Mark J Biggs

List of Publications by Year in Descending Order

79 papers	2,282 citations	29 h-index	45 g-index
84 ext. papers	2,554 ext. citations	6.6 avg, IF	5.24 L-index

#	Paper	IF	Citations
79	Carbon microspheres with embedded FeP nanoparticles as a cathode electrocatalyst in Li-S batteries. *Chemical Engineering Journal*, **2021**, 406, 126823	14.7	29
78	Detection of Ring and Adatom Defects in Activated Disordered Carbon via Fluctuation Nanobeam Electron Diffraction. *Small*, **2020**, 16, e2000828	11	5
77	Cobalt(II) Tetraaminophthalocyanine-modified Multiwall Carbon Nanotubes as an Efficient Sulfur Redox Catalyst for Lithium-Sulfur Batteries. *ChemSusChem*, **2020**, 13, 3034-3044	8.3	13
76	Energy Landscape Mapping and Replica Exchange Molecular Dynamics of an Adsorbed Peptide. *Journal of Physical Chemistry B*, **2020**, 124, 2527-2538	3.4	1
75	Solvent Effect on Supramolecular Self-Assembly of Chlorophylls a on Chemically Reduced Graphene Oxide. *Langmuir*, **2020**, 36, 13575-13582	4	6
74	Decoding gas-solid interaction effects on adsorption isotherm shape: II. Polar adsorptives. *Microporous and Mesoporous Materials*, **2019**, 278, 232-240	5.3	4
73	Decoding gas-solid interaction effects on adsorption isotherm shape: I. Non-polar adsorptives. *Microporous and Mesoporous Materials*, **2018**, 264, 76-83	5.3	7
72	Isosteric Heats of Adsorption of Gases and Vapors on a Microporous Carbonaceous Material. *Journal of Chemical & Engineering Data*, **2018**, 63, 3107-3116	2.8	8
71	Simultaneously ‘pushing’ and ‘pulling’ graphene oxide into low-polar solvents through a designed interface. *Nanotechnology*, **2018**, 29, 315707	3.4	4
70	Carbon Nanotubes in TiO Nanofiber Photoelectrodes for High-Performance Perovskite Solar Cells. *Advanced Science*, **2017**, 4, 1600504	13.6	65
69	Sulfur-Doped Graphene with Iron Pyrite (FeS2) as an Efficient and Stable Electrocatalyst for the Iodine Reduction Reaction in Dye-Sensitized Solar Cells. *Solar Rrl*, **2017**, 1, 1700011	7.1	20
68	Single-Walled Carbon Nanotubes Enhance the Efficiency and Stability of Mesoscopic Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2017**, 9, 19945-19954	9.5	41
67	Free-standing compact cathodes for high volumetric and gravimetric capacity Li–S batteries. *Journal of Materials Chemistry A*, **2017**, 5, 19924-19933	13	17
66	A High-Volumetric-Capacity Cathode Based on Interconnected Close-Packed N-Doped Porous Carbon Nanospheres for Long-Life Lithium–Sulfur Batteries. *Advanced Energy Materials*, **2017**, 7, 1701082	21.8	79
65	Partial breaking of the Coulombic ordering of ionic liquids confined in carbon nanopores. *Nature Materials*, **2017**, 16, 1225-1232	27	166
64	Experimental study of efficient mixing in a micro-fluidized bed. *Applied Thermal Engineering*, **2017**, 127, 1642-1649	5.8	5
63	Characterizing the Switching Transitions of an Adsorbed Peptide by Mapping the Potential Energy Surface. *Journal of Physical Chemistry B*, **2017**, 121, 11455-11464	3.4	2

62	Back Cover: Solar RRL 3-4 2017. *Solar Rrl*, **2017**, 1, 1770113	7.1	
61	Oxygen reduction on chemically heterogeneous iron-containing nanoporous carbon: The effects of specific surface functionalities. *Microporous and Mesoporous Materials*, **2016**, 221, 137-149	5.3	12
60	Solution processed graphene structures for perovskite solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 2605-2616	13	62
59	A new method for reconstruction of the structure of micro-packed beds of spherical particles from desktop X-ray microtomography images. Part A. Initial structure generation and porosity determination. *Chemical Engineering Science*, **2016**, 146, 337-345	4.4	5
58	Explicit numerical simulation-based study of the hydrodynamics of micro-packed beds. *Chemical Engineering Science*, **2016**, 145, 71-79	4.4	6
57	Pore size distributions derived from adsorption isotherms, immersion calorimetry, and isosteric heats: A comparative study. *Carbon*, **2016**, 96, 1106-1113	10.4	41
56	Revisiting the EELS analyses and its coupling with multi-wavelength Raman spectroscopy: the case of hydrogenated amorphous carbon thin films **2016**, 744-745		
55	Tin Oxide Light-Scattering Layer for Titania Photoanodes in Dye-Sensitized Solar Cells. *Energy Technology*, **2016**, 4, 959-966	3.5	10
54	Incorporation of graphene into SnO2 photoanodes for dye-sensitized solar cells. *Applied Surface Science*, **2016**, 387, 690-697	6.7	31
53	Carbonaceous Dye-Sensitized Solar Cell Photoelectrodes. *Advanced Science*, **2015**, 2, 1400025	13.6	37
52	Uncertainty in pore size distribution derived from adsorption isotherms: I. Classical methods. *Microporous and Mesoporous Materials*, **2015**, 214, 210-216	5.3	8
51	Uncertainty in pore size distribution derived from adsorption isotherms: II. Adsorption integral approach. *Microporous and Mesoporous Materials*, **2015**, 214, 217-223	5.3	10
50	Characterizations of Activated Carbon Methanol Adsorption Pair Including the Heat of Adsorptions. *Journal of Chemical & Engineering Data*, **2015**, 60, 1727-1731	2.8	28
49	Carbon Nanotubes for Dye-Sensitized Solar Cells. *Small*, **2015**, 11, 2963-89	11	103
48	Solar Power: Carbonaceous Dye-Sensitized Solar Cell Photoelectrodes (Adv. Sci. 3/2015). *Advanced Science*, **2015**, 2,	13.6	78
47	Control of the spatial homogeneity of pore surface chemistry in particulate activated carbon. *Carbon*, **2015**, 95, 144-149	10.4	13
46	Immersion Calorimetry: Molecular Packing Effects in Micropores. *ChemPhysChem*, **2015**, 16, 3984-91	3.2	11
45	Analysis of Adsorbate-Adsorbate and Adsorbate-Adsorbent Interactions to Decode Isosteric Heats of Gas Adsorption. *ChemPhysChem*, **2015**, 16, 3797-805	3.2	23

44	A multi-method study of the transformation of the carbonaceous skeleton of a polymer-based nanoporous carbon along the activation pathway. *Carbon*, **2015**, 85, 119-134	10.4	18
43	Nanocarbons for mesoscopic perovskite solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 9020-9031	13	88
42	Raman spectroscopy study of the transformation of the carbonaceous skeleton of a polymer-based nanoporous carbon along the thermal annealing pathway. *Carbon*, **2015**, 85, 147-158	10.4	101
41	Dynamic model for the optimisation of adsorption-based desalination processes. *Applied Thermal Engineering*, **2014**, 66, 464-473	5.8	30
40	Control of the pore size distribution and its spatial homogeneity in particulate activated carbon. *Carbon*, **2014**, 78, 113-120	10.4	17
39	Effect of visible light and electrode wetting on the capacitive performance of S- and N-doped nanoporous carbons: Importance of surface chemistry. *Carbon*, **2014**, 78, 540-558	10.4	34
38	The effects of activated carbon surface features on the reactive adsorption of carbamazepine and sulfamethoxazole. *Carbon*, **2014**, 80, 419-432	10.4	112
37	Recent Progress of Research and Development of Adsorption Desalination. *Journal of Chemical Engineering of Japan*, **2014**, 47, 303-308	0.8	2
36	Molecular-level understanding of protein adsorption at the interface between water and a strongly interacting uncharged solid surface. *Journal of the American Chemical Society*, **2014**, 136, 5323-31	16.4	113
35	Free energy of adsorption for a peptide at a liquid/solid interface via nonequilibrium molecular dynamics. *Langmuir*, **2013**, 29, 2919-26	4	49
34	Experimental study of a liquid fluidization in a microfluidic channel. *AICHE Journal*, **2013**, 59, 361-364	3.6	28
33	Microfluidic hydrodynamic focusing based synthesis of POPC liposomes for model biological systems. *Colloids and Surfaces B: Biointerfaces*, **2013**, 104, 276-81	6	43
32	Experimental implementation and validation of thermodynamic cycles of adsorption-based desalination. *Applied Energy*, **2012**, 98, 190-197	10.7	35
31	Granular pressure in a liquid-fluidized bed as revealed by diffusing wave spectroscopy. *AICHE Journal*, **2012**, 58, 1069-1075	3.6	3
30	Thermodynamic cycles of adsorption desalination system. *Applied Energy*, **2012**, 90, 316-322	10.7	57
29	Thermodynamic analysis of an adsorption-based desalination cycle (part II): Effect of evaporator temperature on performance. *Chemical Engineering Research and Design*, **2011**, 89, 2168-2175	5.5	24
28	Low Energy Adsorption Desalination Technology. *Advanced Materials Research*, **2011**, 347-353, 601-606	0.5	
27	On potential energy models for EA-based ab initio protein structure prediction. *Evolutionary Computation*, **2010**, 18, 255-75	4.3	4

26	Thermodynamic analysis of an adsorption-based desalination cycle. *Chemical Engineering Research and Design*, **2010**, 88, 1541-1547	5.5	32
25	TNAMD: Implementation of TIGER2 in NAMD. *Computer Physics Communications*, **2010**, 181, 2082-2085	4.2	3
24	Granular temperature in a liquid fluidized bed as revealed by diffusing wave spectroscopy. *Chemical Engineering Science*, **2009**, 64, 1102-1110	4.4	10
23	Particle dynamics and granular temperatures in dense fluidized beds as revealed by diffusing wave spectroscopy. *Advanced Powder Technology*, **2009**, 20, 227-233	4.6	16
22	Particle dynamics in a vibrated submerged granular bed as revealed by diffusing wave spectroscopy. *Journal Physics D: Applied Physics*, **2009**, 42, 245404	3	8
21	Effect of pore wall model on prediction of diffusion coefficients for graphitic slit pores. *Physical Chemistry Chemical Physics*, **2008**, 10, 2519-27	3.6	18
20	A pore network model for diffusion in nanoporous carbons: Validation by molecular dynamics simulation. *Chemical Engineering Science*, **2008**, 63, 3319-3327	4.4	31
19	Granular temperature in a gas fluidized bed. *Granular Matter*, **2008**, 10, 63-73	2.6	26
18	Particle dynamics in a dense vibrated fluidized bed as revealed by diffusing wave spectroscopy. *Powder Technology*, **2008**, 182, 192-201	5.2	16
17	Switching in of Ac-(Ala)10-NHMe at a solid surface. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2008**, 4, 262-5	6	
16	Study of Conformational Switching in Polyalanine at Solid Surfaces Using Molecular Simulation *Journal of Physical Chemistry C*, **2007**, 111, 15839-15847	3.8	13
15	Evaluation of methods for determining the pore size distribution and pore-network connectivity of porous carbons. *Langmuir*, **2007**, 23, 8430-40	4	29
14	On use of the Amber potential with the Langevin dipole method. *Journal of Physical Chemistry B*, **2007**, 111, 7591-602	3.4	5
13	Ab initio protein fold prediction using evolutionary algorithms: influence of design and control parameters on performance. *Journal of Computational Chemistry*, **2006**, 27, 1177-95	3.5	17
12	Virtual porous carbons: what they are and what they can be used for. *Molecular Simulation*, **2006**, 32, 579-593	2	56
11	Granular temperature distribution in a gas fluidized bed of hollow microparticles prior to onset of bubbling. *Europhysics Letters*, **2006**, 74, 268-274	1.6	22
10	Molecular simulation evidence for solidlike adsorbate in complex carbonaceous micropore structures. *Langmuir*, **2004**, 20, 5786-800	4	32
9	Absolute assessment of adsorption-based porous solid characterization methods: comparison methods. *Langmuir*, **2004**, 20, 7123-38	4	21

8	Explicit numerical simulation of suspension flow with deposition in porous media: influence of local flow field variation on deposition processes predicted by trajectory methods. *Chemical Engineering Science*, **2003**, 58, 1271-1288	4.4	33
7	Transformations and destruction of nitrogen oxides(NO, NO2 and N2O)in a pulsed corona discharge reactor?. *Fuel*, **2003**, 82, 1675-1684	7.1	52
6	Explicit numerical simulation of fluids in reconstructed porous media. *Chemical Engineering Science*, **2002**, 57, 1955-1968	4.4	18
5	Combustion of a porous char particle in an incipiently fluidized bed. *Fuel*, **1998**, 77, 1549-1560	7.1	20
4	The COCO2 product ratio for a porous char particle within an incipiently fluidized bed: a numerical study. *Chemical Engineering Science*, **1997**, 52, 941-952	4.4	50
3	Mass diffusion of diatomic fluids in random micropore spaces using equilibrium molecular dynamics. *Physical Review E*, **1994**, 49, 531-537	2.4	11
2	Mathematical modelling of oscillations in the temperature of freely moving burning carbonaceous particles in bubbling fluidized beds. *Fuel*, **1993**, 72, 805-811	7.1	11
1	Mass diffusion of atomic fluids in random micropore spaces using equilibrium molecular dynamics. *Physical Review A*, **1992**, 46, 3312-3318	2.6	19