Shaheen A Al-Muhtaseb

List of Publications by Year
in descending order

89 papers	4,827 citations	185998 28 h-index	95083 68 g-index
91 all docs	91 docs citations	91 times ranked	6447 citing authors

#	Article	IF	Citations
1	Preparation and Properties of Resorcinol-Formaldehyde Organic and Carbon Gels. Advanced Materials, 2003, 15, 101-114.	11.1	935
2	Zeolitic imidazolate framework (ZIF-8) based polymer nanocomposite membranes for gas separation. Energy and Environmental Science, 2012, 5, 8359.	15.6	627
3	Advances in Tailoring Resorcinolâ€Formaldehyde Organic and Carbon Gels. Advanced Materials, 2011, 23, 2887-2903.	11.1	392
4	Biodegradation of phenol by Pseudomonas putida immobilized in polyvinyl alcohol (PVA) gel. Journal of Hazardous Materials, 2009, 164, 720-725.	6.5	292
5	Controlled thermal oxidative crosslinking of polymers of intrinsic microporosity towards tunable molecular sieve membranes. Nature Communications, 2014, 5, 4813.	5.8	252
6	Dopantâ€Free Holeâ€Transporting Materials for Stable and Efficient Perovskite Solar Cells. Advanced Materials, 2017, 29, 1606555.	11.1	171
7	Emulsion stability and cross-linking of PMMA microcapsules containing phase change materials. Solar Energy Materials and Solar Cells, 2015, 132, 311-318.	3.0	139
8	Supercooling elimination of phase change materials (PCMs) microcapsules. Energy, 2015, 87, 654-662.	4.5	129
9	Photo-oxidative enhancement of polymeric molecular sieve membranes. Nature Communications, 2013, 4, 1918.	5.8	117
10	Instability in CH3NH3PbI3 perovskite solar cells due to elemental migration and chemical composition changes. Scientific Reports, 2017, 7, 15406.	1.6	95
11	Innovative method of metal coating of microcapsules containing phase change materials. Solar Energy, 2016, 129, 54-64.	2.9	88
12	Removal of aluminum from aqueous solutions by adsorption on date-pit and BDH activated carbons. Journal of Hazardous Materials, 2008, 158, 300-307.	6.5	78
13	A review of the features and applications of ZIF-8 and its derivatives for separating CO2 and isomers of C3- and C4- hydrocarbons. Journal of Natural Gas Science and Engineering, 2021, 96, 104289.	2.1	70
14	Solâ^'Gel-Derived Carbon Aerogels and Xerogels:Â Design of Experiments Approach to Materials Synthesis. Industrial & Engineering Chemistry Research, 2002, 41, 3151-3162.	1.8	69
15	Efficacy of using slurry of metal-coated microencapsulated PCM for cooling in a micro-channel heat exchanger. Applied Thermal Engineering, 2017, 122, 11-18.	3.0	69
16	Unravel the Impact of Anchoring Groups on the Photovoltaic Performances of Diketopyrrolopyrrole Sensitizers for Dye-Sensitized Solar Cells. ACS Sustainable Chemistry and Engineering, 2015, 3, 2389-2396.	3.2	65
17	Liquidâ^'Liquid Equilibria of the Ternary System Water + Acetic Acid + 1-Hexanol. Journal of Chemical & Engineering Data, 1997, 42, 183-186.	1.0	62
18	Roles of Surface Heterogeneity and Lateral Interactions on the Isosteric Heat of Adsorption and Adsorbed Phase Heat Capacity. Journal of Physical Chemistry B, 1999, 103, 2467-2479.	1.2	61

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19	Assessment of Ce Zr Hf O2 based oxides as potential solar thermochemical CO2 splitting materials. Ceramics International, 2016, 42, 9354-9362.	2.3	57
20	Collective osmotic shock in ordered materials. Nature Materials, 2012, 11, 53-57.	13.3	56
21	Investigation of Ester- and Amide-Linker-Based Porous Organic Polymers for Carbon Dioxide Capture and Separation at Wide Temperatures and Pressures. ACS Applied Materials & Interfaces, 2016, 8, 20772-20785.	4.0	52
22	Solar hydrogen production via erbium oxide based thermochemical water splitting cycle. Journal of Renewable and Sustainable Energy, 2016, 8, .	0.8	47
23	On the nanogate-opening pressures of copper-doped zeolitic imidazolate framework ZIF-8 for the adsorption of propane, propylene, isobutane, and n-butane. Journal of Materials Science, 2019, 54, 5513-5527.	1.7	46
24	Limits and possible solutions in quantum dot organic solar cells. Renewable and Sustainable Energy Reviews, 2018, 82, 1551-1564.	8.2	33
25	High-pressure CO2/N2 and CO2/CH4 separation using dense polysulfone-supported ionic liquid membranes. Journal of Natural Gas Science and Engineering, 2016, 36, 472-485.	2.1	32
26	Carbon Nanoparticles-Decorated Carbon Nanotubes. Scientific Reports, 2020, 10, 4878.	1.6	32
27	Weakly Conjugated Hybrid Zinc Porphyrin Sensitizers for Solidâ€State Dyeâ€Sensitized Solar Cells. Advanced Functional Materials, 2016, 26, 5550-5559.	7.8	31
28	Phase equilibria of the ternary system water/acetic acid/2-pentanol. Fluid Phase Equilibria, 1996, 123, 189-203.	1.4	29
29	Practical Modeling of Metal Hydride Hydrogen Storage Systems. Industrial & Engineering Chemistry Research, 2003, 42, 1713-1722.	1.8	28
30	Impact of synthesis conditions on meso- and macropore structures of resorcinolâ€“formaldehyde xerogels. Journal of Materials Science, 2011, 46, 7760-7769.	1.7	28
31	Optimization of ITO glass/TiO2 based DSSC photo-anodes through electrophoretic deposition and sintering techniques. Ceramics International, 2017, 43, 10540-10545.	2.3	28
32	Liquidâ^'Liquid Equilibria of the Ternary System Water + Acetic Acid + 2-Methyl-2-butanol. Journal of Chemical & Engineering Data, 1996, 41, 1311-1314.	1.0	27
33	Adsorption of C1â^'C7 Normal Alkanes on BAX Activated Carbon. 1. Potential Theory Correlation and Adsorbent Characterization. Industrial & Engineering Chemistry Research, 2001, 40, 338-346.	1.8	27
34	Adsorption and Desorption Equilibria of Nitrogen, Methane, Ethane, and Ethylene on Date-Pit Activated Carbon. Journal of Chemical & Engineering Data, 2010, 55, 313-319.	1.0	26
35	Adsorption Equilibria of Nitrogen, Methane, and Ethane on BDH-Activated Carbon. Journal of Chemical & Engineering Data, 2007, 52, 60-65.	1.0	24
36	Liquid-liquid equilibria for the extraction of aromatics from naphtha reformate by dimethylformamide/ethylene glycol mixed solvent. Fluid Phase Equilibria, 1997, 129, 175-186.	1.4	22

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37	Carbon dioxide sequestration and methane removal from exhaust gases using resorcinolâ€“formaldehyde activated carbon xerogel. Adsorption, 2013, 19, 967-977.	1.4	22
38	New Virial-Type Model for Predicting Single- and Multicomponent Isosteric Heats of Adsorption. Industrial & Engineering Chemistry Research, 1998, 37, 684-696.	1.8	19
39	Adsorption Equilibrium and Kinetics of Nitrogen, Methane and Carbon Dioxide Gases onto ZIF-8, Cu_{10%}/ZIF-8, and Cu_{30%}/ZIF-8. Industrial & Engineering Chemistry Research, 2019, 58, 6653-6661.	1.8	19
40	Stability in 3D and 2D/3D hybrid perovskite solar cells studied by EFISHG and IS techniques under light and heat soaking. Organic Electronics, 2019, 66, 7-12.	1.4	18
41	Hybrid online-flipped learning pedagogy for teaching laboratory courses to mitigate the pandemic COVID-19 confinement and enable effective sustainable delivery: investigation of attaining course learning outcome. SN Social Sciences, 2021, 1, 113.	0.4	18
42	Phase Equilibria of the Ternary System Water + Acetic Acid + 1-Pentanol. Journal of Chemical & Engineering Data, 1996, 41, 562-565.	1.0	16
43	Thermal Treatment of Sol-Gel Derived Nickel Oxide Xerogels. Journal of Sol-Gel Science and Technology, 2003, 28, 133-141.	1.1	16
44	Growth of MAPbBr3 perovskite crystals and its interfacial properties with Al and Ag contacts for perovskite solar cells. Optical Materials, 2017, 73, 50-55.	1.7	16
45	New Model That Describes Adsorption of Laterally Interacting Gas Mixtures on Random Heterogeneous Surfaces. 1. Parametric Study and Correlation with Binary Data. Langmuir, 1998, 14, 6528-6538.	1.6	15
46	Role of catalyst type in the selective separation of olefinic and paraffinic hydrocarbons using xerogel-based adsorbents. Carbon, 2008, 46, 1003-1009.	5.4	15
47	Selective adsorption of carbon dioxide, methane and nitrogen using resorcinol-formaldehyde-xerogel activated carbon. Adsorption, 2017, 23, 933-944.	1.4	15
48	Phase Equilibria of the Ternary System Water + Propionic Acid + 2-Butanol. Separation Science and Technology, 1997, 32, 1463-1476.	1.3	14
49	Extraction of Aromatics from Petroleum Naphtha Reformate by a 1-Cyclohexyl-2-pyrrolidone/Ethylene Carbonate Mixed Solvent. Industrial & Engineering Chemistry Research, 1997, 36, 414-418.	1.8	14
50	Nanofeatures of resorcinolâ€“formaldehyde carbon microspheres. Materials Letters, 2012, 87, 31-34.	1.3	14
51	New insights on estimating pore size distribution of latex particles: Statistical mechanics approach and modeling. Microporous and Mesoporous Materials, 2016, 224, 360-371.	2.2	14
52	Adsorption process of n-alkanes onto BAX-1100 activated carbon: Theoretical estimation of isosteric heat of adsorption and energy distribution of heterogeneous surfaces. Journal of Molecular Liquids, 2018, 252, 399-407.	2.3	14
53	New Model That Describes Adsorption of Laterally Interacting Gas Mixtures on Random Heterogeneous Surfaces. 2. Correlation of Complex Binary and Prediction of Multicomponent Adsorption Equilibria. Langmuir, 1999, 15, 7732-7744.	1.6	12
54	Removal of crystal violet from wastewater using resorcinol-formaldehyde carbon xerogels. Separation Science and Technology, 2016, 51, 403-415.	1.3	12

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55	Consequence of aging at Au/HTM/perovskite interface in triple cation 3D and 2D/3D hybrid perovskite solar cells. Scientific Reports, 2021, 11, 33.	1.6	12
56	A Statistical Mechanical Perspective on the Temperature Dependence of the Isosteric Heat of Adsorption and Adsorbed Phase Heat Capacity. Journal of Physical Chemistry B, 1999, 103, 8104-8115.	1.2	11
57	Nano-gate opening pressures for the adsorption of isobutane, n-butane, propane, and propylene gases on bimetallic Coâ€“Zn based zeolitic imidazolate frameworks. Dalton Transactions, 2019, 48, 4685-4695.	1.6	11
58	Influence of doped metal center on morphology and pore structure of ZIF-8. MRS Communications, 2019, 9, 288-291.	0.8	11
59	Degradation analysis in mixed (MAPbI3 and MAPbBr3) perovskite solar cells under thermal stress. Journal of Materials Science: Materials in Electronics, 2019, 30, 1354-1359.	1.1	11
60	Adsorption of Carbon Dioxide, Methane, and Nitrogen Gases onto ZIF Compounds with Zinc, Cobalt, and Zinc/Cobalt Metal Centers. Journal of Nanomaterials, 2019, 2019, 1-11.	1.5	11
61	Adsorption of C1â€“C7 Normal Alkanes on BAX-Activated Carbon. 2. Statistically Optimized Approach for Deriving Thermodynamic Properties from the Adsorption Isotherm. Industrial & Engineering Chemistry Research, 2001, 40, 319-337.	1.8	10
62	Adsorption Energy and Pore-Size Distributions of Activated Carbons Calculated Using Hill's Model. Adsorption Science and Technology, 2014, 32, 571-590.	1.5	10
63	An empirical correlation-based model to predict solid-fluid phase equilibria and phase separation of the ternary system CH4-CO2-H2S. Journal of Natural Gas Science and Engineering, 2021, 94, 104120.	2.1	9
64	A comparison between four cubic equations of state in predicting the inversion curve and spinodal curve loci of methane. Thermochimica Acta, 1996, 287, 43-52.	1.2	8
65	Screening alternatives for producing paraffinic phase change materials for thermal energy storage in buildings. International Journal of Energy Research, 2017, 41, 1932-1940.	2.2	8
66	A Rapid Method for Low Temperature Microencapsulation of Phase Change Materials (PCMs) Using a Coiled Tube Ultraviolet Reactor. Energies, 2021, 14, 7867.	1.6	8
67	Further Modification of the Antoine Equation for Correlation of Adsorption Equilibria. Langmuir, 1998, 14, 5317-5323.	1.6	7
68	Energetic investigation of the adsorption process of CH4, C2H6 and N2 on activated carbon: Numerical and statistical physics treatment. Physica B: Condensed Matter, 2014, 433, 55-61.	1.3	7
69	High performance CO₂filtration and sequestration by using bromomethyl benzene linked microporous networks. RSC Advances, 2016, 6, 66324-66335.	1.7	6
70	Influence of Chitosan Addition on Resorcinolâ€“Formaldehyde Xerogel Structure. Applied Sciences (Switzerland), 2019, 9, 4582.	1.3	5
71	Influence of Casting Solvents on CO2/CH4 Separation Using Polysulfone Membranes. Membranes, 2021, 11, 286.	1.4	5
72	A review on the solidâ€“liquidâ€“vapor phase equilibria of acid gases in methane. , 2022, 12, 566-579.		5

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73	Quasiâ€Solidâ€State Dyeâ€Sensitized Solar Cells Based on Ru(II) Polypyridine Sensitizers. Energy Technology, 2016, 4, 380-384.	1.8	4
74	Enhancement of electrical and optical performance of N719 by co-sensitization. Optical Materials, 2018, 78, 201-206.	1.7	4
75	Silica and carbon decorated silica nanosheet impact on primary human immune cells. Colloids and Surfaces B: Biointerfaces, 2018, 172, 779-789.	2.5	4
76	Gas templating of resorcinol-formaldehyde xerogels. Journal of Non-Crystalline Solids, 2018, 498, 64-71.	1.5	3
77	Effect of sulfonated poly (ether ether ketone) on the sensitivity of polyvinylidene fluoride-based resistive humidity sensors. Materials Today Communications, 2020, 25, 101601.	0.9	3
78	Modelling and prediction of the solubility of acid gases in diethanolamine solutions. High Temperatures - High Pressures, 2000, 32, 261-270.	0.3	2
79	On the Correlation of Modified Antoine's Adsorption Isotherm Models with Experimental Data. Langmuir, 2000, 16, 8536-8538.	1.6	2
80	Influence of Micro- and Mesoporosity of Resorcinolâ€“Formaldehyde Xerogels on Adsorption. Environmental Engineering Science, 2013, 30, 381-386.	0.8	2
81	Novel controlled synthesis of nanoporous carbon nanorods from resorcinol-formaldehyde xerogels. Materials Letters, 2017, 201, 181-184.	1.3	2
82	Effect of gas templating of resorcinol-formaldehyde xerogels on characteristics and performances of subsequent activated carbons. Materials Chemistry and Physics, 2019, 234, 361-368.	2.0	2
83	The Effect of Chitosanâ€™s Addition to Resorcinol/Formaldehyde Xerogels on the Characteristics of Resultant Activated Carbon. Materials, 2019, 12, 3847.	1.3	2
84	Influence of Carbon Uniformity on Its Characteristics and Adsorption Capacities of CO2 and CH4 Gases. Applied Sciences (Switzerland), 2021, 11, 265.	1.3	2
85	Prediction of solid-liquid-vapor phase equilibria of noble gases in nitrogen. Arabian Journal of Chemistry, 2022, 15, 103866.	2.3	2
86	New Methodology for the Measurement and Analysis of Adsorption Dynamics:Â Butane on Activated Carbon. Industrial & Engineering Chemistry Research, 2004, 43, 7075-7082.	1.8	1
87	Effects of Adsorbent Characteristics on Adiabatic Vacuum Swing Adsorption Processes for Solvent Vapor Recovery. Chemical Engineering and Technology, 2006, 29, 1323-1332.	0.9	1
88	Using electric power to synthesize resorcinolâ€formaldehyde gels with enhanced characteristics. International Journal of Energy Research, 2020, 44, 12259-12268.	2.2	1
89	Dataset on the new recipe for the preparation of nanoporous carbon nanorods using resorcinol-formaldehyde xerogels. Data in Brief, 2018, 18, 827-830.	0.5	0