Kyuchul Shin

List of Publications by Year
in descending order

54	1,525	331670 21	315739 38
papers	citations	h-index	g-index

55	55	55	916
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thermodynamic and kinetic hydrate inhibition performance of aqueous ethylene glycol solutions for natural gas. Chemical Engineering Science, 2013, 99, 184-190.	3.8	134
2	Methanol incorporation in clathrate hydrates and the implications for oil and gas pipeline flow assurance and icy planetary bodies. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8437-8442.	7.1	113
3	Kinetics of Methane Hydrate Replacement with Carbon Dioxide and Nitrogen Gas Mixture Using in Situ NMR Spectroscopy. Environmental Science & Technology, 2015, 49, 1964-1971.	10.0	111
4	Ammonia clathrate hydrates as new solid phases for Titan, Enceladus, and other planetary systems. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14785-14790.	7.1	99
5	Synergistic Hydrate Inhibition of Monoethylene Glycol with Poly(vinylcaprolactam) in Thermodynamically Underinhibited System. Journal of Physical Chemistry B, 2014, 118, 9065-9075.	2.6	78
6	Swapping Phenomena Occurring in Deep-Sea Gas Hydrates. Energy & Fuels, 2008, 22, 3160-3163.	5.1	72
7	Tetra-n-butylammonium Borohydride Semiclathrate: A Hybrid Material for Hydrogen Storage. Journal of Physical Chemistry A, 2009, 113, 6415-6418.	2.5	70
8	Catastrophic Growth of Gas Hydrates in the Presence of Kinetic Hydrate Inhibitors. Journal of Physical Chemistry A, 2013, 117, 13988-13995.	2.5	68
9	CH 4 -CO 2 replacement occurring in sII natural gas hydrates for CH 4 recovery and CO 2 sequestration. Energy Conversion and Management, 2017, 150, 356-364.	9.2	60
10	Effect of Hydrate Shell Formation on the Stability of Dry Water. Journal of Physical Chemistry C, 2015, 119, 1690-1699.	3.1	52
11	Spectroscopic Identification of Amyl Alcohol Hydrates through Free OH Observation. Journal of Physical Chemistry B, 2009, 113, 10562-10565.	2.6	42
12	Crystal engineering the clathrate hydrate lattice with NH₄F. CrystEngComm, 2014, 16, 7209-7217.	2.6	36
13	Molecular Dynamics Simulations of Hydrogen Bonding in Clathrate Hydrates with Ammonia and Methanol Guest Molecules. Journal of Chemical & Engineering Data, 2015, 60, 389-397.	1.9	34
14	Antifreezes Act as Catalysts for Methane Hydrate Formation from Ice. Angewandte Chemie - International Edition, 2014, 53, 10429-10433.	13.8	33
15	Preventing Gas Hydrate Agglomeration with Polymer Hydrogels. Energy & Fuels, 2014, 28, 4409-4420.	5.1	32
16	Clathrate nanocage reactor for the decomposition of greenhouse gas. Chemical Engineering Journal, 2019, 359, 1629-1634.	12.7	28
17	Structure Transition and Tuning Pattern in the Double (Tetramethylammonium Hydroxide + Gaseous) Tj ETQq1 1 0.784314 rgBT /Ove	2.6	25
18	Managing Hydrogen Bonding in Clathrate Hydrates by Crystal Engineering. Angewandte Chemie - International Edition, 2017, 56, 6171-6175.	13.8	25

#	Article	IF	Citations
19	Direct observation of atomic hydrogen generated from the water framework of clathrate hydrates. Chemical Communications, 2011, 47, 674-676.	4.1	24
20	Enhanced methane storage in clathrate hydrates induced by antifreezes. Chemical Engineering Journal, 2021, 418, 129304.	12.7	24
21	Maximized Proton Conductivity of the HPF6 Clathrate Hydrate by Structural Transformation. Journal of Physical Chemistry C, 2008, 112, 13332-13335.	3.1	21
22	Superoxide Ions Entrapped in Water Cages of Ionic Clathrate Hydrates. Journal of the American Chemical Society, 2010, 132, 3694-3696.	13.7	21
23	Managing Hydrogen Bonding in Clathrate Hydrates by Crystal Engineering. Angewandte Chemie, 2017, 129, 6267-6271.	2.0	20
24	LCST-Modulated Polymers for Synergistic Hydrate Inhibition in Methane Gas Flowlines. Energy & Fuels, 2018, 32, 3013-3021.	5.1	20
25	Structural Transformation due to Co-Host Inclusion in Ionic Clathrate Hydrates. Journal of the American Chemical Society, 2008, 130, 7180-7181.	13.7	19
26	Physicochemical Properties of Ionic Clathrate Hydrates. Chemistry - an Asian Journal, 2010, 5, 22-34.	3.3	19
27	Superexchange-Like Interaction of Encaged Molecular Oxygen in Nitrogen-Doped Water Cages of Clathrate Hydrates. Journal of the American Chemical Society, 2011, 133, 20399-20404.	13.7	17
28	Discrete Magnetic Patterns of Nonionic and Ionic Clathrate Hydrates. Journal of the American Chemical Society, 2008, 130, 17234-17235.	13.7	16
29	Structure identification of binary 1-propanol+methane hydrate using neutron powder diffraction. Korean Journal of Chemical Engineering, 2017, 34, 2514-2518.	2.7	15
30	Effect of Guestâ€“Host Hydrogen Bonding on Thermodynamic Stability of Clathrate Hydrates: Diazine Isomers. Journal of Physical Chemistry C, 2015, 119, 10218-10226.	3.1	14
31	Thermal Expansivity of Ionic Clathrate Hydrates Including Gaseous Guest Molecules. Journal of Physical Chemistry B, 2011, 115, 958-963.	2.6	12
32	Gauche conformation of acyclic guest molecules appearing in the large cages of structure-H clathrate hydrates. Korean Journal of Chemical Engineering, 2007, 24, 843-846.	2.7	11
33	Phase and kinetic behavior of the mixed methane and carbon dioxide hydrates. Korean Journal of Chemical Engineering, 2006, 23, 283-287.	2.7	10
34	Intracavity Conformational Changes in Clathrate Hydrates. Journal of Physical Chemistry C, 2016, 120, 17190-17195.	3.1	10
35	Thermodynamic Stability of Structure II Methyl Vinyl Ketone Binary Clathrate Hydrates and Effects of Secondary Guest Molecules on Large Guest Conformation. ACS Omega, 2017, 2, 1601-1607.	3.5	9
36	Spectroscopic observation of H2 migration in structure-I clathrate hydrate. Korean Journal of Chemical Engineering, 2008, 25, 1397-1400.	2.7	8

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37	Equilibrium and crystallographic measurements of the binary tetrahydrofuran and helium clathrate hydrates. Korean Journal of Chemical Engineering, 2008, 25, 154-157.	2.7	8
38	Abnormal Proton Positioning of Water Framework in the Presence of Paramagnetic Guest within Ion-Doped Clathrate Hydrate Host. Journal of Physical Chemistry C, 2014, 118, 15193-15199.	3.1	8
39	Crystal engineering and characterization of a structure-H ionic clathrate hydrate. Canadian Journal of Chemistry, 2015, 93, 850-857.	1.1	8
40	Structural Identification of Binary Tetrahydrofuran + O2 and 3-Hydroxytetrahydrofuran + O2 Clathrate Hydrates by Rietveld Analysis with Direct Space Method. Crystals, 2018, 8, 328.	2.2	8
41	Effects of Large Guest Molecular Structure on Thermal Expansion Behaviors in Binary (C4H8O + CH4) Clathrate Hydrates. Journal of Physical Chemistry C, 2019, 123, 20705-20714.	3.1	8
42	Spectroscopic Observations of Hostâ€“Guest Hydrogen Bonding in Binary Cyclopropanemethanol + Methane Hydrate. Journal of Physical Chemistry C, 2019, 123, 26777-26784.	3.1	8
43	In situ Raman and 13C NMR spectroscopic analysis of gas hydrates formed in confined water: application to natural gas capture. Canadian Journal of Chemistry, 2015, 93, 1035-1042.	1.1	7
44	Metastability of Ethane Clathrate Hydrate Induced by [Co(NH3)6]3+ Complex. Journal of Physical Chemistry C, 2011, 115, 2558-2562.	3.1	6
45	Effect of kinetic hydrate inhibitor and liquid hydrocarbon on the heterogeneous segregation and deposition of gas hydrate particles. Korean Journal of Chemical Engineering, 2014, 31, 2177-2182.	2.7	6
46	Highly Efficient Recovery of Water-Soluble Polymers in Synergistic Kinetic Inhibition of Gas Hydrate Formation. ACS Applied Polymer Materials, 2019, 1, 130-135.	4.4	6
47	Spectroscopy Identification and Thermodynamic Stability of tert-Butyl Nitrite and Methane Clathrate Hydrate. Journal of Chemical & Engineering Data, 2010, 55, 5906-5909.	1.9	5
48	Managing hydrogen bonding in the clathrate hydrate of the 1-pentanol guest molecule. CrystEngComm, 2021, 23, 4708-4716.	2.6	5
49	Incorporation of Ammonium Fluoride and Methanol in Carbon Dioxide Clathrate Hydrates and Their Significance for Hydrate-Based Gas Separation. Industrial & Engineering Chemistry Research, 2021, 60, 11267-11276.	3.7	5
50	Thermal expansivity of Î³-irradiated clathrate hydrate with intracavity conformational change. Chemical Physics Letters, 2018, 706, 14-18.	2.6	4
51	Solid-state conversion of metal oleate precursors for the preparation of LiNi1/3Co1/3Mn1/3O2 as cathode material for lithium-ion batteries. Korean Journal of Chemical Engineering, 2020, 37, 1258-1265.	2.7	4
52	Structural identification of DClO4 clathrate hydrates: Neutron powder diffraction analysis. Korean Journal of Chemical Engineering, 2016, 33, 1728-1735.	2.7	3
53	Effect of Methanol Guests on Thermal Properties of NH₄F-Doped THF Clathrate Hydrate. Energy & Fuels, 2022, 36, 10504-10511.	5.1	2
54	Separation and purification of Sr-90 nuclide from a waste mixture. Journal of Radioanalytical and Nuclear Chemistry, 2022, 331, 275-281.	1.5	1