

# Shaheen A Al-Muhtaseb

## List of Publications by Citations

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88

papers

3,886

citations

24

h-index

61

g-index

90

ext. papers

4,323

ext. citations

6

avg, IF

5.66

L-index

| #  | Paper   | IF   | Citations |
|----|---|------|-----------|
| 88 | Preparation and Properties of Resorcinol-Formaldehyde Organic and Carbon Gels. <i>Advanced Materials</i> , <b>2003</b> , 15, 101-114  | 24   | 831       |
| 87 | Zeolitic imidazolate framework (ZIF-8) based polymer nanocomposite membranes for gas separation. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 8359  | 35.4 | 535       |
| 86 | Advances in tailoring resorcinol-formaldehyde organic and carbon gels. <i>Advanced Materials</i> , <b>2011</b> , 23, 2887-903   | 24   | 320       |
| 85 | Biodegradation of phenol by <i>Pseudomonas putida</i> immobilized in polyvinyl alcohol (PVA) gel. <i>Journal of Hazardous Materials</i> , <b>2009</b> , 164, 720-5  | 12.8 | 245       |
| 84 | Controlled thermal oxidative crosslinking of polymers of intrinsic microporosity towards tunable molecular sieve membranes. <i>Nature Communications</i> , <b>2014</b> , 5, 4813  | 17.4 | 199       |
| 83 | Dopant-Free Hole-Transporting Materials for Stable and Efficient Perovskite Solar Cells. <i>Advanced Materials</i> , <b>2017</b> , 29, 1606555  | 24   | 151       |
| 82 | Emulsion stability and cross-linking of PMMA microcapsules containing phase change materials. <i>Solar Energy Materials and Solar Cells</i> , <b>2015</b> , 132, 311-318  | 6.4  | 113       |
| 81 | Supercooling elimination of phase change materials (PCMs) microcapsules. <i>Energy</i> , <b>2015</b> , 87, 654-662  | 7.9  | 95        |
| 80 | Photo-oxidative enhancement of polymeric molecular sieve membranes. <i>Nature Communications</i> , <b>2013</b> , 4, 1918  | 17.4 | 94        |
| 79 | Removal of aluminum from aqueous solutions by adsorption on date-pit and BDH activated carbons. <i>Journal of Hazardous Materials</i> , <b>2008</b> , 158, 300-7  | 12.8 | 68        |
| 78 | Instability in CHNHPbI perovskite solar cells due to elemental migration and chemical composition changes. <i>Scientific Reports</i> , <b>2017</b> , 7, 15406   | 4.9  | 65        |
| 77 | Innovative method of metal coating of microcapsules containing phase change materials. <i>Solar Energy</i> , <b>2016</b> , 129, 54-64   | 6.8  | 61        |
| 76 | Sol-Gel-Derived Carbon Aerogels and Xerogels: Design of Experiments Approach to Materials Synthesis. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2002</b> , 41, 3151-3162                                 | 3.9  | 61        |
| 75 | Unravel the Impact of Anchoring Groups on the Photovoltaic Performances of Diketopyrrolopyrrole Sensitizers for Dye-Sensitized Solar Cells. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2015</b> , 3, 2389-2396 | 8.3  | 56        |
| 74 | Liquid-Liquid Equilibria of the Ternary System Water + Acetic Acid + 1-Hexanol. <i>Journal of Chemical &amp; Engineering Data</i> , <b>1997</b> , 42, 183-186   | 2.8  | 55        |
| 73 | Roles of Surface Heterogeneity and Lateral Interactions on the Isosteric Heat of Adsorption and Adsorbed Phase Heat Capacity. <i>Journal of Physical Chemistry B</i> , <b>1999</b> , 103, 2467-2479                       | 3.4  | 55        |
| 72 | Collective osmotic shock in ordered materials. <i>Nature Materials</i> , <b>2011</b> , 11, 53-7   | 27   | 54        |

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|----|---|------|----|
| 71 | Efficacy of using slurry of metal-coated microencapsulated PCM for cooling in a micro-channel heat exchanger. <i>Applied Thermal Engineering</i> , <b>2017</b> , 122, 11-18   | 5.8  | 51 |
| 70 | Assessment of Ce Zr Hf O <sub>2</sub> based oxides as potential solar thermochemical CO <sub>2</sub> splitting materials. <i>Ceramics International</i> , <b>2016</b> , 42, 9354-9362   | 5.1  | 47 |
| 69 | Investigation of Ester- and Amide-Linker-Based Porous Organic Polymers for Carbon Dioxide Capture and Separation at Wide Temperatures and Pressures. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 20772-85            | 9.5  | 43 |
| 68 | Solar hydrogen production via erbium oxide based thermochemical water splitting cycle. <i>Journal of Renewable and Sustainable Energy</i> , <b>2016</b> , 8, 034702   | 2.5  | 42 |
| 67 | Liquid-Liquid Equilibria of the Ternary System Water + Acetic Acid + 2-Methyl-2-butanol. <i>Journal of Chemical &amp; Engineering Data</i> , <b>1996</b> , 41, 1311-1314  | 2.8  | 26 |
| 66 | Phase equilibria of the ternary system water/acetic acid/2-pentanol. <i>Fluid Phase Equilibria</i> , <b>1996</b> , 123, 189-203   | 2.5  | 25 |
| 65 | Adsorption Equilibria of Nitrogen, Methane, and Ethane on BDH-Activated Carbon. <i>Journal of Chemical &amp; Engineering Data</i> , <b>2007</b> , 52, 60-65   | 2.8  | 24 |
| 64 | Adsorption of C <sub>1</sub> -C <sub>7</sub> Normal Alkanes on BAX Activated Carbon. 1. Potential Theory Correlation and Adsorbent Characterization. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2001</b> , 40, 338-346   | 3.9  | 24 |
| 63 | Weakly Conjugated Hybrid Zinc Porphyrin Sensitizers for Solid-State Dye-Sensitized Solar Cells. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 5550-5559  | 15.6 | 23 |
| 62 | Impact of synthesis conditions on meso- and macropore structures of resorcinol-formaldehyde xerogels. <i>Journal of Materials Science</i> , <b>2011</b> , 46, 7760-7769   | 4.3  | 22 |
| 61 | Adsorption and Desorption Equilibria of Nitrogen, Methane, Ethane, and Ethylene on Date-Pit Activated Carbon. <i>Journal of Chemical &amp; Engineering Data</i> , <b>2010</b> , 55, 313-319   | 2.8  | 22 |
| 60 | Practical Modeling of Metal Hydride Hydrogen Storage Systems. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2003</b> , 42, 1713-1722  | 3.9  | 22 |
| 59 | Limits and possible solutions in quantum dot organic solar cells. <i>Renewable and Sustainable Energy Reviews</i> , <b>2018</b> , 82, 1551-1564   | 16.2 | 20 |
| 58 | Liquid-liquid equilibria for the extraction of aromatics from naphtha reformat by dimethylformamide/ethylene glycol mixed solvent. <i>Fluid Phase Equilibria</i> , <b>1997</b> , 129, 175-186   | 2.5  | 20 |
| 57 | On the nanogate-opening pressures of copper-doped zeolitic imidazolate framework ZIF-8 for the adsorption of propane, propylene, isobutane, and n-butane. <i>Journal of Materials Science</i> , <b>2019</b> , 54, 5513-5527               | 4.3  | 19 |
| 56 | Optimization of ITO glass/TiO <sub>2</sub> based DSSC photo-anodes through electrophoretic deposition and sintering techniques. <i>Ceramics International</i> , <b>2017</b> , 43, 10540-10545   | 5.1  | 18 |
| 55 | High-pressure CO <sub>2</sub> /N <sub>2</sub> and CO <sub>2</sub> /CH <sub>4</sub> separation using dense polysulfone-supported ionic liquid membranes. <i>Journal of Natural Gas Science and Engineering</i> , <b>2016</b> , 36, 472-485 | 4.6  | 18 |
| 54 | Carbon dioxide sequestration and methane removal from exhaust gases using resorcinol-formaldehyde activated carbon xerogel. <i>Adsorption</i> , <b>2013</b> , 19, 967-977   | 2.6  | 18 |

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|----|---|------|----|
| 53 | New Virial-Type Model for Predicting Single- and Multicomponent Isothermic Heats of Adsorption. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>1998</b> , 37, 684-696  | 3.9  | 18 |
| 52 | Carbon Nanoparticles-Decorated Carbon Nanotubes. <i>Scientific Reports</i> , <b>2020</b> , 10, 4878   | 4.9  | 15 |
| 51 | Phase Equilibria of the Ternary System Water + Acetic Acid + 1-Pentanol. <i>Journal of Chemical &amp; Engineering Data</i> , <b>1996</b> , 41, 562-565  | 2.8  | 15 |
| 50 | Role of catalyst type in the selective separation of olefinic and paraffinic hydrocarbons using xerogel-based adsorbents. <i>Carbon</i> , <b>2008</b> , 46, 1003-1009   | 10.4 | 14 |
| 49 | Stability in 3D and 2D/3D hybrid perovskite solar cells studied by EFISHG and IS techniques under light and heat soaking. <i>Organic Electronics</i> , <b>2019</b> , 66, 7-12   | 3.5  | 14 |
| 48 | Adsorption Equilibrium and Kinetics of Nitrogen, Methane and Carbon Dioxide Gases onto ZIF-8, Cu10%/ZIF-8, and Cu30%/ZIF-8. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2019</b> , 58, 6653-6661  | 3.9  | 13 |
| 47 | New insights on estimating pore size distribution of latex particles: Statistical mechanics approach and modeling. <i>Microporous and Mesoporous Materials</i> , <b>2016</b> , 224, 360-371   | 5.3  | 13 |
| 46 | Phase Equilibria of the Ternary System Water + Propionic Acid + 2-Butanol. <i>Separation Science and Technology</i> , <b>1997</b> , 32, 1463-1476   | 2.5  | 13 |
| 45 | Extraction of Aromatics from Petroleum Naphtha Reformate by a 1-Cyclohexyl-2-pyrrolidone/Ethylene Carbonate Mixed Solvent. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>1997</b> , 36, 414-418   | 3.9  | 13 |
| 44 | Selective adsorption of carbon dioxide, methane and nitrogen using resorcinol-formaldehyde-xerogel activated carbon. <i>Adsorption</i> , <b>2017</b> , 23, 933-944  | 2.6  | 12 |
| 43 | New Model That Describes Adsorption of Laterally Interacting Gas Mixtures on Random Heterogeneous Surfaces. 1. Parametric Study and Correlation with Binary Data. <i>Langmuir</i> , <b>1998</b> , 14, 6528-6538 <sup>12</sup>                                     | 4.6  | 12 |
| 42 | Growth of MAPbBr <sub>3</sub> perovskite crystals and its interfacial properties with Al and Ag contacts for perovskite solar cells. <i>Optical Materials</i> , <b>2017</b> , 73, 50-55   | 3.3  | 11 |
| 41 | Nanofeatures of resorcinol-formaldehyde carbon microspheres. <i>Materials Letters</i> , <b>2012</b> , 87, 31-34   | 3.3  | 11 |
| 40 | Thermal Treatment of Sol-Gel Derived Nickel Oxide Xerogels. <i>Journal of Sol-Gel Science and Technology</i> , <b>2003</b> , 28, 133-141  | 2.3  | 10 |
| 39 | A Statistical Mechanical Perspective on the Temperature Dependence of the Isothermic Heat of Adsorption and Adsorbed Phase Heat Capacity. <i>Journal of Physical Chemistry B</i> , <b>1999</b> , 103, 8104-8115   | 3.4  | 10 |
| 38 | Adsorption process of n-alkanes onto BAX-1100 activated carbon: Theoretical estimation of isothermic heat of adsorption and energy distribution of heterogeneous surfaces. <i>Journal of Molecular Liquids</i> , <b>2018</b> , 252, 399-407                       | 6    | 9  |
| 37 | Adsorption of C <sub>1-7</sub> Normal Alkanes on BAX-Activated Carbon. 2. Statistically Optimized Approach for Deriving Thermodynamic Properties from the Adsorption Isotherm. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2001</b> , 40, 319-337 | 3.9  | 9  |
| 36 | Degradation analysis in mixed (MAPbI <sub>3</sub> and MAPbBr <sub>3</sub> ) perovskite solar cells under thermal stress. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2019</b> , 30, 1354-1359  | 2.1  | 9  |

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|----|---|-----|---|
| 35 | Nano-gate opening pressures for the adsorption of isobutane, n-butane, propane, and propylene gases on bimetallic Co-Zn based zeolitic imidazolate frameworks. <i>Dalton Transactions</i> , <b>2019</b> , 48, 4685-4695   | 4.3 | 8 |
| 34 | Removal of crystal violet from wastewater using resorcinol-formaldehyde carbon xerogels. <i>Separation Science and Technology</i> , <b>2016</b> , 51, 403-415   | 2.5 | 8 |
| 33 | 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. <i>Langmuir</i> , <b>1999</b> , 15, 7732-7744                    | 4   | 8 |
| 32 | Screening alternatives for producing paraffinic phase change materials for thermal energy storage in buildings. <i>International Journal of Energy Research</i> , <b>2017</b> , 41, 1932-1940   | 4.5 | 7 |
| 31 | A comparison between four cubic equations of state in predicting the inversion curve and spinodal curve loci of methane. <i>Thermochimica Acta</i> , <b>1996</b> , 287, 43-52   | 2.9 | 7 |
| 30 | Consequence of aging at Au/HTM/perovskite interface in triple cation 3D and 2D/3D hybrid perovskite solar cells. <i>Scientific Reports</i> , <b>2021</b> , 11, 33   | 4.9 | 7 |
| 29 | Energetic investigation of the adsorption process of CH <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> and N <sub>2</sub> on activated carbon: Numerical and statistical physics treatment. <i>Physica B: Condensed Matter</i> , <b>2014</b> , 433, 55-61               | 2.8 | 6 |
| 28 | Adsorption Energy and Pore-Size Distributions of Activated Carbons Calculated Using Hill's Model. <i>Adsorption Science and Technology</i> , <b>2014</b> , 32, 571-590  | 3.6 | 6 |
| 27 | Adsorption of Carbon Dioxide, Methane, and Nitrogen Gases onto ZIF Compounds with Zinc, Cobalt, and Zinc/Cobalt Metal Centers. <i>Journal of Nanomaterials</i> , <b>2019</b> , 2019, 1-11   | 3.2 | 6 |
| 26 | A review of the features and applications of ZIF-8 and its derivatives for separating CO <sub>2</sub> and isomers of C <sub>3</sub> - and C <sub>4</sub> - hydrocarbons. <i>Journal of Natural Gas Science and Engineering</i> , <b>2021</b> , 96, 104289             | 4.6 | 6 |
| 25 | High performance CO <sub>2</sub> filtration and sequestration by using bromomethyl benzene linked microporous networks. <i>RSC Advances</i> , <b>2016</b> , 6, 66324-66335  | 3.7 | 6 |
| 24 | Further Modification of the Antoine Equation for Correlation of Adsorption Equilibria. <i>Langmuir</i> , <b>1998</b> , 14, 5317-5323  | 4   | 5 |
| 23 | Influence of doped metal center on morphology and pore structure of ZIF-8. <i>MRS Communications</i> , <b>2019</b> , 9, 288-291   | 2.7 | 5 |
| 22 | 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. <i>SN Social Sciences</i> , <b>2021</b> , 1, 113 |     | 4 |
| 21 | Quasi-Solid-State Dye-Sensitized Solar Cells Based on Ru(II) Polypyridine Sensitizers. <i>Energy Technology</i> , <b>2016</b> , 4, 380-384  | 3.5 | 4 |
| 20 | Enhancement of electrical and optical performance of N719 by co-sensitization. <i>Optical Materials</i> , <b>2018</b> , 78, 201-206   | 3.3 | 3 |
| 19 | Gas templating of resorcinol-formaldehyde xerogels. <i>Journal of Non-Crystalline Solids</i> , <b>2018</b> , 498, 64-71   | 3.9 | 3 |
| 18 | Influence of Chitosan Addition on Resorcinol-Formaldehyde Xerogel Structure. <i>Applied Sciences (Switzerland)</i> , <b>2019</b> , 9, 4582  | 2.6 | 3 |

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|----|--|-----|---|
| 17 | An empirical correlation-based model to predict solid-fluid phase equilibria and phase separation of the ternary system CH <sub>4</sub> -CO <sub>2</sub> -H <sub>2</sub> S. <i>Journal of Natural Gas Science and Engineering</i> , <b>2021</b> , 94, 104120 | 4.6 | 3 |
| 16 | Novel controlled synthesis of nanoporous carbon nanorods from resorcinol-formaldehyde xerogels. <i>Materials Letters</i> , <b>2017</b> , 201, 181-184  | 3.3 | 2 |
| 15 | Influence of Micro- and Mesoporosity of Resorcinol/Formaldehyde Xerogels on Adsorption. <i>Environmental Engineering Science</i> , <b>2013</b> , 30, 381-386   | 2   | 2 |
| 14 | Modelling and prediction of the solubility of acid gases in diethanolamine solutions. <i>High Temperatures - High Pressures</i> , <b>2000</b> , 32, 261-270  | 1.3 | 2 |
| 13 | On the Correlation of Modified Antoine's Adsorption Isotherm Models with Experimental Data. <i>Langmuir</i> , <b>2000</b> , 16, 8536-8538  | 4   | 2 |
| 12 | Silica and carbon decorated silica nanosheet impact on primary human immune cells. <i>Colloids and Surfaces B: Biointerfaces</i> , <b>2018</b> , 172, 779-789  | 6   | 2 |
| 11 | Effect of gas templating of resorcinol-formaldehyde xerogels on characteristics and performances of subsequent activated carbons. <i>Materials Chemistry and Physics</i> , <b>2019</b> , 234, 361-368  | 4.4 | 1 |
| 10 | Effect of sulfonated poly (ether ether ketone) on the sensitivity of polyvinylidene fluoride-based resistive humidity sensors. <i>Materials Today Communications</i> , <b>2020</b> , 25, 101601  | 2.5 | 1 |
| 9  | Effects of Adsorbent Characteristics on Adiabatic Vacuum Swing Adsorption Processes for Solvent Vapor Recovery. <i>Chemical Engineering and Technology</i> , <b>2006</b> , 29, 1323-1332   | 2   | 1 |
| 8  | New Methodology for the Measurement and Analysis of Adsorption Dynamics: Butane on Activated Carbon. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2004</b> , 43, 7075-7082  | 3.9 | 1 |
| 7  | A Rapid Method for Low Temperature Microencapsulation of Phase Change Materials (PCMs) Using a Coiled Tube Ultraviolet Reactor. <i>Energies</i> , <b>2021</b> , 14, 7867   | 3.1 | 1 |
| 6  | Influence of Carbon Uniformity on Its Characteristics and Adsorption Capacities of CO <sub>2</sub> and CH <sub>4</sub> Gases. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 265  | 2.6 | 1 |
| 5  | Membranes for CO <sub>2</sub> Separation <b>2016</b> , 237-292   |     | 1 |
| 4  | The Effect of Chitosan's Addition to Resorcinol/Formaldehyde Xerogels on the Characteristics of Resultant Activated Carbon. <i>Materials</i> , <b>2019</b> , 12,   | 3.5 | 1 |
| 3  | Prediction of solid-liquid-vapor phase equilibria of noble gases in nitrogen. <i>Arabian Journal of Chemistry</i> , <b>2022</b> , 15, 103866   | 5.9 | 0 |
| 2  | Using electric power to synthesize resorcinol-formaldehyde gels with enhanced characteristics. <i>International Journal of Energy Research</i> , <b>2020</b> , 44, 12259-12268   | 4.5 |   |
| 1  | Dataset on the new recipe for the preparation of nanoporous carbon nanorods using resorcinol-formaldehyde xerogels. <i>Data in Brief</i> , <b>2018</b> , 18, 827-830   | 1.2 |   |