

Yun-Ho Ahn

List of Publications by Year in descending order

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89
papers

4,030
citations

147566

31
h-index

118652

62
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89
all docs

89
docs citations

89
times ranked

2796
citing authors

#	ARTICLE	IF	CITATIONS
1	Tuning clathrate hydrates for hydrogen storage. <i>Nature</i> , 2005, 434, 743-746.	13.7	737
2	Recovery of CO ₂ from Flue Gas Using Gas Hydrate: A Thermodynamic Verification through Phase Equilibrium Measurements. <i>Environmental Science & Technology</i> , 2000, 34, 4397-4400.	4.6	527
3	Recovering Methane from Solid Methane Hydrate with Carbon Dioxide. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 5048-5051.	7.2	332
4	Methane and Carbon Dioxide Hydrate Phase Behavior in Small Porous Silica Gels: A Three-Phase Equilibrium Determination and Thermodynamic Modeling. <i>Langmuir</i> , 2002, 18, 9164-9170.	1.6	140
5	Facile one-pot synthesis of gold nanoparticles using alcohol ionic liquids. <i>Journal of Materials Chemistry</i> , 2006, 16, 1315.	6.7	134
6	Physical and electrochemical properties of 1-butyl-3-methylimidazolium bromide, 1-butyl-3-methylimidazolium iodide, and 1-butyl-3-methylimidazolium tetrafluoroborate. <i>Korean Journal of Chemical Engineering</i> , 2004, 21, 1010-1014.	1.2	126
7	Multiple-Phase Hydrate Equilibria of the Ternary Carbon Dioxide, Methane, and Water Mixtures. <i>Journal of Physical Chemistry B</i> , 2001, 105, 10084-10090.	1.2	115
8	Intercalation of Gas Molecules in Graphene Oxide Interlayer: The Role of Water. <i>Journal of Physical Chemistry C</i> , 2014, 118, 11142-11148.	1.5	83
9	Structure and Guest Distribution of the Mixed Carbon Dioxide and Nitrogen Hydrates As Revealed by X-ray Diffraction and ¹³ C NMR Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2004, 108, 530-534.	1.2	75
10	Hydrate phase equilibria for gas mixtures containing carbon dioxide: A proof-of-concept to carbon dioxide recovery from multicomponent gas stream. <i>Korean Journal of Chemical Engineering</i> , 2000, 17, 659-667.	1.2	73
11	¹³ C NMR analysis and gas uptake measurements of pure and mixed gas hydrates: Development of natural gas transport and storage method using gas hydrate. <i>Korean Journal of Chemical Engineering</i> , 2003, 20, 1085-1091.	1.2	73
12	Swapping Phenomena Occurring in Deep-Sea Gas Hydrates. <i>Energy & Fuels</i> , 2008, 22, 3160-3163.	2.5	72
13	Nondestructive natural gas hydrate recovery driven by air and carbon dioxide. <i>Scientific Reports</i> , 2014, 4, 6616.	1.6	54
14	Effect of Hydrate Shell Formation on the Stability of Dry Water. <i>Journal of Physical Chemistry C</i> , 2015, 119, 1690-1699.	1.5	52
15	Phase equilibria and kinetic behavior of CO ₂ hydrate in electrolyte and porous media solutions: application to ocean sequestration of CO ₂ . <i>Korean Journal of Chemical Engineering</i> , 2002, 19, 673-678.	1.2	51
16	Structural, Mineralogical, and Rheological Properties of Methane Hydrates in Smectite Clays. <i>Journal of Chemical & Engineering Data</i> , 2009, 54, 1284-1291.	1.0	48
17	Experimental verifications of Mpemba-like behaviors of clathrate hydrates. <i>Korean Journal of Chemical Engineering</i> , 2016, 33, 1903-1907.	1.2	46
18	Spectroscopic Observation of Critical Guest Concentration Appearing in <i>tert</i> -Butyl Alcohol Clathrate Hydrate. <i>Journal of Physical Chemistry B</i> , 2008, 112, 8443-8446.	1.2	45

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19	Kinetics of formation of carbon dioxide clathrate hydrates. Korean Journal of Chemical Engineering, 1996, 13, 620-626.	1.2	44
20	Fabrication of silver nanoparticles via self-regulated reduction by 1-(2-hydroxyethyl)-3-methylimidazolium tetrafluoroborate. Korean Journal of Chemical Engineering, 2007, 24, 856-859.	1.2	43
21	Clathrate Phase Equilibria for the Water + Deuterium Oxide + Carbon Dioxide and Water + Deuterium Oxide + Chlorodifluoromethane (R22) Systems. Journal of Chemical & Engineering Data, 1996, 41, 1114-1116.	1.0	42
22	Generalized model for predicting phase behavior of clathrate hydrate. AIChE Journal, 2002, 48, 1317-1330.	1.8	42
23	Spectroscopic Identification of Amyl Alcohol Hydrates through Free OH Observation. Journal of Physical Chemistry B, 2009, 113, 10562-10565.	1.2	42
24	Size-controlled electrochemical synthesis of palladium nanoparticles using morpholinium ionic liquid. Korean Journal of Chemical Engineering, 2007, 24, 1089-1094.	1.2	39
25	Natural gas hydrate as a potential energy resource: From occurrence to production. Korean Journal of Chemical Engineering, 2013, 30, 771-786.	1.2	38
26	Solubilities and Vapor Pressures of the Water + Lithium Bromide + Ethanolamine System. Journal of Chemical & Engineering Data, 1996, 41, 279-281.	1.0	37
27	Surface tension and viscosity of 1-butyl-3-methylimidazolium iodide and 1-butyl-3-methylimidazolium tetrafluoroborate, and solubility of lithium bromide+1-butyl-3-methylimidazolium bromide in water. Korean Journal of Chemical Engineering, 2006, 23, 113-116.	1.2	37
28	Hydration number and two-phase equilibria of CH ₄ hydrate in the deep ocean sediments. Geophysical Research Letters, 2002, 29, 85-1-85-4.	1.5	36
29	Occurrence of near-seafloor gas hydrates and associated cold vents in the Ulleung Basin, East Sea. Geosciences Journal, 2009, 13, 371-385.	0.6	36
30	Phase behavior of gas hydrates in nanoporous materials: Review. Korean Journal of Chemical Engineering, 2016, 33, 1977-1988.	1.2	34
31	Clathrate phase equilibria for the water-phenol-carbon dioxide system. AIChE Journal, 1997, 43, 1884-1893.	1.8	32
32	Abnormal methane occupancy of natural gas hydrates in deep sea floor sediments. Energy and Environmental Science, 2011, 4, 421-424.	15.6	31
33	CO ₂ hydrate behavior in the deep ocean sediments; phase equilibrium, formation kinetics, and solubility. Geophysical Research Letters, 2002, 29, 30-1.	1.5	30
34	Effect of Hydrophobic Silica Nanoparticles on the Kinetics of Methane Hydrate Formation in Water-in-Oil Emulsions. Energy & Fuels, 2019, 33, 523-530.	2.5	29
35	Spectroscopic Observation of the Hydroxy Position in Butanol Hydrates and Its Effect on Hydrate Stability. ChemPhysChem, 2015, 16, 2876-2881.	1.0	28
36	Isolation of vindoline from Catharanthus roseus by supercritical fluid extraction. Biotechnology Progress, 1992, 8, 583-586.	1.3	27

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37	Spectroscopic evidences of the double hydrogen hydrates stabilized with ethane and propane. Korean Journal of Chemical Engineering, 2007, 24, 624-627.	1.2	27
38	Compositional and structural identification of natural gas hydrates collected at site 1249 on ocean drilling program leg 204. Korean Journal of Chemical Engineering, 2005, 22, 569-572.	1.2	25
39	Solubilities, Vapor Pressures, Densities, and Viscosities of the LiBr + LiI + HO(CH ₂) ₃ OH + H ₂ O System. Journal of Chemical & Engineering Data, 2001, 46, 79-83.	1.0	23
40	Phase behavior and structure transition of the mixed methane and nitrogen hydrates. Korean Journal of Chemical Engineering, 2006, 23, 299-302.	1.2	23
41	Thermal stability and ionic conductivity of the ionic clathrate hydrates incorporated with potassium hydroxide. Journal of Materials Chemistry, 2009, 19, 6542.	6.7	23
42	Heat Capacities of the Water + Lithium Bromide + Ethanolamine and Water + Lithium Bromide + 1,3-Propanediol Systems. Journal of Chemical & Engineering Data, 1997, 42, 371-373.	1.0	22
43	Vapor-liquid equilibria for the binary monoethanolamine+ water and monoethanolamine+ethanol systems. Korean Journal of Chemical Engineering, 1997, 14, 146-148.	1.2	22
44	Phase Equilibria of R22 (CHClF ₂) Hydrate Systems in the Presence of NaCl, KCl, and MgCl ₂ . Journal of Chemical & Engineering Data, 2000, 45, 1150-1153.	1.0	22
45	Phase Equilibria of Carbon Dioxide Hydrate System in the Presence of Sucrose, Glucose, and Fructose. Journal of Chemical & Engineering Data, 1999, 44, 1081-1084.	1.0	20
46	One-phase preparation of palladium nanoparticles using thiol-functionalized ionic liquid. Korean Journal of Chemical Engineering, 2005, 22, 717-720.	1.2	18
47	Effect of Molecular Nitrogen on Multiple Hydrogen Occupancy in Clathrate Hydrates. Journal of Physical Chemistry C, 2014, 118, 20203-20208.	1.5	18
48	Thermal and electrochemical properties of morpholinium salts with bromide anion. Korean Journal of Chemical Engineering, 2005, 22, 945-948.	1.2	17
49	Synthesis and ionic conductivities of lithium-doped morpholinium salts. Korean Journal of Chemical Engineering, 2005, 22, 281-284.	1.2	16
50	Thermodynamic and Spectroscopic Identification of Methane Inclusion in the Binary Heterocyclic Compound Hydrates. Journal of Physical Chemistry C, 2013, 117, 23515-23521.	1.5	16
51	Electrical Resistivity Measurements of Methane Hydrate during N ₂ /CO ₂ Gas Exchange. Energy & Fuels, 2017, 31, 708-713.	2.5	15
52	Structure identification of binary 1-propanol+methane hydrate using neutron powder diffraction. Korean Journal of Chemical Engineering, 2017, 34, 2514-2518.	1.2	15
53	Tuning clathrate hydrates for hydrogen storage. , 2010, , 285-288.		14
54	Effect of Guest-Host Hydrogen Bonding on Thermodynamic Stability of Clathrate Hydrates: Diazine Isomers. Journal of Physical Chemistry C, 2015, 119, 10218-10226.	1.5	14

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55	Gas hydrate inhibition by 3-hydroxytetrahydrofuran: Spectroscopic identifications and hydrate phase equilibria. <i>Fluid Phase Equilibria</i> , 2016, 413, 65-70.	1.4	14
56	Poly(vinylidene fluoride)-hexafluoropropylene gel electrolytes based on N-(2-hydroxyethyl)-N-methyl morpholinium ionic liquids. <i>Korean Journal of Chemical Engineering</i> , 2006, 23, 940-947.	1.2	13
57	Hydrate seeding effect on the metastability of CH ₄ hydrate. <i>Korean Journal of Chemical Engineering</i> , 2020, 37, 341-349.	1.2	13
58	Inclusion of thiophene as a co-guest in a structure II hydrate with methane gas. <i>RSC Advances</i> , 2014, 4, 26176.	1.7	12
59	Gauche conformation of acyclic guest molecules appearing in the large cages of structure-H clathrate hydrates. <i>Korean Journal of Chemical Engineering</i> , 2007, 24, 843-846.	1.2	11
60	Spectroscopic and thermodynamic investigations of clathrate hydrates of methacrolein. <i>RSC Advances</i> , 2017, 7, 12359-12365.	1.7	11
61	Effect of Naphthenate Formation on the Anti-Adhesive Behavior of Clathrate Hydrates at a Water/Oil Interface. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 5064-5070.	1.8	11
62	Phase and kinetic behavior of the mixed methane and carbon dioxide hydrates. <i>Korean Journal of Chemical Engineering</i> , 2006, 23, 283-287.	1.2	10
63	Size-selective Pd nanoparticles stabilized by dialkylmorpholinium ionic liquids. <i>Korean Journal of Chemical Engineering</i> , 2009, 26, 760-764.	1.2	10
64	Heat capacity measurement and cycle simulation of the trifluoroethanol (TFE) +quinoline mixture as a new organic working fluid used in absorption heat pump. <i>Korean Journal of Chemical Engineering</i> , 2003, 20, 762-767.	1.2	9
65	Replacement of Methane Hydrate by Carbon Dioxide: ¹³ C NMR Study for Studying a Limit to the Degree of Substitution. <i>Studies in Surface Science and Catalysis</i> , 2004, 153, 495-500.	1.5	9
66	Thermodynamic Stability of Structure II Methyl Vinyl Ketone Binary Clathrate Hydrates and Effects of Secondary Guest Molecules on Large Guest Conformation. <i>ACS Omega</i> , 2017, 2, 1601-1607.	1.6	9
67	Spectroscopic observation of H ₂ migration in structure-I clathrate hydrate. <i>Korean Journal of Chemical Engineering</i> , 2008, 25, 1397-1400.	1.2	8
68	Equilibrium and crystallographic measurements of the binary tetrahydrofuran and helium clathrate hydrates. <i>Korean Journal of Chemical Engineering</i> , 2008, 25, 154-157.	1.2	8
69	Phase Equilibria and Spectroscopic Identification of (2-Methylpropane-2-peroxol + Gaseous Guests) Hydrates. <i>Journal of Chemical & Engineering Data</i> , 2012, 57, 1128-1133.	1.0	8
70	Abnormal Proton Positioning of Water Framework in the Presence of Paramagnetic Guest within Ion-Doped Clathrate Hydrate Host. <i>Journal of Physical Chemistry C</i> , 2014, 118, 15193-15199.	1.5	8
71	Effects of Large Guest Molecular Structure on Thermal Expansion Behaviors in Binary (C ₄ H ₈ O + CH ₄) Clathrate Hydrates. <i>Journal of Physical Chemistry C</i> , 2019, 123, 20705-20714.	1.5	8
72	Destruction of CFC113 in supercritical and subcritical water. <i>Korean Journal of Chemical Engineering</i> , 1996, 13, 640-641.	1.2	7

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73	In situ Raman and ¹³ C NMR spectroscopic analysis of gas hydrates formed in confined water: application to natural gas capture. Canadian Journal of Chemistry, 2015, 93, 1035-1042.	0.6	7
74	Hydrophilic pore-blocked metal-organic frameworks: a simple route to a highly selective CH ₄ /N ₂ separation. RSC Advances, 2015, 5, 2749-2755.	1.7	7
75	Thermodynamic and spectroscopic identification of aldehyde hydrates. Korean Journal of Chemical Engineering, 2016, 33, 1897-1902.	1.2	7
76	Differential Enthalpies of Dilution of the Lithium Bromide + 1,3-Propanediol + Water and Lithium Bromide + Lithium Iodide + Lithium Chloride + Lithium Nitrate + Water Systems. Journal of Chemical & Engineering Data, 2002, 47, 397-399.	1.0	6
77	Metastability of Ethane Clathrate Hydrate Induced by [Co(NH ₃) ₆] ³⁺ Complex. Journal of Physical Chemistry C, 2011, 115, 2558-2562.	1.5	6
78	One-dimensional approaches for methane hydrate production by CO ₂ /N ₂ gas mixture in horizontal and vertical column reactor. Korean Journal of Chemical Engineering, 2016, 33, 1712-1719.	1.2	6
79	Spectroscopy Identification and Thermodynamic Stability of <i>tert</i> -Butyl Nitrite and Methane Clathrate Hydrate. Journal of Chemical & Engineering Data, 2010, 55, 5906-5909.	1.0	5
80	Guest molecule dynamics and guest-specific degassing phenomenon of binary gas hydrate investigated by terahertz time-domain spectroscopy. RSC Advances, 2013, 3, 8857.	1.7	5
81	Temperature- and Pressure-Induced Structural Transition of Binary Clathrate Hydrates. ChemPhysChem, 2019, 20, 429-435.	1.0	5
82	Experimental verification of anomalous chloride enrichment related to methane hydrate formation in deep-sea sediments. AIChE Journal, 2012, 58, 322-328.	1.8	4
83	Reactive radical cation transfer in the cages of icy clathrate hydrates. Korean Journal of Chemical Engineering, 2015, 32, 350-353.	1.2	4
84	Thermal expansivity of ¹³ C-irradiated clathrate hydrate with intracavity conformational change. Chemical Physics Letters, 2018, 706, 14-18.	1.2	4
85	Structural identification of DCIO ₄ clathrate hydrates: Neutron powder diffraction analysis. Korean Journal of Chemical Engineering, 2016, 33, 1728-1735.	1.2	3
86	Correlation of the vapor-liquid equilibria of CFC, HCFC and fc mixtures: Critical evaluation of mixing rules. Korean Journal of Chemical Engineering, 1995, 12, 535-539.	1.2	1
87	Tuning magnetism via selective injection into ice-like clathrate hydrates. Korean Journal of Chemical Engineering, 2016, 33, 1706-1711.	1.2	1
88	Generalized thermodynamic behavior for the gaseous and liquid states I. Thermal conductivity. Korean Journal of Chemical Engineering, 1990, 7, 219-225.	1.2	0
89	The Inclusion of Hydrogen in Clathrate Hydrates of the Various Guests and Tuning of the <i>tert</i> -Butylamine Hydrate. Materials Research Society Symposia Proceedings, 2006, 927, 1.	0.1	0