Minoru T Miyahara

List of Publications by Year
in descending order

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102 papers	3,361 citations	159573 30 h-index	155644 55 g-index
105 all docs	105 docs citations	105 times ranked	3002 citing authors

#	Article	IF	Citations
1	Nano Bubbles on a Hydrophobic Surface in Water Observed by Tapping-Mode Atomic Force Microscopy. Langmuir, 2000, 16, 6377-6380.	3.5	612
2	Attraction between Hydrophobic Surfaces with and without Gas Phase. Langmuir, 2000, 16, 5681-5687.	3.5	204
3	Freezing/melting phenomena for Lennard-Jones methane in slit pores: A Monte Carlo study. Journal of Chemical Physics, 1997, 106, 2865-2880.	3.0	187
4	Mechanism for Stripe Pattern Formation on Hydrophilic Surfaces by Using Convective Self-Assembly. Langmuir, 2009, 25, 7287-7295.	3.5	121
5	Synthesis and adsorption properties of ZIF-8 nanoparticles using a micromixer. Chemical Engineering Journal, 2013, 227, 145-150.	12.7	114
6	High-throughput gas separation by flexible metalâ€“organic frameworks with fast gating and thermal management capabilities. Nature Communications, 2020, 11, 3867.	12.8	99
7	Origin of Long-Range Attractive Force between Surfaces Hydrophobized by Surfactant Adsorption. Langmuir, 2002, 18, 5713-5719.	3.5	93
8	Adsorption-Induced Structural Transition of ZIF-8: A Combined Experimental and Simulation Study. Journal of Physical Chemistry C, 2014, 118, 8445-8454.	3.1	84
9	Modeling Capillary Condensation in Cylindrical Nanopores:Â A Molecular Dynamics Study. Langmuir, 2000, 16, 4293-4299.	3.5	80
10	Synthesis of zeolitic imidazolate framework-8 particles of controlled sizes, shapes, and gate adsorption characteristics using a central collision-type microreactor. Chemical Engineering Journal, 2017, 313, 724-733.	12.7	72
11	Graphene-based ordered framework with a diverse range of carbon polygons formed in zeolite nanochannels. Carbon, 2018, 129, 854-862.	10.3	70
12	Liquid Drops on Homogeneous and Chemically Heterogeneous Surfaces:Â A Two-Dimensional Lattice Boltzmann Study. Langmuir, 2003, 19, 9086-9093.	3.5	61
13	Intrinsic Thermal Management Capabilities of Flexible Metalâ€“Organic Frameworks for Carbon Dioxide Separation and Capture. ACS Applied Materials & Interfaces, 2017, 9, 41066-41077.	8.0	61
14	Free energy analysis for adsorption-induced lattice transition of flexible coordination framework. Journal of Chemical Physics, 2009, 130, 164707.	3.0	57
15	Determination of adsorption equilibria in pores by molecular dynamics in a unit cell with imaginary gas phase. Journal of Chemical Physics, 1997, 106, 8124-8134.	3.0	56
16	Force-driven reversible liquidâ€“gas phase transition mediated by elastic nanosponges. Nature Communications, 2019, 10, 2559.	12.8	46
17	Simulation study for adsorption-induced structural transition in stacked-layer porous coordination polymers: Equilibrium and hysteretic adsorption behaviors. Journal of Chemical Physics, 2013, 138, 054708.	3.0	45
18	Understanding gate adsorption behaviour of CO₂ on elastic layer-structured metalâ€“organic framework-11. Dalton Transactions, 2016, 45, 4193-4202.	3.3	43

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19	Spontaneous Formation of Cluster Array of Gold Particles by Convective Self-Assembly. Langmuir, 2012, 28, 12982-12988.	3.5	42
20	Energy-saving drying technology for porous media using liquefied DME gas. Adsorption, 2008, 14, 467-473.	3.0	41
21	Modeling and Visualization of CO₂ Adsorption on Elastic Layer-Structured Metalâ€"Organic Framework-11: Toward a Better Understanding of Gate Adsorption Behavior. Journal of Physical Chemistry C, 2015, 119, 11533-11543.	3.1	41
22	Triple point of Lennard-Jones fluid in slit nanopore: Solidification of critical condensate. Journal of Chemical Physics, 2004, 120, 6173-6179.	3.0	40
23	Solidification of Lennard-Jones Fluid in Cylindrical Nanopores and Its Geometrical Hindrance Effect: A Monte Carlo Study. Langmuir, 2000, 16, 8529-8535.	3.5	37
24	Fabrication of Colloidal Grid Network by Two-Step Convective Self-Assembly. Langmuir, 2011, 27, 5290-5295.	3.5	37
25	Solidâ€"liquid phase transition of Lennard-Jones fluid in slit pores under tensile condition. Journal of Chemical Physics, 2000, 112, 9909-9916.	3.0	36
26	Langevin Dynamics Simulations of Cationic Surfactants in Aqueous Solutions Using Potentials of Mean Force. Langmuir, 2004, 20, 2017-2025.	3.5	35
27	Coordination and Reduction Processes in the Synthesis of Dendrimer-Encapsulated Pt Nanoparticles. Langmuir, 2010, 26, 2339-2345.	3.5	35
28	Interaction Forces between Colloidal Particles in Alcoholâˆ'Water Mixtures Evaluated by Simple Model Simulations. Langmuir, 2000, 16, 3361-3371.	3.5	31
29	Wetting-induced interaction between rigid nanoparticle and plate: A Monte Carlo study. Journal of Chemical Physics, 2002, 116, 9500-9509.	3.0	31
30	Capillary condensation model within nano-scale pores studied with molecular dynamics simulation.. Journal of Chemical Engineering of Japan, 1997, 30, 274-284.	0.6	30
31	Verification of the Condensation Model for Cylindrical Nanopores. Analysis of the Nitrogen Isotherm for FSM-16. Langmuir, 2000, 16, 6622-6627.	3.5	30
32	Molecular Dynamics Simulations of Surfactant Aggregation on Hydrophilic Walls in Micellar Solutions. Langmuir, 1999, 15, 578-586.	3.5	29
33	A Reexamination of Mean Force Potentials for the Methane Pair and the Constituent Ion Pairs of NaCl in Water.. Journal of Chemical Engineering of Japan, 2003, 36, 57-65.	0.6	29
34	Colloidal Stripe Pattern with Controlled Periodicity by Convective Self-Assembly with Liquid-Level Manipulation. ACS Applied Materials & Interfaces, 2012, 4, 3184-3190.	8.0	29
35	Adsorption and order formation of colloidal nanoparticles on a substrate: A Brownian dynamics study. Journal of Chemical Physics, 2004, 120, 1524-1534.	3.0	25
36	Characterization of mixing performance in a microreactor and its application to the synthesis of porous coordination polymer particles. Advanced Powder Technology, 2017, 28, 3104-3110.	4.1	25

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37	Adsorption-Induced Structural Transition of an Interpenetrated Porous Coordination Polymer: Detailed Exploration of Free Energy Profiles. Langmuir, 2012, 28, 5093-5100.	3.5	24
38	Concentration dependence of surface diffusivity of nitrobenzene and benzonitrile in liquid phase adsorption onto an activated carbon.. Journal of Chemical Engineering of Japan, 1992, 25, 408-414.	0.6	23
39	Reversible Pore Size Control of Elastic Microporous Material by Mechanical Force. Chemistry - A European Journal, 2013, 19, 13009-13016.	3.3	23
40	Fluids in nanospaces: molecular simulation studies to find out key mechanisms for engineering. Adsorption, 2014, 20, 213-223.	3.0	23
41	Flow Synthesis of Plasmonic Gold Nanoshells via a Microreactor. Particle and Particle Systems Characterization, 2015, 32, 234-242.	2.3	23
42	Correlation of Concentration-dependent Surface Diffusivity in Liquid Phase Adsorption.. Journal of Chemical Engineering of Japan, 1993, 26, 510-516.	0.6	21
43	Particulate pattern formation and its morphology control by convective self-assembly. Advanced Powder Technology, 2013, 24, 897-907.	4.1	21
44	<i>In Situ</i> Observation of Meniscus Shape Deformation with Colloidal Stripe Pattern Formation in Convective Self-Assembly. Langmuir, 2015, 31, 4121-4128.	3.5	20
45	Mechanism of Kinetically Controlled Capillary Condensation in Nanopores: A Combined Experimental and Monte Carlo Approach. ACS Nano, 2017, 11, 269-276.	14.6	20
46	Dynamics of order formation by colloidal adsorption onto a substrate studied with Brownian dynamics. Journal of Chemical Physics, 2005, 122, 104704.	3.0	19
47	Dependence of adsorption-induced structural transition on framework structure of porous coordination polymers. Journal of Chemical Physics, 2014, 140, 044707.	3.0	19
48	Capillary condensation in mesoporous silica with surface roughness. Adsorption, 2013, 19, 631-641.	3.0	18
49	Sublimation phenomena of Lennard-Jones fluids in slit nanopores. Journal of Chemical Physics, 2007, 126, 054703.	3.0	17
50	Sublimation Phenomena in Slit Nanopores: Lennard-Jones Phase Diagram. Adsorption, 2005, 11, 295-299.	3.0	16
51	Flow synthesis of silver nanoshells using a microreactor. Chemical Engineering Journal, 2019, 374, 674-683.	12.7	16
52	Synthesis and photoluminescence characterization of dendrimer-encapsulated CdS quantum dots. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2012, 411, 12-17.	4.7	15
53	Critical energy barrier for capillary condensation in mesopores: Hysteresis and reversibility. Journal of Chemical Physics, 2016, 144, 164705.	3.0	15
54	Flow microreactor synthesis of gold nanoshells and patchy particles. Advanced Powder Technology, 2016, 27, 2335-2341.	4.1	15

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55	Free energy calculations for adsorption-induced deformation of flexible metalâ€"organic frameworks. Current Opinion in Chemical Engineering, 2019, 24, 19-25.	7.8	15
56	Flow Microreactor Synthesis of Zeolitic Imidazolate Framework (ZIF)@ZIF Coreâ€"Shell Metalâ€"Organic Framework Particles and Their Adsorption Properties. Langmuir, 2021, 37, 3858-3867.	3.5	15
57	Condensation Model for Cylindrical Nanopores Applied to Realistic Porous Glass Generated by Molecular Simulation. Langmuir, 2000, 16, 6064-6066.	3.5	14
58	Freezing of Lennard-Jones fluid in cylindrical nanopores underÂtensile conditions. Adsorption, 2007, 13, 191-195.	3.0	14
59	Simple Evaluation Scheme of Adsorbate-Solid Interaction for Nano-Pore Characterization Studied with Monte Carlo Simulation.. Journal of Chemical Engineering of Japan, 2000, 33, 103-112.	0.6	14
60	Liquid-phase capillary condensation and adsorption isothern. AIChE Journal, 1994, 40, 1549-1557.	3.6	13
61	Comprehensive Modeling of Capillary Condensation in Open-Ended Nanopores: Equilibrium, Metastability, and Spinodal. Journal of Physical Chemistry C, 2017, 121, 26877-26886.	3.1	13
62	Modeling Pt2+Coordination Process within Poly(amidoamine) Dendrimers for Synthesis of Dendrimer-Encapsulated Pt Nanoparticles. Industrial & Engineering Chemistry Research, 2011, 50, 7332-7337.	3.7	12
63	Determination of phase equilibria in confined systems by open pore cell Monte Carlo method. Journal of Chemical Physics, 2013, 138, 084709.	3.0	12
64	Free Energy Analysis for Adsorption-Induced Structural Transition of Colloidal Zeolitic Imidazolate Framework-8 Particles. Journal of Physical Chemistry C, 2017, 121, 20366-20374.	3.1	12
65	Single-Electrode Capacitance and Charged State in Interfacial Region within Nano-Porous Carbon Electrode for Electric Double Layer Capacitor.. Kagaku Kogaku Ronbunshu, 1997, 23, 512-518.	0.3	11
66	Molecular simulation of condensation process of Lennard-Jones fluids confined in nanospace with jungle-gym structure. Adsorption, 2008, 14, 165-170.	3.0	11
67	CHARACTERISTICS AND BEHAVIOR OF NANOPARTICLES AND ITS DISPERSION SYSTEMS. , 2008, , 113-176.		11
68	In silico synthesis of carbon molecular sieves for high-performance air separation. Carbon, 2019, 141, 626-634.	10.3	11
69	Interaction Forces between Nanoparticles in Diolâ^'Water Mixtures:Â A Molecular Dynamics Study with Coarse-Grained Model. Langmuir, 2002, 18, 4171-4178.	3.5	10
70	Slacking of Gate Adsorption Behavior on Metalâ€"Organic Frameworks under an External Force. ACS Applied Materials & Interfaces, 2021, 13, 30213-30223.	8.0	10
71	Capillary Phase Separation in Solvent Dehydration by Hygroscopic Porous Adsorbents.. Journal of Chemical Engineering of Japan, 1997, 30, 683-690.	0.6	9
72	Controlling self-assembled structure of Au nanoparticles by convective self-assembly with liquid-level manipulation. Advanced Powder Technology, 2014, 25, 811-815.	4.1	8

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73	CHF₃â€“CHClF₂ Binary Competitive Adsorption Equilibria in Graphitic Slit Pores: Monte Carlo Simulations and Breakthrough Curve Experiments. Industrial & Engineering Chemistry Research, 2018, 57, 6440-6450.	3.7	8
74	On the Convective Self-Assembly of Colloidal Particles in Nanofluid Based on in Situ Measurements of Interaction Forces. Langmuir, 2019, 35, 11533-11541.	3.5	8
75	Efficiency of Thermal Management Using Phase-Change Material for Nonisothermal Adsorption Process. Industrial & Engineering Chemistry Research, 2020, 59, 14485-14495.	3.7	8
76	HEAT TRANSFER IN A CONDUCTIVE-HEATING AGITATED DRYER. Drying Technology, 1994, 12, 299-328.	3.1	7
77	Hydrogen Isotope Separation in Carbon Nanopores. Journal of Chemical Engineering of Japan, 2011, 44, 355-363.	0.6	6
78	Potential theory for gate adsorption on soft porous crystals. Molecular Simulation, 2015, 41, 1329-1338.	2.0	6
79	Room-Temperature Synthesis of Ni and Pt-Co Alloy Nanoparticles Using a Microreactor. Frontiers in Chemical Engineering, 2021, 3, .	2.7	6
80	Multiple Roles of Polyethylenimine during Synthesis of 10 nm Thick Continuous Silver Nanoshells. Langmuir, 2020, 36, 4511-4518.	3.5	5
81	High-Performance Carbon Molecular Sieves for the Separation of Propylene and Propane. ACS Applied Materials & Interfaces, 2022, 14, 17878-17888.	8.0	5
82	Heat transfer from a submerged tube moving in a granular bed.. Journal of Chemical Engineering of Japan, 1988, 21, 141-147.	0.6	4
83	Order formation of colloidal nanoparticles adsorbed on a substrate with friction. Advanced Powder Technology, 2010, 21, 57-63.	4.1	4
84	Low-temperature hydrogen-graphite system revisited: Experimental study and Monte Carlo simulation. Journal of Chemical Physics, 2019, 151, 024704.	3.0	4
85	Synthesis of zeolite-templated carbons for methane storage: A molecular simulation study. Tanso, 2018, 2018, 197-203.	0.1	4
86	Flow Synthetic Process of SiO2@Au Core-Shell Nanoparticles by Using Microreactor. Journal of the Society of Powder Technology, Japan, 2013, 50, 478-484.	0.1	3
87	Mechanism of CO2 Capacity Reduction of Flexible Metal-Organic Framework Caused by Water Adsorption. Frontiers in Materials, 2022, 9, .	2.4	3
88	Triple Point of a Lennard-Jones Fluid in Nanopores with Zero Excess Pore Wall Energy. Adsorption Science and Technology, 2009, 27, 735-743.	3.2	2
89	What is the Smallest Atom as a Probe for Characterizing Nanostructures?. Journal of Physical Chemistry C, 2018, 122, 15446-15455.	3.1	2
90	Controlling Self-Assembled Structure of Au Nanoparticles by Convective Self-Assembly with Liquid-Level Manipulation. Journal of the Society of Powder Technology, Japan, 2012, 49, 356-361.	0.1	1

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91	Diffusion phenomena of propane and propylene in colloidal zeolitic imidazolate Framework-8 particles. Journal of the Taiwan Institute of Chemical Engineers, 2018, 90, 79-84.	5.3	1
92	Monolayer Formation of Submicron-sized Colloidal Particles by Drag Coating Convective Self-assembly. Journal of the Society of Powder Technology, Japan, 2018, 55, 582-587.	0.1	1
93	Synthesis and Characterization of Core-Shell Metal-Organic Framework (ZIF-67@ZIF-8) Particles. Journal of the Society of Powder Technology, Japan, 2019, 56, 181-186.	0.1	1
94	Prediction of Adsorption Rate on Slab with an Adsorption Amount-dependent Diffusion Coefficient. Kagaku Kogaku Ronbunshu, 2004, 30, 243-245.	0.3	1
95	Single-Electrode Transient Behavior for Electric Double Layer Capacitor Composed of Nano-Porous Carbon Electrode.. Kagaku Kogaku Ronbunshu, 1997, 23, 519-525.	0.3	0
96	Numerical Simulation of Meniscus Shape Evolution in Vertical-Deposition Convective Self-Assembly. Journal of the Society of Powder Technology, Japan, 2014, 51, 355-362.	0.1	0
97	High-performance Gas Separation System Using Gate-type Adsorbents. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2021, 28, 143-147.	0.0	0
98	Regular Regime and Drying Characteristic Function of Porous Slab with Surface Resistance for Mass Transfer. Kagaku Kogaku Ronbunshu, 2004, 30, 368-371.	0.3	0
99	PHASE BEHAVIOR OF SIMPLE FLUIDS CONFINED IN COORDINATION NANOSPACE. , 2007, , .		0
100	Understanding Recognition Property of Isotopologues on Metal-Organic Framework. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2015, 23, 215-217.	0.0	0
101	Mechanism of the Self-assembly Process of Colloidal Particles in Nanofluid. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2018, 26, 153-156.	0.0	0
102	Synthesis and Characterization of Core-shell Soft MOF Particles. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2018, 26, 183-186.	0.0	0