swing Adsorption Hydrogen Purification by Simulation. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 15414-15426	3.9	77
101	Propane/propylene separation with Li-exchanged zeolite 13X. <i>Chemical Engineering Journal</i> , 2010 , 160, 207-214	14.7	75
100	Steam methane reforming in a Ni/Al ₂ O ₃ catalyst: Kinetics and diffusional limitations in extrudates. <i>Canadian Journal of Chemical Engineering</i> , 2009 , 87, 945-956	2.3	71
99	Separation of Methane and Nitrogen by Adsorption on Carbon Molecular Sieve. <i>Separation Science and Technology</i> , 2005 , 40, 2721-2743	2.5	68
98	Adsorption of Propane and Propylene in Pellets and Crystals of 5A Zeolite. <i>Industrial & Engineering Chemistry Research</i> , 2002 , 41, 85-92	3.9	67
97	Adsorption of Off-Gases from Steam Methane Reforming (H ₂ , CO ₂ , CH ₄ , CO and N ₂) on Activated Carbon. <i>Separation Science and Technology</i> , 2008 , 43, 1338-1364	2.5	66
96	Methane steam reforming in large pore catalyst. <i>Chemical Engineering Science</i> , 2010 , 65, 1539-1550	4.4	62
95	Adsorption Equilibrium and Kinetics of Water Vapor on Different Adsorbents. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 7019-7026	3.9	62
94	Electric swing adsorption as emerging CO ₂ capture technique. <i>Energy Procedia</i> , 2009 , 1, 1219-1225	2.3	61
93	Adsorption and diffusion of H ₂ , N ₂ , CO, CH ₄ and CO ₂ in UTSA-16 metal-organic framework extrudates. <i>Chemical Engineering Science</i> , 2015 , 124, 159-169	4.4	58
92	Adsorption and Desorption of Carbon Dioxide and Nitrogen on Zeolite 5A. <i>Separation Science and Technology</i> , 2011 , 46, 434-451	2.5	58
91	Adsorption of propane and propylene onto carbon molecular sieve. <i>Carbon</i> , 2003 , 41, 2533-2545	10.4	57
90	Adsorption of propane and propylene in zeolite 4A honeycomb monolith. <i>Chemical Engineering Science</i> , 2006 , 61, 3053-3067	4.4	55
89	High-pressure separation of CH ₄ /CO ₂ using activated carbon. <i>Chemical Engineering Science</i> , 2013 , 89, 10-20	4.4	54
88	Capture of CO ₂ from flue gas by vacuum pressure swing adsorption using activated carbon beads. <i>Adsorption</i> , 2011 , 17, 179-188	2.6	54
87	Pressure Swing Adsorption for Biogas Upgrading. Effect of Recycling Streams in Pressure Swing Adsorption Design. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 974-985	3.9	54

86	New pi-complexation adsorbents for propane-propylene separation. <i>Langmuir</i> , 2004 , 20, 5291-7	4	54
85	Vacuum Pressure Swing Adsorption to Produce Polymer-Grade Propylene. <i>Separation Science and Technology</i> , 2010 , 45, 1252-1259	2.5	53
84	High Pressure Adsorption of CO ₂ and CH ₄ on Zr-MOFs. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 15500-15507	3.9	49
83	CO ₂ Capture from NGCC Power Stations using Electric Swing Adsorption (ESA). <i>Energy & Fuels</i> , 2009 , 23, 2797-2803	4.1	48
82	Adsorption Kinetics of Propane and Propylene in Zeolite 4A. <i>Chemical Engineering Research and Design</i> , 2004 , 82, 1604-1612	5.5	48
81	Simultaneous biogas purification and CO ₂ capture by vacuum swing adsorption using zeolite NaUSY. <i>Chemical Engineering Journal</i> , 2018 , 334, 2593-2602	14.7	48
80	CO Capture in Dry and Wet Conditions in UTSA-16 Metal-Organic Framework. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 455-463	9.5	46
79	Electric Swing Adsorption for Gas Separation and Purification: A Review. <i>Separation Science and Technology</i> , 2014 , 49, 1985-2002	2.5	46
78	Cryogenic Adsorption of Methane and Carbon Dioxide on Zeolites 4A and 13X. <i>Energy & Fuels</i> , 2014 , 28, 6688-6693	4.1	45
77	Activated carbon honeycomb monolith Zeolite 13X hybrid system to capture CO ₂ from flue gases employing Electric Swing Adsorption. <i>Chemical Engineering Science</i> , 2013 , 104, 304-318	4.4	45
76	Layered Vacuum Pressure-Swing Adsorption for Biogas Upgrading. <i>Industrial & Engineering Chemistry Research</i> , 2007 , 46, 7844-7848	3.9	44
75	Carbon Molecular Sieves for Hydrocarbon Separations by Adsorption. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 7218-7227	3.9	44
74	Propane/Propylene Separation by Simulated Moving Bed I. Adsorption of Propane, Propylene and Isobutane in Pellets of 13X Zeolite. <i>Separation Science and Technology</i> , 2007 , 42, 2539-2566	2.5	42
73	Four beds pressure swing adsorption for hydrogen purification: Case of humid feed and activated carbon beds. <i>AIChE Journal</i> , 2009 , 55, 2292-2302	3.6	41
72	An efficient recipe for formulation of metal-organic Frameworks. <i>Chemical Engineering Science</i> , 2015 , 124, 154-158	4.4	40
71	New insights into UTSA-16. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 220-7	3.6	40
70	Propane/Propylene Binary Adsorption on Zeolite 4A. <i>Adsorption</i> , 2003 , 9, 321-329	2.6	40
69	Separation of CO ₂ /CH ₄ using carbon molecular sieve (CMS) at low and high pressure. <i>Chemical Engineering Science</i> , 2017 , 164, 148-157	4.4	37

68	Dynamic Study of the Pressure Swing Adsorption Process for Biogas Upgrading and Its Responses to Feed Disturbances. <i>Industrial & Engineering Chemistry Research</i> , 2013 , 52, 5445-5454	3.9	37
67	Pressure Swing Adsorption for Biogas Upgrading with Carbon Molecular Sieve. <i>Industrial & Engineering Chemistry Research</i> , 2018 , 57, 8057-8067	3.9	37
66	Structured packed bubble column reactor for continuous production of vanillin from Kraft lignin oxidation. <i>Catalysis Today</i> , 2009 , 147, S330-S335	5.3	36
65	Layered Pressure Swing Adsorption for Methane Recovery from CH ₄ /CO ₂ /N ₂ Streams. <i>Adsorption</i> , 2005 , 11, 549-554	2.6	36
64	Adsorption Equilibria and Kinetics of Propane and Propylene in Silica Gel. <i>Industrial & Engineering Chemistry Research</i> , 2001 , 40, 1686-1693	3.9	36
63	Hydrotalcite Materials for Carbon Dioxide Adsorption at High Temperatures: Characterization and Diffusivity Measurements. <i>Separation Science and Technology</i> , 2005 , 39, 1989-2010	2.5	35
62	Fast-cycling VPSA for hydrogen purification. <i>Fuel</i> , 2012 , 93, 510-523	7.1	33
61	Expanded bed adsorption/desorption of proteins with Streamline Direct CST I adsorbent. <i>Biotechnology and Bioengineering</i> , 2006 , 94, 1155-63	4.9	32
60	New cycle configuration to enhance performance of kinetic PSA processes. <i>Chemical Engineering Science</i> , 2011 , 66, 1590-1599	4.4	31
59	Equilibrium and Fixed Bed Adsorption of 1-Butene, Propylene and Propane Over 13X Zeolite Pellets. <i>Separation Science and Technology</i> , 2008 , 43, 1124-1156	2.5	31
58	A comprehensive modeling of the hybrid temperature electric swing adsorption process for CO ₂ capture. <i>International Journal of Greenhouse Gas Control</i> , 2018 , 74, 155-173	4.2	30
57	Multiscale investigation of adsorption properties of novel 3D printed UTSA-16 structures. <i>Chemical Engineering Journal</i> , 2020 , 402, 126166	14.7	29
56	Effect of catalyst activity in SMR-SERP for hydrogen production: Commercial vs. large-pore catalyst. <i>Chemical Engineering Science</i> , 2011 , 66, 342-354	4.4	29
55	CO ₂ Capture in Natural Gas Production by Adsorption Processes. <i>Energy Procedia</i> , 2017 , 114, 2259-2264	2.3	28
54	Electric Swing Adsorption for CO ₂ removal from flue gases. <i>International Journal of Greenhouse Gas Control</i> , 2007 , 2, 194-194	4.2	28
53	CO ₂ capture using a novel hybrid monolith (H-ZSM5/activated carbon) as adsorbent by combined vacuum and electric swing adsorption (VESA). <i>Chemical Engineering Journal</i> , 2019 , 358, 707-717	14.7	28
52	Conductive ZSM-5-Based Adsorbent for CO ₂ Capture: Active Phase vs Monolith. <i>Industrial & Engineering Chemistry Research</i> , 2017 , 56, 8485-8498	3.9	27
51	Impact of operating parameters on CO ₂ capture using carbon monolith by Electrical Swing Adsorption technology (ESA). <i>Chemical Engineering Journal</i> , 2017 , 327, 441-453	14.7	27

50	Fixed-Bed Adsorption of Salicylic Acid onto Polymeric Adsorbents and Activated Charcoal. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 927-936	3.9	27
49	Moving bed temperature swing adsorption for CO ₂ capture from a natural gas combined cycle power plant. <i>International Journal of Greenhouse Gas Control</i> , 2019 , 85, 58-70	4.2	26
48	Challenges of electric swing adsorption for CO(2) capture. <i>ChemSusChem</i> , 2010 , 3, 892-8	8.3	26
47	Adsorption of Binary Mixtures of Propane/Propylene in Carbon Molecular Sieve 4A. <i>Industrial & Engineering Chemistry Research</i> , 2004 , 43, 8057-8065	3.9	26
46	Comparison and evaluation of agglomerated MOFs in biohydrogen purification by means of pressure swing adsorption (PSA). <i>Chemical Engineering Journal</i> , 2017 , 326, 117-129	14.7	25
45	Propane/Propylene Separation by Simulated Moving Bed II. Measurement and Prediction of Binary Adsorption Equilibria of Propane, Propylene, Isobutane, and 1-Butene on 13X Zeolite. <i>Separation Science and Technology</i> , 2009 , 44, 1485-1509	2.5	25
44	Adsorption of small molecules on alkali-earth modified titanosilicates. <i>Microporous and Mesoporous Materials</i> , 2009 , 121, 114-120	5.3	25
43	Enhancing Capacity of Activated Carbons for Hydrogen Purification. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 3978-3990	3.9	25
42	Promoting CO ₂ hydrogenation to methanol by incorporating adsorbents into catalysts: Effects of hydrotalcite. <i>Chemical Engineering Journal</i> , 2019 , 378, 122052	14.7	23
41	Synthesis of a novel hybrid adsorbent which combines activated carbon and zeolite NaUSY for CO ₂ capture by electric swing adsorption (ESA). <i>Chemical Engineering Journal</i> , 2018 , 336, 659-668	14.7	22
40	Li+/ZSM-25 Zeolite as a CO ₂ Capture Adsorbent with High Selectivity and Improved Adsorption Kinetics, Showing CO ₂ -Induced Framework Expansion. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 18933-18941	3.8	21
39	Life-cycle assessment as a tool for eco-design of metal-organic frameworks (MOFs). <i>Sustainable Materials and Technologies</i> , 2017 , 14, 11-18	5.3	21
38	Dual Pressure Swing Adsorption Units for Gas Separation and Purification. <i>Industrial & Engineering Chemistry Research</i> , 2012 , 51, 8695-8699	3.9	21
37	Electrothermal performance of an activated carbon honeycomb monolith. <i>Chemical Engineering Research and Design</i> , 2012 , 90, 2013-2022	5.5	20
36	Shaping of metal-organic framework UiO-66 using alginates: Effect of operation variables. <i>Separation and Purification Technology</i> , 2020 , 235, 116182	8.3	20
35	Development of Moving Bed Temperature Swing Adsorption (MBTSA) Process for Post-combustion CO ₂ Capture: Initial Benchmarking in a NGCC Context. <i>Energy Procedia</i> , 2017 , 114, 2203-2210	2.3	19
34	Utilization of Dual-PSA Technology for Natural Gas Upgrading and Integrated CO ₂ Capture. <i>Energy Procedia</i> , 2012 , 26, 2-14	2.3	19
33	Propane/Propene Separation by SBA-15 and EComplexated Ag-SBA-15. <i>Adsorption</i> , 2005 , 11, 775-780	2.6	19

32	Pressure drop and heat transfer properties of cubic iso-reticular foams. <i>Chemical Engineering and Processing: Process Intensification</i> , 2018 , 127, 36-42	3.7	16
31	Effect of Ion Exchange on the Adsorption of Steam Methane Reforming Off-Gases on Zeolite 13X. <i>Journal of Chemical & Engineering Data</i> , 2010 , 55, 184-195	2.8	15
30	Multi-purpose structured catalysts designed and manufactured by 3D printing. <i>Materials and Design</i> , 2020 , 187, 108377	8.1	15
29	Adsorption of Water Vapor on Carbon Molecular Sieve: Thermal and Electrothermal Regeneration Study. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 2144-2156	3.9	13
28	Enrichment of low grade CH ₄ from N ₂ /CH ₄ mixtures using vacuum swing adsorption with activated carbon. <i>Chemical Engineering Science</i> , 2021 , 229, 116152	4.4	13
27	Evaluation of simplified pressure swing adsorption cycles for bio-methane production. <i>Adsorption</i> , 2019 , 25, 783-793	2.6	12
26	Experimental Results of Pressure Swing Adsorption (PSA) for Pre-combustion CO ₂ Capture with Metal Organic Frameworks. <i>Energy Procedia</i> , 2017 , 114, 2265-2270	2.3	12
25	Rotating bed reactor for CLC: Bed characteristics dependencies on internal gas mixing. <i>Applied Energy</i> , 2014 , 113, 1952-1957	10.7	12
24	Crystal Size Effect in Vacuum Pressure-Swing Adsorption for Propane/Propylene Separation. <i>Industrial & Engineering Chemistry Research</i> , 2004 , 43, 7557-7565	3.9	12
23	Olefin/Paraffin Separation Using Calcium-ETS-4. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 15522-15530	3.9	11
22	Silica Gel as a Selective Adsorbent for Biogas Drying and Upgrading. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 10142-10149	3.9	10
21	Effect of Gas Recycling on the Performance of a Moving Bed Temperature-Swing (MBTSA) Process for CO ₂ Capture in a Coal Fired Power Plant Context. <i>Energies</i> , 2017 , 10, 745	3.1	10
20	Production of MOF Adsorbent Spheres and Comparison of Their Performance with Zeolite 13X in a Moving-Bed TSA Process for Postcombustion CO ₂ Capture. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 7198-7211	3.9	9
19	Process Intensification in Nitric Acid Plants by Catalytic Oxidation of Nitric Oxide. <i>Industrial & Engineering Chemistry Research</i> , 2018 , 57, 10180-10186	3.9	8
18	Towards a design of a pressure swing adsorption unit for small scale biogas upgrading at. <i>Energy Procedia</i> , 2019 , 158, 848-853	2.3	6
17	A procedure to find thermodynamic equilibrium constants for CO ₂ and CH ₄ adsorption on activated carbon. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 8223-30	3.6	6
16	PSA Technology for H ₂ Separation 2016 , 489-508		6
15	Innovative Process Cycle with Zeolite (MS13X) for Post Combustion Adsorption. <i>Energy Procedia</i> , 2017 , 114, 2211-2218	2.3	5

14	Biogas Upgrading by Pressure Swing Adsorption 2011 ,		5
13	Highly structured metal-organic framework nanofibers for methane storage. <i>Science China Materials</i> , 2021 , 64, 1742-1750	7.1	5
12	Industrial production of activated carbon using circular bioeconomy principles: Case study from a Romanian company. <i>Cleaner Engineering and Technology</i> , 2022 , 7, 100443	2.7	4
11	Screening Supported Amine Sorbents in the Context of Post-combustion Carbon Capture by Vacuum Swing Adsorption . <i>Chemie-Ingenieur-Technik</i> , 2021 , 93, 929-940	0.8	4
10	Adequacy versus complexity of mathematical models for engineering an adsorbed natural gas device. <i>Journal of Energy Storage</i> , 2020 , 28, 101200	7.8	3
9	Zeolite Apgiia for Adsorption Based Carbon Dioxide Capture. <i>Separation Science and Technology</i> , 2013 , 48, 388-402	2.5	3
8	Extrusion and Characterization of High Si/Al Ratio ZSM-5 Using Silica Binder. <i>Energies</i> , 2020 , 13, 1201	3.1	3
7	Effect of Manufacturing Techniques in Pressure Drop on Triple Periodical Minimal Surface Packings . <i>Chemie-Ingenieur-Technik</i> , 2021 , 93, 967-973	0.8	3
6	Pilot scale assessment of methane capture from low concentration sources to town gas specification by pressure vacuum swing adsorption (PVSA). <i>Chemical Engineering Journal</i> , 2022 , 427, 130810	14.7	3
5	A phase conversion method to anchor ZIF-8 onto a PAN nanofiber surface for CO capture.. <i>RSC Advances</i> , 2021 , 12, 664-670	3.7	2
4	Modelling of adsorption technologies for controlling indoor air quality. <i>Adsorption</i> , 2022 , 28, 1	2.6	1
3	Compact reactor architectures designed with fractals. <i>Reaction Chemistry and Engineering</i> , 2021 , 6, 1448-1453	1.53	1
2	Evaluation of MBTSA technology for CO2 capture from waste-to-energy plants. <i>International Journal of Greenhouse Gas Control</i> , 2022 , 118, 103685	4.2	1
1	Screening Supported Amine Sorbents in the Context of Post-combustion Carbon Capture by Vacuum Swing Adsorption. <i>Chemie-Ingenieur-Technik</i> , 2021 , 93, 1336-1336	0.8	