Peter A Monson

List of Publications by Year in Descending Order

149 papers	6,599 citations	46 h-index	76 g-index
159 ext. papers	6,899 ext. citations	3.8 avg, IF	5.91 L-index

#	Paper	IF	Citations
149	Connecting dynamic pore filling mechanisms with equilibrium and out of equilibrium configurations of fluids in nanopores.. *Journal of Chemical Physics*, **2022**, 156, 134702	3.9	
148	Modeling fluids confined in three-dimensionally ordered mesoporous carbons. *Adsorption*, **2021**, 27, 253-264	2.6	3
147	Modeling the Impact of Mesoporous Silica Microstructures on the Adsorption Hysteresis Loop. *Journal of Physical Chemistry C*, **2020**, 124, 21646-21655	3.8	11
146	Sorption Isotherm Reconstruction and Extraction of Pore Size Distributions for Serially Connected Pore Model (SCPM) Structures Employing Algorithmic and Statistical Models. *Journal of Physical Chemistry C*, **2020**, 124, 21591-21607	3.8	6
145	Density-functional theory study of the body-centered-cubic and cI16 hard-sphere crystals. *Journal of Chemical Physics*, **2019**, 150, 134506	3.9	2
144	Nonequilibrium Steady States in Fluid Transport through Mesopores: Dynamic Mean Field Theory and Nonequilibrium Molecular Dynamics. *Langmuir*, **2019**, 35, 5702-5710	4	3
143	On the mechanical stability of the body-centered cubic phase and the emergence of a metastable cI16 phase in classical hard sphere solids. *Journal of Chemical Physics*, **2018**, 148, 024502	3.9	5
142	Morphology of Fluids Confined in Physically Reconstructed Mesoporous Silica: Experiment and Mean Field Density Functional Theory. *Langmuir*, **2018**, 34, 9936-9945	4	12
141	A comparison of dynamic mean field theory and grand canonical molecular dynamics for the dynamics of pore filling and capillary condensation of fluids in mesopores. *Journal of Chemical Physics*, **2018**, 149, 014703	3.9	1
140	Modeling the Role of Excluded Volume in Zeolite Structure Direction. *Journal of Physical Chemistry Letters*, **2018**, 9, 3703-3707	6.4	6
139	Enhanced replica exchange reactive Monte Carlo simulations for constructing zeolite frameworks. *Molecular Simulation*, **2018**, 44, 453-462	2	3
138	Molecular Simulations of the Synthesis of Periodic Mesoporous Silica Phases at High Surfactant Concentrations. *Journal of Physical Chemistry C*, **2017**, 121, 4564-4575	3.8	17
137	Multiscale Model for the Templated Synthesis of Mesoporous Silica: The Essential Role of Silica Oligomers. *Chemistry of Materials*, **2016**, 28, 2715-2727	9.6	22
136	Modelling the assembly of nanoporous silica materials. *International Reviews in Physical Chemistry*, **2015**, 34, 35-70	7	24
135	Modelling the dynamics of condensation and evaporation of fluids in three-dimensional slit pores. *Molecular Physics*, **2015**, 113, 1250-1260	1.7	5
134	Modeling the self-assembly of silica-templated nanoparticles in the initial stages of zeolite formation. *Langmuir*, **2015**, 31, 4940-9	4	15
133	Reactive Ensemble Monte Carlo Simulations of Silica Polymerization That Yield Zeolites and Related Crystalline Microporous Structures. *Journal of Physical Chemistry C*, **2015**, 119, 26628-26635	3.8	9

132	Dynamic density functional theory with hydrodynamic interactions: theoretical development and application in the study of phase separation in gas-liquid systems. *Journal of Chemical Physics*, **2015**, 142, 094706	3.9	10
131	Modeling the influence of side stream and ink bottle structures on adsorption/desorption dynamics of fluids in long pores. *Langmuir*, **2015**, 31, 188-98	4	3
130	Modeling permporometry of mesoporous membranes using dynamic mean field theory. *AICHE Journal*, **2015**, 61, 2958-2967	3.6	2
129	Lattice Monte Carlo Simulations in Search of Zeolite Analogues: Effects of Structure Directing Agents. *Journal of Physical Chemistry C*, **2015**, 119, 28046-28054	3.8	8
128	Physical adsorption of gases: the case for absolute adsorption as the basis for thermodynamic analysis. *Adsorption*, **2014**, 20, 591-622	2.6	101
127	Filling dynamics of closed end nanocapillaries. *Langmuir*, **2014**, 30, 1290-4	4	22
126	Lattice model for silica polymerization: Monte Carlo simulations of the transition between gel and nanoparticle phases. *Journal of Physical Chemistry B*, **2014**, 118, 10989-99	3.4	9
125	Dynamic mean field theory for lattice gas models of fluids confined in porous materials: higher order theory based on the Bethe-Peierls and path probability method approximations. *Journal of Chemical Physics*, **2014**, 141, 024706	3.9	7
124	Dynamic mean field theory for lattice gas models of fluid mixtures confined in mesoporous materials. *Langmuir*, **2013**, 29, 13808-20	4	6
123	Simulating the formation of surfactant-templated mesoporous silica materials: a model with both surfactant self-assembly and silica polymerization. *Langmuir*, **2013**, 29, 766-80	4	18
122	Dynamics of capillary condensation in lattice gas models of confined fluids: a comparison of dynamic mean field theory with dynamic Monte Carlo simulations. *Journal of Chemical Physics*, **2013**, 138, 234709	3.9	16
121	Emergence of Zeolite Analogs and other Microporous Crystals in an Atomic Lattice Model of Silica and Related Materials. *Journal of Physical Chemistry Letters*, **2012**, 3, 761-5	6.4	13
120	Modeling three-dimensional network formation with an atomic lattice model: application to silicic acid polymerization. *Journal of Chemical Physics*, **2011**, 134, 134703	3.9	14
119	Modelling relaxation processes for fluids in porous materials using dynamic mean field theory: application to pore networks. *Adsorption*, **2011**, 17, 769-776	2.6	7
118	Monte Carlo Simulations of Silica Polymerization and Network Formation. *Journal of Physical Chemistry C*, **2011**, 115, 15988-16000	3.8	34
117	Dynamic mean field theory of condensation and evaporation processes for fluids in porous materials: application to partial drying and drying. *Faraday Discussions*, **2010**, 146, 167-84; discussion 195-215, 395-403	3.6	19
116	Comment on Computer Simulation of Static and Dynamic Properties During Transient Sorption of Fluids in Mesoporous Materials *Journal of Physical Chemistry C*, **2010**, 114, 9187-9188	3.8	
115	Modeling Nanoparticle Formation during Early Stages of Zeolite Growth: A Low-Coordination Lattice Model of Template Penetration. *Journal of Physical Chemistry C*, **2010**, 114, 14393-14401	3.8	21

114	Probing the Mechanism of Silica Polymerization at Ambient Temperatures using Monte Carlo Simulations. *Journal of Physical Chemistry Letters*, **2010**, 1, 3219-3224	6.4	32
113	Modeling Mesoscale Structure in Comb Polymer Materials for Anhydrous Proton Transport Applications. *Macromolecules*, **2010**, 43, 9549-9554	5.5	1
112	Understanding adsorption and desorption processes in mesoporous materials with independent disordered channels. *Physical Review E*, **2009**, 80, 031607	2.4	63
111	Modeling Relaxation Processes for Fluids in Porous Materials Using Dynamic Mean Field Theory: An Application to Partial Wetting. *Journal of Low Temperature Physics*, **2009**, 157, 395-409	1.3	31
110	Solid-fluid and solid-solid equilibrium in hard sphere united atom models of n-alkanes: rotator phase stability. *Journal of Physical Chemistry B*, **2009**, 113, 13866-73	3.4	13
109	Contact angles, pore condensation, and hysteresis: insights from a simple molecular model. *Langmuir*, **2008**, 24, 12295-302	4	59
108	Probing memory effects in confined fluids via diffusion measurements. *Langmuir*, **2008**, 24, 6429-32	4	50
107	Understanding capillary condensation and hysteresis in porous silicon: network effects within independent pores. *Physical Review E*, **2008**, 78, 060601	2.4	72
106	Mean field kinetic theory for a lattice gas model of fluids confined in porous materials. *Journal of Chemical Physics*, **2008**, 128, 084701	3.9	75
105	Molecular thermodynamics of solid-fluid and solid-solid equilibria. *AICHE Journal*, **2008**, 54, 1122-1128	3.6	13
104	Studies of a Lattice Model of Water Confined in a Slit Pore *Journal of Physical Chemistry C*, **2007**, 111, 15976-15981	3.8	13
103	Dynamical aspects of the adsorption hysteresis phenomenon. *Magnetic Resonance Imaging*, **2007**, 25, 481-4	3.3	10
102	Diffusion hysteresis in mesoporous materials. *European Physical Journal: Special Topics*, **2007**, 141, 107-113	2.3	16
101	Recent Progress in the Statistical Mechanical Mechanics of Interaction Site Fluids. *Advances in Chemical Physics*, **2007**, 451-550		51
100	Further studies of a simple atomistic model of silica: thermodynamic stability of zeolite frameworks as silica polymorphs. *Journal of Chemical Physics*, **2007**, 126, 144701	3.9	12
99	Solid-Fluid Equilibrium: Insights from Simple Molecular Models. *Advances in Chemical Physics*, **2007**, 113-179		66
98	Calculation of free energies and chemical potentials for gas hydrates using Monte Carlo simulations. *Journal of Physical Chemistry B*, **2007**, 111, 7274-82	3.4	57
97	Mercury porosimetry in mesoporous glasses: a comparison of experiments with results from a molecular model. *Langmuir*, **2007**, 23, 3372-80	4	52

96	Wetting of rings on a nanopatterned surface: a lattice model study. *Physical Review E*, **2006**, 73, 041603	2.4	18
95	Monte Carlo Simulation Study of Water Adsorption in Activated Carbon. *Industrial & Engineering Chemistry Research*, **2006**, 45, 5649-5656	3.9	69
94	Crystal nucleation in binary hard sphere mixtures: a Monte Carlo simulation study. *Journal of Chemical Physics*, **2006**, 125, 24508	3.9	81
93	Calculating the Phase Behavior of Gas-Hydrate-Forming Systems from Molecular Models. *Industrial & Engineering Chemistry Research*, **2006**, 45, 424-431	3.9	28
92	Mean-field theory of liquid droplets on roughened solid surfaces: application to superhydrophobicity. *Langmuir*, **2006**, 22, 1595-601	4	54
91	Modelling the thermal stability of precursor nanoparticles in zeolite synthesis. *Molecular Physics*, **2006**, 104, 3513-3522	1.7	19
90	Exploration of molecular dynamics during transient sorption of fluids in mesoporous materials. *Nature*, **2006**, 443, 965-8	50.4	201
89	A study of the phase behavior of a simple model of chiral molecules and enantiomeric mixtures. *Journal of Chemical Physics*, **2005**, 122, 54505	3.9	12
88	Modeling spontaneous formation of precursor nanoparticles in clear-solution zeolite synthesis. *Journal of the American Chemical Society*, **2005**, 127, 14388-400	16.4	73
87	Does water condense in carbon pores?. *Langmuir*, **2005**, 21, 10219-25	4	101
86	Dynamic aspects of mercury porosimetry: a lattice model study. *Langmuir*, **2005**, 21, 3179-86	4	35
85	Molecular Modeling of Adsorption in Activated Carbon: Comparison of Monte Carlo Simulations with Experiment. *Adsorption*, **2005**, 11, 5-13	2.6	38
84	Recent Progress in Molecular Modeling of Adsorption and Hysteresis in Mesoporous Materials. *Adsorption*, **2005**, 11, 29-35	2.6	19
83	Molecular Modeling of Mercury Porosimetry. *Adsorption*, **2005**, 11, 325-329	2.6	28
82	Normal mode approach for predicting the mechanical properties of solids from first principles: Application to compressibility and thermal expansion of zeolites. *Physical Review B*, **2005**, 71,	3.3	19
81	On the mechanical properties and phase behavior of silica: a simple model based on low coordination and strong association. *Journal of Chemical Physics*, **2004**, 121, 8415-22	3.9	36
80	Solid-fluid and solid-solid phase equilibrium in a model of n-alkane mixtures. *Journal of Chemical Physics*, **2004**, 120, 2980-8	3.9	16
79	Density Functional Theory Study of Silica Zeolite Structures: Stabilities and Mechanical Properties of SOD, LTA, CHA, MOR, and MFI. *Journal of Physical Chemistry B*, **2004**, 108, 9208-9215	3.4	79

78	Modeling mercury porosimetry using statistical mechanics. *Langmuir*, **2004**, 20, 6482-9	4	68
77	Studies of a primitive model of mixtures of nonpolar molecules with water. *Molecular Physics*, **2004**, 102, 2071-2079	1.7	2
76	Adsorption/desorption hysteresis in inkbottle pores: a density functional theory and Monte Carlo simulation study. *Langmuir*, **2004**, 20, 4289-94	4	91
75	Modeling desorption of fluids from disordered mesoporous materials. *Langmuir*, **2004**, 20, 4743-7	4	50
74	Phase behavior and dynamics of fluids in mesoporous glasses. *Physical Review E*, **2003**, 67, 041207	2.4	114
73	Mean-field theory of ice phase stability. *Journal of Chemical Physics*, **2003**, 118, 7005-7011	3.9	6
72	Understanding congruent melting in binary solids: Molecular models of benzene–hexafluorobenzene mixtures. *Journal of Chemical Physics*, **2003**, 118, 2815	3.9	19
71	Lattice model of adsorption in disordered porous materials: mean-field density functional theory and Monte Carlo simulations. *Physical Review E*, **2002**, 65, 011202	2.4	72
70	Adsorption hysteresis and capillary condensation in disordered porous solids: a density functional study. *Journal of Physics Condensed Matter*, **2002**, 14, 9295-9315	1.8	79
69	Adsorption in Porous Materials at High Pressure: Theory and Experiment. *Langmuir*, **2002**, 18, 10261-10273	4	315
68	A molecular model of adsorption in a dilute semiflexible porous network. *Molecular Physics*, **2002**, 100, 2031-2039	1.7	24
67	Phase equilibrium in a quadrupolar hard sphere interaction site model of benzene. *Journal of Chemical Physics*, **2001**, 114, 4124-4130	3.9	22
66	Capillary condensation in disordered porous materials: hysteresis versus equilibrium behavior. *Physical Review Letters*, **2001**, 87, 055701	7.4	240
65	Modeling of Adsorption and Desorption in Pores of Simple Geometry Using Molecular Dynamics. *Langmuir*, **2001**, 17, 7600-7604	4	232
64	Isobaric molecular dynamics simulations of hard sphere systems. *Physical Review E*, **2001**, 63, 061106	2.4	6
63	Molecular dynamics simulations of hard sphere solidification at constant pressure. *Physical Review E*, **2001**, 64, 061703	2.4	22
62	Mean-Field Theory of Fluid Adsorption in a Porous Glass. *Langmuir*, **2001**, 17, 7472-7475	4	74
61	Computer simulations of phase equilibrium for a fluid confined in a disordered porous structure. *Physical Review E*, **2000**, 61, 7231-4	2.4	57

60	The phase behavior of a hard sphere chain model of a binary n-alkane mixture. *Journal of Chemical Physics*, **2000**, 112, 2870-2877	3.9	9
59	Phase behavior of a hard sphere interaction site model of benzene. *Journal of Chemical Physics*, **2000**, 112, 8950-8957	3.9	27
58	Hysteresis in Monte Carlo and Molecular Dynamics Simulations of Adsorption in Porous Materials. *Langmuir*, **2000**, 16, 9857-9860	4	75
57	An application of cell theory to molecular models of n-alkane solids. *Molecular Physics*, **2000**, 98, 363-370	1.7	8
56	Solid-fluid equilibrium in molecular models of n-alkanes. *Journal of Chemical Physics*, **1999**, 110, 664-675	3.9	47
55	Tailored Porous Materials. *Chemistry of Materials*, **1999**, 11, 2633-2656	9.6	623
54	Surface Roughness Effects in Molecular Models of Adsorption in Heterogeneous Porous Solids. *Langmuir*, **1998**, 14, 4880-4886	4	13
53	Solid-fluid equilibrium for a molecular model with short ranged directional forces. *Journal of Chemical Physics*, **1998**, 109, 9938-9949	3.9	67
52	The high density equation of state and solid-fluid equilibrium in systems of freely jointed chains of tangent hard spheres. *Journal of Chemical Physics*, **1997**, 107, 6899-6907	3.9	56
51	Phase diagrams of single-component fluids in disordered porous materials: Predictions from integral-equation theory. *Journal of Chemical Physics*, **1997**, 106, 264-279	3.9	102
50	An application of classical thermodynamics to solid-fluid equilibrium in hard sphere mixtures. *Journal of Chemical Physics*, **1997**, 107, 6855-6858	3.9	12
49	Plastic crystal phases of hard dumbbells and hard spherocylinders. *Journal of Chemical Physics*, **1997**, 107, 2696-2697	3.9	53
48	Monte Carlo Simulation Studies of Heats of Adsorption in Heterogeneous Solids. *Langmuir*, **1996**, 12, 5425-5432	4	105
47	Solid-fluid phase equilibrium for single component and binary Lennard-Jones systems: A cell theory approach. *Journal of Chemical Physics*, **1996**, 105, 10022-10029	3.9	23
46	Monte Carlo calculations of phase diagrams for a fluid confined in a disordered porous material. *Physical Review E*, **1996**, 54, 6557-6564	2.4	83
45	Phase equilibrium in a molecular model of a fluid confined in a disordered porous material. *Physical Review E*, **1996**, 54, R29-R32	2.4	94
44	Phase diagrams of a fluid confined in a disordered porous material. *Journal of Physics Condensed Matter*, **1996**, 8, 9621-9625	1.8	16
43	Heats of Adsorption from Molecular Models of Adsorption in Heterogeneous Solids. *Kluwer International Series in Engineering and Computer Science*, **1996**, 1009-1018		1

42	Solid-fluid equilibrium in a nonlinear hard sphere triatomic model of propane. *Journal of Chemical Physics*, **1995**, 103, 9756-9762	3.9	23
41	Liquid–liquid equilibrium in a slit pore: Monte Carlo simulation and mean field density functional theory. *Journal of Chemical Physics*, **1995**, 102, 3712-3719	3.9	41
40	Substitutionally ordered solid solutions of hard spheres. *Journal of Chemical Physics*, **1995**, 102, 3354-3360	3.9	122
39	Solid–fluid equilibria for quadrupolar hard dumbbells via Monte Carlo simulation. *Journal of Chemical Physics*, **1995**, 102, 1361-1372	3.9	32
38	Prewetting at a liquid mixture–solid interface: A comparison of Monte Carlo simulations with mean field density functional theory. *Journal of Chemical Physics*, **1994**, 101, 10947-10952	3.9	17
37	Modeling the Influence of Heterogeneous Adsorbent Microstructure upon Adsorption Equilibria for Binary Mixtures. *Langmuir*, **1994**, 10, 530-537	4	23
36	Vapour-liquid equilibria for two centre Lennard-Jones diatomics and dipolar diatomics. *Molecular Physics*, **1993**, 80, 997-1007	1.7	44
35	Monte Carlo simulation study of adsorption from a liquid mixture at states near liquid–liquid coexistence. *Journal of Chemical Physics*, **1993**, 99, 8238-8243	3.9	21
34	Physical adsorption in heterogeneous porous materials: an analytical study of a one-dimensional model. *Langmuir*, **1993**, 9, 561-567	4	15
33	Further studies of prewetting transitions via Monte Carlo simulation. *Journal of Chemical Physics*, **1993**, 99, 6897-6906	3.9	48
32	A cell theory for solid solutions: Application to hard sphere mixtures. *Journal of Chemical Physics*, **1993**, 99, 8914-8921	3.9	44
31	Adsorption of fluids in disordered porous media from integral equation theory. *Journal of Chemical Physics*, **1993**, 99, 3003-3013	3.9	93
30	On the stability of the plastic crystal phase of hard dumbbell solids. *Journal of Chemical Physics*, **1992**, 97, 8543-8548	3.9	70
29	An analysis of the statistical model adsorption isotherm. *AICHE Journal*, **1992**, 38, 1979-1989	3.6	15
28	Solid–fluid equilibria for hard dumbbells via Monte Carlo simulation. *Journal of Chemical Physics*, **1992**, 96, 9060-9072	3.9	121
27	The influence of adsorbent microstructure upon adsorption equilibria: Investigations of a model system. *Journal of Chemical Physics*, **1991**, 95, 2936-2948	3.9	88
26	Cluster integrals for square well particles: Application to percolation. *Journal of Chemical Physics*, **1991**, 94, 3070-3082	3.9	10
25	A new method for the numerical solution of integral equation approximations. *International Journal of Thermophysics*, **1990**, 11, 97-107	2.1	6

24	Reply to "Comment on 'Prewetting at a solid-fluid interface via Monte Carlo simulation' ". *Physical Review A*, **1990**, 42, 2458-2459	2.6	19
23	Prewetting at a fluid-solid interface via Monte Carlo simulation. *Physical Review A*, **1989**, 39, 6402-6408	2.6	129
22	Isobaric ensemble Monte Carlo simulation of adsorption at fluid-solid interfaces. *Langmuir*, **1989**, 5, 639-644	4	9
21	An interaction site approach to clustering and percolation phenomena in systems of nonspherical particles. *Journal of Chemical Physics*, **1988**, 89, 3300-3307	3.9	15
20	Monte Carlo calculations of cluster statistics in continuum models of composite morphology. *Journal of Chemical Physics*, **1988**, 88, 1198-1206	3.9	167
19	Clustering and percolation in assemblies of anisotropic particles: Perturbation theory and Monte Carlo simulation. *Physical Review A*, **1988**, 38, 5376-5383	2.6	16
18	Cluster perturbation theory for interaction site fluids. *Journal of Chemical Physics*, **1987**, 87, 3618-3629	3.9	32
17	Local compositions and the square-well fluid. *International Journal of Thermophysics*, **1986**, 7, 367-379	2.1	9
16	Computer simulation of adsorption equilibrium for a gas on a solid surface using the potential distribution theory. *Journal of Chemical Physics*, **1986**, 84, 1909-1915	3.9	19
15	Solution of the Percus-Yevick equation in the coexistence region of a simple fluid. *International Journal of Thermophysics*, **1985**, 6, 573-584	2.1	9
14	Solution of the Ornstein-Zernike equation in the vicinity of the critical point of a simple fluid. *Journal of Chemical Physics*, **1985**, 82, 4303-4311	3.9	46
13	Thermodynamic properties of molecular fluids from the site-site Ornstein-Zernike equation. *Molecular Physics*, **1984**, 53, 1209-1223	1.7	23
12	Additions and corrections. Equilibrium Properties of the Gaussian Overlap Fluid. *The Journal of Physical Chemistry*, **1984**, 88, 2678-2678		4
11	On series expansions of orientation-dependent properties of pairs of non-spherical molecules. *Molecular Physics*, **1983**, 49, 251-274	1.7	7
10	Equilibrium properties of molecular fluids with charge distributions of quadrupolar symmetry. *Journal of Chemical Physics*, **1983**, 78, 4126-4132	3.9	14
9	Integral equations for polar molecular fluids. *Molecular Physics*, **1983**, 48, 181-191	1.7	22
8	Equilibrium properties of the Gaussian overlap fluid. Monte Carlo simulation and thermodynamic perturbation theory. *The Journal of Physical Chemistry*, **1983**, 87, 2852-2858		25
7	Deviations from two-dimensionality in classical adsorbed films. *Surface Science*, **1982**, 122, 401-407	1.8	12

6	Numerical solution of the RISM equations for the site-site 12-6 potential. *Molecular Physics*, **1982**, 47, 435-442	1.7	40
5	Theory of monolayer physical adsorption. II. Fluid phases on a periodic surface. *Journal of Chemical Physics*, **1981**, 74, 6431-6439	3.9	41
4	Mixtures of hard spherocylinders and hard spheres. *Molecular Physics*, **1980**, 39, 977-988	1.7	32
3	Non-additive three body contributions to the lattice energies of nitrogen and carbon dioxide. *Molecular Physics*, **1980**, 39, 1163-1168	1.7	15
2	On the pair distribution function in fluids of hard non-spherical molecules. *Molecular Physics*, **1979**, 38, 1699-1702	1.7	13
1	Virial equation of state for rigid spherocylinders. *Molecular Physics*, **1978**, 35, 1337-1342	1.7	38