

Jacek Jagiello

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108
papers

6,397
citations

42
h-index

78
g-index

110
ext. papers

6,946
ext. citations

7.3
avg, IF

5.99
L-index

#	Paper	IF	Citations
108	Comparison of DFT characterization methods based on N ₂ , Ar, CO ₂ , and H ₂ adsorption applied to carbons with various pore size distributions. <i>Carbon</i> , 2004 , 42, 1227-1232	10.4	364
107	2D-NLDFT adsorption models for carbon slit-shaped pores with surface energetical heterogeneity and geometrical corrugation. <i>Carbon</i> , 2013 , 55, 70-80	10.4	346
106	Stable Numerical Solution of the Adsorption Integral Equation Using Splines. <i>Langmuir</i> , 1994 , 10, 2778-2785		343
105	Carbide-Derived Carbons: Effect of Pore Size on Hydrogen Uptake and Heat of Adsorption. <i>Advanced Functional Materials</i> , 2006 , 16, 2288-2293	15.6	335
104	Virial-type thermal equation of gas/solid adsorption. <i>Chemical Engineering Science</i> , 1989 , 44, 797-801	4.4	285
103	Carbon slit pore model incorporating surface energetical heterogeneity and geometrical corrugation. <i>Adsorption</i> , 2013 , 19, 777-783	2.6	223
102	Hierarchically Engineered Mesoporous Metal-Organic Frameworks toward Cell-free Immobilized Enzyme Systems. <i>Chem</i> , 2018 , 4, 1022-1034	16.2	187
101	The first example of commensurate adsorption of atomic gas in a MOF and effective separation of xenon from other noble gases. <i>Chemical Science</i> , 2014 , 5, 620-624	9.4	175
100	Surface functionality and porosity of activated carbons obtained from chemical activation of wood. <i>Carbon</i> , 2000 , 38, 669-674	10.4	170
99	Characterization of the surfaces of activated carbons in terms of their acidity constant distributions. <i>Carbon</i> , 1993 , 31, 1193-1202	10.4	169
98	Tailoring the pore alignment for rapid ion transport in microporous carbons. <i>Journal of the American Chemical Society</i> , 2010 , 132, 3252-3	16.4	164
97	Gas sorption properties of microporous metal organic frameworks. <i>Journal of Solid State Chemistry</i> , 2005 , 178, 2527-2532	3.3	160
96	Heterogeneity of proton binding sites at the oxide/solution interface. <i>Langmuir</i> , 1993 , 9, 1754-1765	4	148
95	A Simple Two-Dimensional NLDFT Model of Gas Adsorption in Finite Carbon Pores. Application to Pore Structure Analysis. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 19382-19385	3.8	140
94	Hydrogen adsorption studies on single wall carbon nanotubes. <i>Carbon</i> , 2004 , 42, 1243-1248	10.4	140
93	Achieving High Density of Adsorbed Hydrogen in Microporous Metal Organic Frameworks. <i>Advanced Materials</i> , 2005 , 17, 2703-2706	24	119
92	Toward understanding reactive adsorption of ammonia on Cu-MOF/graphite oxide nanocomposites. <i>Langmuir</i> , 2011 , 27, 13043-51	4	117

91	Carbons with narrow pore size distribution prepared by simultaneous carbonization and self-activation of tobacco stems and their application to supercapacitors. <i>Carbon</i> , 2015 , 81, 148-157	10.4	112
90	Porosity, Surface Area, Surface Energy, and Hydrogen Adsorption in Nanostructured Carbons. <i>Journal of Physical Chemistry B</i> , 2004 , 108, 15820-15826	3.4	107
89	Physical adsorption of gases on heterogeneous solid surfaces: Evaluation of the adsorption energy distribution from adsorption isotherms and heats of adsorption. <i>Journal of Colloid and Interface Science</i> , 1982 , 87, 478-491	9.3	97
88	Dual gas analysis of microporous carbons using 2D-NLDFT heterogeneous surface model and combined adsorption data of N ₂ and CO ₂ . <i>Carbon</i> , 2015 , 91, 330-337	10.4	95
87	Comparison of methods to assess surface acidic groups on activated carbons. <i>Analytical Chemistry</i> , 1992 , 64, 891-895	7.8	94
86	Determination of Proton Affinity Distributions for Chemical Systems in Aqueous Environments Using a Stable Numerical Solution of the Adsorption Integral Equation. <i>Journal of Colloid and Interface Science</i> , 1995 , 172, 341-346	9.3	85
85	Complexity of CO ₂ adsorption on nanoporous sulfur-doped carbons ¶s surface chemistry an important factor?. <i>Carbon</i> , 2014 , 74, 207-217	10.4	82
84	In Situ Studies of Ion Transport in Microporous Supercapacitor Electrodes at Ultralow Temperatures. <i>Advanced Functional Materials</i> , 2012 , 22, 1655-1662	15.6	81
83	Pore Structure of Carbon¶Mineral Nanocomposites and Derived Carbons Obtained by Template Carbonization. <i>Chemistry of Materials</i> , 1996 , 8, 2023-2029	9.6	71
82	Characterization of silicas by inverse gas chromatography at finite concentration: Determination of the adsorption energy distribution function. <i>Journal of Colloid and Interface Science</i> , 1990 , 137, 128-136	9.3	66
81	Relationship between energetic and structural heterogeneity of microporous carbons determined on the basis of adsorption potentials in model micropores. <i>Langmuir</i> , 1993 , 9, 2513-2517	4	59
80	Tetracycline removal with activated carbons produced by hydrothermal carbonisation of Agave americana fibres and mimosa tannin. <i>Industrial Crops and Products</i> , 2018 , 115, 146-157	5.9	58
79	Effect of surface chemical groups on energetic heterogeneity of activated carbons. <i>Langmuir</i> , 1993 , 9, 2518-2522	4	55
78	Adsorption near Ambient Temperatures of Methane, Carbon Tetrafluoride, and Sulfur Hexafluoride on Commercial Activated Carbons. <i>Journal of Chemical & Engineering Data</i> , 1995 , 40, 1288-1292	2.8	54
77	Adsorption Properties of Activated Carbons Prepared from Waste CDs and DVDs. <i>ACS Sustainable Chemistry and Engineering</i> , 2015 , 3, 733-742	8.3	52
76	Insight into the mechanism of CO ₂ adsorption on CuBTC and its composites with graphite oxide or aminated graphite oxide. <i>Chemical Engineering Journal</i> , 2014 , 239, 399-407	14.7	52
75	Study of carbon-smectite composites and carbons obtained by in situ carbonization of polyfurfuryl alcohol. <i>Carbon</i> , 1994 , 32, 659-664	10.4	51
74	DFT-based prediction of high-pressure H ₂ adsorption on porous carbons at ambient temperatures from low-pressure adsorption data measured at 77 K. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 4531-4	3.4	50

73	Inverse Gas Chromatography Study of Modified Smectite Surfaces. <i>Clays and Clay Minerals</i> , 1992 , 40, 306-310	2.1	50
72	Enhanced resolution of ultra micropore size determination of biochars and activated carbons by dual gas analysis using N ₂ and CO ₂ with 2D-NLDFT adsorption models. <i>Carbon</i> , 2019 , 144, 206-215	10.4	50
71	Enhanced reactive adsorption of H ₂ S on CuBTC/ S- and N-doped GO composites. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 8194-8204	13	48
70	Application of inverse gas chromatography at infinite dilution to study the effects of oxidation of activated carbons. <i>Carbon</i> , 1992 , 30, 63-69	10.4	47
69	Hydrogen adsorption on a single-walled carbon nanotube material: a comparative study of three different adsorption techniques. <i>Nanotechnology</i> , 2004 , 15, 1503-1508	3.4	45
68	Quantifying the Complex Pore Architecture of Hierarchical Faujasite Zeolites and the Impact on Diffusion. <i>Advanced Functional Materials</i> , 2016 , 26, 5621-5630	15.6	44
67	Using DFT analysis of adsorption data of multiple gases including H ₂ for the comprehensive characterization of microporous carbons. <i>Carbon</i> , 2007 , 45, 1066-1071	10.4	42
66	Characterization of pore structure of carbon molecular sieves using DFT analysis of Ar and H ₂ adsorption data. <i>Microporous and Mesoporous Materials</i> , 2008 , 108, 117-122	5.3	41
65	Sieving Properties of Carbons Obtained by Template Carbonization of Polyfurfuryl Alcohol within Mineral Matrixes. <i>Langmuir</i> , 1995 , 11, 3964-3969	4	40
64	Application of inverse gas chromatography to the study of the surface properties of modified layered minerals. <i>Microporous Materials</i> , 1993 , 1, 73-79		40
63	Surface energy and adsorption energy distribution measurements on some carbon blacks. <i>Carbon</i> , 1991 , 29, 1135-1143	10.4	39
62	Unified method for the total pore volume and pore size distribution of hierarchical zeolites from argon adsorption and mercury intrusion. <i>Langmuir</i> , 2015 , 31, 1242-7	4	35
61	Low-temperature adsorption of gases on heterogeneous solid surfaces: Surfaces with random topography. <i>Journal of Low Temperature Physics</i> , 1981 , 45, 1-19	1.3	33
60	High-resolution adsorption of nitrogen on mesoporous alumina. <i>Langmuir</i> , 2004 , 20, 7532-9	4	32
59	Surface acidity of pillared taeniolites in terms of their proton affinity distributions. <i>The Journal of Physical Chemistry</i> , 1995 , 99, 13522-13527		32
58	Micropore structure of template-derived carbons studied using adsorption of gases with different molecular diameters. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995 , 91, 2929-2933		32
57	Thermodynamics of CO ₂ adsorption on functionalized SBA-15 silica. NLDFT analysis of surface energetic heterogeneity. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 15468-75	3.6	31
56	Local exact and approximate solutions of the adsorption integral equation with a kernel of a Langmuir-like isotherm: Determination of adsorption energy distribution. <i>Journal of Colloid and Interface Science</i> , 1991 , 146, 415-424	9.3	31

55	Effect of WO ₃ loading on the surface acidity of WO ₃ /Al ₂ O ₃ composite oxides. <i>Applied Catalysis A: General</i> , 1992 , 84, 123-139	5.1	31
54	Characterization of specific interaction capacity of solid surfaces by adsorption of alkanes and alkenes. Part I: Adsorption on open surfaces. <i>Chromatographia</i> , 1989 , 28, 588-592	2.1	31
53	Effects of CO ₂ activation of carbon aerogels leading to ultrahigh micro-meso porosity. <i>Microporous and Mesoporous Materials</i> , 2015 , 209, 18-22	5.3	30
52	Sorption and desorption of lithium ions from activated carbons. <i>Carbon</i> , 1996 , 34, 481-487	10.4	29
51	Thermodynamic description of the process of gas liberation from a coal bed. <i>Fuel</i> , 1992 , 71, 431-435	7.1	29
50	Adsorption of Sulfur Hexafluoride and Propane at Temperatures near Ambient on Pillared Clays. <i>Journal of Chemical & Engineering Data</i> , 1996 , 41, 880-884	2.8	28
49	Inverse gas chromatographic studies on silica: infinite dilution and finite concentration measurements. <i>Langmuir</i> , 1991 , 7, 2243-2247	4	27
48	Physical meaning of the parameters used in fractal kinetic and generalised adsorption models of Brouers-Botolongo. <i>Adsorption</i> , 2018 , 24, 11-27	2.6	26
47	Adsorption of pentane isomers on metal-organic frameworks Cu-BTC and Fe-BTC. <i>Catalysis Today</i> , 2015 , 243, 69-75	5.3	25
46	Study of carbon microstructure by using inverse gas chromatography. <i>Carbon</i> , 1994 , 32, 687-691	10.4	25
45	Direct structural evidence of commensurate-to-incommensurate transition of hydrocarbon adsorption in a microporous metal organic framework. <i>Chemical Science</i> , 2016 , 7, 759-765	9.4	24
44	Exploring the effect of ultramicropore distribution on gravimetric capacitance of nanoporous carbons. <i>Electrochimica Acta</i> , 2018 , 275, 236-247	6.7	23
43	Characterization of acidity of pillared clays by proton affinity distribution and DRIFT spectroscopy. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1994 , 90, 3573-3578		23
42	Exploiting the adsorption of simple gases O ₂ and H ₂ with minimal quadrupole moments for the dual gas characterization of nanoporous carbons using 2D-NLDFT models. <i>Carbon</i> , 2020 , 160, 164-175	10.4	23
41	Consistency of carbon nanopore characteristics derived from adsorption of simple gases and 2D-NLDFT models. Advantages of using adsorption isotherms of oxygen (O) at 77 K. <i>Journal of Colloid and Interface Science</i> , 2019 , 542, 151-158	9.3	22
40	Effects of Temperature on Adsorption of Methanol on Graphitized Thermal Carbon Black: A Computer Simulation and Experimental Study. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 16142-16149	3.8	22
39	Using a New Finite Slit Pore Model for NLDFT Analysis of Carbon Pore Structure. <i>Adsorption Science and Technology</i> , 2011 , 29, 769-780	3.6	22
38	Tests of Pore-Size Distributions Deduced from Inversion of Simulated and Real Adsorption Data. <i>Journal of Low Temperature Physics</i> , 2009 , 157, 410-428	1.3	22

37	Sorption Properties of Carbon Composite Materials Formed from Layered Clay Minerals. <i>Clays and Clay Minerals</i> , 1994 , 42, 1-6	2.1	22
36	Chemical and structural properties of clay minerals modified by inorganic and organic material. <i>Clay Minerals</i> , 1992 , 27, 435-444	1.3	22
35	Low-temperature adsorption of gases on heterogeneous solid surfaces: Effects of surface topography. <i>Journal of Low Temperature Physics</i> , 1982 , 48, 307-320	1.3	22
34	Hydrotalcite-like structures as molecular containers for preparation of microporous carbons. <i>Applied Clay Science</i> , 1995 , 10, 177-186	5.2	19
33	Monte Carlo simulation and experimental studies on the low temperature characterization of nitrogen adsorption on graphite. <i>Carbon</i> , 2013 , 52, 158-170	10.4	18
32	Crystallizing Atomic Xenon in a Flexible MOF to Probe and Understand Its Temperature-Dependent Breathing Behavior and Unusual Gas Adsorption Phenomenon. <i>Journal of the American Chemical Society</i> , 2020 , 142, 20088-20097	16.4	18
31	Structural analysis of IPC zeolites and related materials using positron annihilation spectroscopy and high-resolution argon adsorption. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 15269-77	3.6	17
30	2D-NLDFT adsorption models for porous oxides with corrugated cylindrical pores. <i>Journal of Colloid and Interface Science</i> , 2018 , 532, 588-597	9.3	16
29	Complementary study of microporous adsorbents with DFT and LBET. <i>Applied Surface Science</i> , 2007 , 253, 5616-5621	6.7	14
28	Thermodynamic study of high-pressure adsorption of methane on activated carbons: The effect of oxidation on pore structure and adsorption energy heterogeneity. <i>Carbon</i> , 1992 , 30, 507-512	10.4	13
27	Surface chemical heterogeneity of pillared hydrotalcites. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1996 , 92, 1243		10
26	A study of the acidic properties of pure and composite oxides by inverse gas chromatography at infinite dilution. <i>Journal of Catalysis</i> , 1991 , 131, 433-444	7.3	10
25	Study of Nanocomposites Obtained by Carbonization of Different Organic Precursors within Taeniolite Matrices. <i>Clays and Clay Minerals</i> , 1996 , 44, 237-243	2.1	9
24	Poropore structure development in poly(sodium-4-styrenesulfonate) derived carbons. <i>Carbon</i> , 1995 , 33, 1047-1052	10.4	9
23	Characterization of specific interactions capacity of solid surfaces by adsorption of alkanes and alkenes. Part II: Adsorption on crystalline silica layer surfaces. <i>Chromatographia</i> , 1990 , 29, 35-38	2.1	9
22	A study of the activity of chemical groups on carbonaceous and model surfaces by infinite dilution chromatography. <i>Chromatographia</i> , 1992 , 33, 441-444	2.1	8
21	Low-pressure adsorption of gases on heterogeneous solid surfaces and the virial description formalism. <i>Journal of Colloid and Interface Science</i> , 1985 , 104, 297-310	9.3	7
20	Evaluation of the textural properties of ultramicroporous carbons using experimental and theoretical methods. <i>Carbon</i> , 2020 , 157, 495-505	10.4	7

19	Assessing the contribution of micropores and mesopores from nitrogen adsorption on nanoporous carbons: Application to pore size analysis. <i>Carbon</i> , 2021 , 183, 150-157	10.4	7
18	Effect of the Incorporation of Functionalized Cellulose Nanocrystals into UiO-66 on Composite Porosity and Surface Heterogeneity Alterations. <i>Advanced Materials Interfaces</i> , 2020 , 7, 1902098	4.6	6
17	Proton affinity distributions: A scientific basis for the design and construction of supported metal catalysts. <i>Studies in Surface Science and Catalysis</i> , 1995 , 91, 237-252	1.8	6
16	Adsorption of ammonia in zeolites and SiO ₂ -molecular sieves. The distribution of adsorption energy in Na-X and NaH-Y zeolites. <i>Zeolites</i> , 1983 , 3, 199-204		6
15	Alternative view of oxygen reduction on porous carbon electrocatalysts: the substance of complex oxygen-surface interactions. <i>IScience</i> , 2021 , 24, 102216	6.1	6
14	Adsorption energy and structural heterogeneity of activated carbons. <i>Studies in Surface Science and Catalysis</i> , 1994 , 87, 679-688	1.8	5
13	A new method of evaluation of specific surface area of solids using inverse gas chromatography at infinite dilution. <i>Journal of Colloid and Interface Science</i> , 1991 , 142, 232-235	9.3	5
12	A Simple Approach to the 2D Mobile Adsorption of Gases on Heterogeneous Solid Surfaces Exhibiting Random Surface Topography. <i>Adsorption Science and Technology</i> , 1989 , 6, 35-51	3.6	5
11	Adsorption of organics on thermally treated solids obtained from colloidal silica. <i>Collection of Czechoslovak Chemical Communications</i> , 1987 , 52, 572-581		4
10	Development of a simple NLDFT model for the analysis of adsorption isotherms on zeolite templated carbon (ZTC). <i>Carbon</i> , 2020 , 169, 205-213	10.4	4
9	Enhancing the gas adsorption capacities of UiO-66 by nanographite addition. <i>Microporous and Mesoporous Materials</i> , 2020 , 309, 110571	5.3	4
8	Effect of Mineral Host on Surface Acidity of Hydroxy-Cr Intercalated Clays. <i>Clays and Clay Minerals</i> , 1997 , 45, 110-113	2.1	3
7	Changes in the acidic properties of pillared taeniolites on heat treatment or alkene decomposition. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1996 , 92, 4631-4635		2
6	Thermodynamically Consistent Analysis of Silica Surface Heterogeneity Using Alkane and Alkene Adsorption Isotherms. <i>Kluwer International Series in Engineering and Computer Science</i> , 1996 , 417-424		2
5	Confirmation of pore formation mechanisms in biochars and activated carbons by dual isotherm analysis. <i>Materials Advances</i> ,	3.3	1
4	Carbon materials porosity analysis using DFT models for potential application in the recovery of methane from its low-concentration mixtures. <i>Chemical Engineering Journal</i> , 2022 , 436, 135259	14.7	1
3	Comprehensive Analysis of Hierarchical Porous Carbons Using a Dual-Shape 2D-NLDFT Model with an Adjustable Slit-Cylinder Pore Shape Boundary. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 49472-49489	9.5	0
2	Pore development during CO ₂ and H ₂ O activation associated with the catalytic role of inherent inorganics in sewage sludge char and its performance during the reforming of volatiles. <i>Chemical Engineering Journal</i> , 2022 , 446, 137298	14.7	0

- 1 Hierarchical Structures: Quantifying the Complex Pore Architecture of Hierarchical Faujasite Zeolites and the Impact on Diffusion (Adv. Funct. Mater. 31/2016). *Advanced Functional Materials*, **2016**, 26, 5768-5768 15.6