Yongwon Seo

List of Publications by Year in descending order

109 papers	4,285 citations	87888 38 h-index	123424 61 g-index
110 all docs	110 docs citations	110 times ranked	1847 citing authors

#	Article	IF	Citations
1	Recovering Methane from Solid Methane Hydrate with Carbon Dioxide. Angewandte Chemie - International Edition, 2003, 42, 5048-5051.	13.8	332
2	Continuous operation of the potassium-based dry sorbent CO2 capture process with two fluidized-bed reactors. International Journal of Greenhouse Gas Control, 2007, 1, 31-36.	4.6	168
3	Methane and Carbon Dioxide Hydrate Phase Behavior in Small Porous Silica Gels:Â Three-Phase Equilibrium Determination and Thermodynamic Modeling. Langmuir, 2002, 18, 9164-9170.	3.5	140
4	Experimental Verification of Methaneâ€“Carbon Dioxide Replacement in Natural Gas Hydrates Using a Differential Scanning Calorimeter. Environmental Science & Technology, 2013, 47, 13184-13190.	10.0	139
5	CO₂ Capture from Simulated Fuel Gas Mixtures Using Semiclathrate Hydrates Formed by Quaternary Ammonium Salts. Environmental Science & Technology, 2013, 47, 7571-7577.	10.0	136
6	Separation of SF₆ from Gas Mixtures Using Gas Hydrate Formation. Environmental Science & Technology, 2010, 44, 6117-6122.	10.0	120
7	CH4 recovery and CO2 sequestration using flue gas in natural gas hydrates as revealed by a micro-differential scanning calorimeter. Applied Energy, 2015, 150, 120-127.	10.1	116
8	Hydrate-based pre-combustion capture of carbon dioxide in the presence of a thermodynamic promoter and porous silica gels. International Journal of Greenhouse Gas Control, 2013, 14, 193-199.	4.6	115
9	Effects of water vapor pretreatment time and reaction temperature on CO2 capture characteristics of a sodium-based solid sorbent in a bubbling fluidized-bed reactor. Chemosphere, 2007, 69, 712-718.	8.2	108
10	Structure identification and dissociation enthalpy measurements of the CO2+ N2 hydrates for their application to CO2 capture and storage. Chemical Engineering Journal, 2014, 246, 20-26.	12.7	88
11	Guest Gas Enclathration in Semiclathrates of Tetra-n-butylammonium Bromide: Stability Condition and Spectroscopic Analysis. Langmuir, 2011, 27, 10597-10603.	3.5	83
12	Phase Equilibria of Semiclathrate Hydrate for Nitrogen in the Presence of Tetra-n-butylammonium Bromide and Fluoride. Journal of Chemical & Engineering Data, 2010, 55, 5883-5886.	1.9	77
13	CH 4 â€“ Flue gas replacement occurring in sH hydrates and its significance for CH 4 recovery and CO 2 sequestration. Chemical Engineering Journal, 2017, 308, 50-58.	12.7	73
14	Semiclathrate-based CO2 capture from flue gas mixtures: An experimental approach with thermodynamic and Raman spectroscopic analyses. Applied Energy, 2015, 154, 987-994.	10.1	70
15	Thermodynamic and 13C NMR spectroscopic verification of methaneâ€“carbon dioxide replacement in natural gas hydrates. Chemical Engineering Journal, 2013, 225, 636-640.	12.7	63
16	Thermodynamic and Spectroscopic Identification of Guest Gas Enclathration in the Double Tetra-n-butylammonium Fluoride Semiclathrates. Journal of Physical Chemistry B, 2012, 116, 9075-9081.	2.6	62
17	Effect of water pretreatment on CO2 capture using a potassium-based solid sorbent in a bubbling fluidized bed reactor. Korean Journal of Chemical Engineering, 2007, 24, 457-460.	2.7	61
18	Phase Equilibria and Thermodynamic Modeling of Ethane and Propane Hydrates in Porous Silica Gels. Journal of Physical Chemistry B, 2009, 113, 5487-5492.	2.6	61

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19	Guest gas enclathration in tetra-n-butyl ammonium chloride (TBAC) semiclathrates: Potential application to natural gas storage and CO2 capture. Applied Energy, 2015, 140, 107-112.	10.1	61
20	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
21	A New Hydrate-Based Recovery Process for Removing Chlorinated Hydrocarbons from Aqueous Solutions. Environmental Science & Technology, 2001, 35, 3386-3390.	10.0	56
22	Thermodynamic, structural, and kinetic studies of cyclopentaneâ€¯+â€¯CO2 hydrates: Applications for desalination and CO2 capture. Chemical Engineering Journal, 2019, 375, 121974.	12.7	55
23	Thermodynamic and kinetic influences of NaCl on HFC-125a hydrates and their significance in gas hydrate-based desalination. Chemical Engineering Journal, 2019, 358, 598-605.	12.7	55
24	Experimental Measurement and Thermodynamic Modeling of the Mixed CH₄ + C₃H₈ Clathrate Hydrate Equilibria in Silica Gel Pores: Effects of Pore Size and Salinity. Langmuir, 2010, 26, 9742-9748.	3.5	54
25	Enclathration of CO 2 as a co-guest of structure H hydrates and its implications for CO 2 capture and sequestration. Applied Energy, 2016, 163, 51-59.	10.1	54
26	Greenhouse Gas (CHF₃) Separation by Gas Hydrate Formation. ACS Sustainable Chemistry and Engineering, 2017, 5, 5485-5492.	6.7	52
27	A New Method for Separating HFC-134a from Gas Mixtures Using Clathrate Hydrate Formation. Environmental Science & Technology, 2004, 38, 4635-4639.	10.0	51
28	Kinetic CO2 selectivity in clathrate-based CO2 capture for upgrading CO2-rich natural gas and biogas. Chemical Engineering Journal, 2019, 369, 686-693.	12.7	51
29	Isostructural and cage-specific replacement occurring in sII hydrate with external CO2/N2 gas and its implications for natural gas production and CO2 storage. Applied Energy, 2016, 178, 579-586.	10.1	49
30	Experimental and computational investigation of methane hydrate inhibition in the presence of amino acids and ionic liquids. Energy, 2019, 182, 632-640.	8.8	49
31	Thermodynamic stability and guest distribution of CH4/N2/CO2 mixed hydrates for methane hydrate production using N2/CO2 injection. Journal of Chemical Thermodynamics, 2017, 106, 16-21.	2.0	46
32	Enhanced CH₄ Recovery Induced via Structural Transformation in the CH₄/CO₂ Replacement That Occurs in sH Hydrates. Environmental Science & Technology, 2015, 49, 8899-8906.	10.0	45
33	Characterization of cyclopentane clathrates with gaseous guests for gas storage and separation. Chemical Engineering Journal, 2018, 338, 572-578.	12.7	44
34	Structural transition induced by cage-dependent guest exchange in CH4â€¯+â€¯C3H8 hydrates with CO2 injection for energy recovery and CO2 sequestration. Applied Energy, 2018, 228, 229-239.	10.1	44
35	Influences of large molecular alcohols on gas hydrates and their potential role in gas storage and CO2 sequestration. Chemical Engineering Journal, 2015, 267, 117-123.	12.7	42
36	Semiclathrate-based CO2 capture from flue gas in the presence of tetra-n-butyl ammonium chloride (TBAC). Chemical Engineering Journal, 2015, 276, 205-212.	12.7	42

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37	CO 2 capture from flue gas using clathrate formation in the presence of thermodynamic promoters. Energy, 2017, 118, 950-956.	8.8	40
38	Clathrate-Based CO₂ Capture from Co₂-Rich Natural Gas and Biogas. ACS Sustainable Chemistry and Engineering, 2018, 6, 5627-5635.	6.7	39
39	Influence of CH4 hydrate exploitation using depressurization and replacement methods on mechanical strength of hydrate-bearing sediment. Applied Energy, 2020, 277, 115569.	10.1	38
40	Kinetics of Esterification of Lactic Acid with Methanol in the Presence of Cation Exchange Resin Using a Pseudo-Homogeneous Model.. Journal of Chemical Engineering of Japan, 2000, 33, 128-133.	0.6	37
41	Hydration number and two-phase equilibria of CH4hydrate in the deep ocean sediments. Geophysical Research Letters, 2002, 29, 85-1-85-4.	4.0	36
42	Effects of operation variables on the recovery of lactic acid in a batch distillation process with chemical reactions. Korean Journal of Chemical Engineering, 1999, 16, 556-561.	2.7	35
43	Accurate measurement of phase equilibria and dissociation enthalpies of HFC-134a hydrates in the presence of NaCl for potential application in desalination. Korean Journal of Chemical Engineering, 2016, 33, 1425-1430.	2.7	35
44	Guest enclathration and structural transition in CO2+ N2+ methylcyclopentane hydrates and their significance for CO2 capture and sequestration. Chemical Engineering Journal, 2017, 320, 43-49.	12.7	35
45	Time-dependent observation of a cage-specific guest exchange in sI hydrates for CH4 recovery and CO2 sequestration. Chemical Engineering Journal, 2020, 389, 124434.	12.7	34
46	Hydrate Phase Equilibria of the Ternary CH4 + NaCl + Water, CO2 + NaCl + Water and CH4 + CO2 + Water Mixtures in Silica Gel Pores. Journal of Physical Chemistry B, 2003, 107, 889-894.	2.6	33
47	Spatial and temporal variations of volatile organic compounds using passive air samplers in the multi-industrial city of Ulsan, Korea. Environmental Science and Pollution Research, 2019, 26, 5831-5841.	5.3	32
48	Separation efficiency and equilibrium recovery ratio of SF6 in hydrate-based greenhouse gas separation. Chemical Engineering Journal, 2021, 405, 126956.	12.7	31
49	1-Propanol as a co-guest of gas hydrates and its potential role in gas storage and CO2 sequestration. Chemical Engineering Journal, 2014, 258, 427-432.	12.7	30
50	Enclathration of tert-butyl alcohol in sII hydrates and its implications in gas storage and CO2 sequestration. Fuel, 2016, 164, 237-244.	6.4	30
51	The effect of rainstorm movement on urban drainage network runoff hydrographs. Hydrological Processes, 2012, 26, 3830-3841.	2.6	29
52	Formation and dissociation behaviors of SF6 hydrates in the presence of a surfactant and an antifoaming agent for hydrate-based greenhouse gas (SF6) separation. Chemical Engineering Journal, 2020, 400, 125973.	12.7	29
53	Effect of Reaction Temperature on CO2 Capture Using Potassium-Based Solid Sorbent in Bubbling Fluidized-Bed Reactor. Journal of Environmental Engineering, ASCE, 2009, 135, 473-477.	1.4	28
54	Phase Behavior and Structure Identification of the Mixed Chlorinated Hydrocarbon Clathrate Hydrates. Journal of Physical Chemistry B, 2002, 106, 9668-9673.	2.6	27

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55	Thermodynamic inhibition effects of an ionic liquid (choline chloride), a naturally derived substance (urea), and their mixture (deep eutectic solvent) on CH4 hydrates. Chemical Engineering Journal, 2020, 399, 125830.	12.7	27
56	In Situ Raman Study of the Formation and Dissociation Kinetics of Methane and Methane/Propane Hydrates. Energy & Fuels, 2020, 34, 6288-6297.	5.1	27
57	Efficient dual-function inhibitors for prevention of gas hydrate formation and CO2/H2S corrosion inside oil and gas pipelines. Chemical Engineering Journal, 2022, 431, 134098.	12.7	25
58	Phase Behavior and ¹³C NMR Spectroscopic Analysis of the Mixed Methane + Ethane + Propane Hydrates in Mesoporous Silica Gels. Journal of Physical Chemistry B, 2010, 114, 15079-15084.	2.6	24
59	Enclathration of CHF 3 and C 2 F 6 molecules in gas hydrates for potential application in fluorinated gas (F-gas) separation. Chemical Engineering Journal, 2016, 306, 298-305.	12.7	24
60	Influence of Competitive Inclusion of CO₂ and N₂ on sII Hydrateâ€“Flue Gas Replacement for Energy Recovery and CO₂ Sequestration. Environmental Science & Technology, 2020, 54, 7562-7569.	10.0	24
61	The Effect of Voidage on the CO2 Sorption Capacity of K-Based Sorbent in a Dual Circulating Fluidized Bed Process. Journal of Chemical Engineering of Japan, 2008, 41, 691-694.	0.6	24
62	2-Propanol As a Co-Guest of Structure II Hydrates in the Presence of Help Gases. Journal of Physical Chemistry B, 2013, 117, 2449-2455.	2.6	23
63	Dual inhibition effects of diamines on the formation of methane gas hydrate and their significance for natural gas production and transportation. Energy Conversion and Management, 2016, 124, 578-586.	9.2	23
64	Evaluation of kinetic salt-enrichment behavior and separation performance of HFC-152a hydrate-based desalination using an experimental measurement and a thermodynamic correlation. Water Research, 2021, 193, 116882.	11.3	23
65	Effects of pressure and temperature conditions on thermodynamic and kinetic guest exchange behaviors of CH4Ââ‹¯ CO2Â+ N2 replacement for energy recovery and greenhouse gas storage. Energy, 2022, 239, 122153.	8.8	23
66	Structure Transition from Semi- to True Clathrate Hydrates Induced by CH₄ Enclathration. Journal of Physical Chemistry C, 2012, 116, 16352-16357.	3.1	22
67	Recoverable and recyclable gas hydrate inhibitors based on magnetic nanoparticle-decorated metalâ€“organic frameworks. Chemical Engineering Journal, 2020, 401, 126081.	12.7	22
68	CH4 enclathration in tetra-iso-amyl ammonium bromide (TiAAB) semiclathrate and its significance for natural gas storage. Chemical Engineering Journal, 2017, 330, 1160-1165.	12.7	21
69	Synergistic kinetic inhibition of amino acids and ionic liquids on CH4 hydrate for flow assurance. Fuel, 2020, 263, 116689.	6.4	21
70	Network configuration and hydrograph sensitivity to storm kinematics. Water Resources Research, 2013, 49, 1812-1827.	4.2	20
71	Magnetic Transition and Long-Time Relaxation Behavior Induced by Selective Injection of Guest Molecules into Clathrate Hydrates. Journal of the American Chemical Society, 2009, 131, 5736-5737.	13.7	17
72	Stability conditions and guest distribution of the methane + ethane + propane hydrates or semiclathrates in the presence of tetrahydrofuran or quaternary ammonium salts. Journal of Chemical Thermodynamics, 2013, 65, 113-119.	2.0	17

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73	Inhibition synergism of glycine (an amino acid) and [BMIM][BF4] (an ionic liquid) on the growth of CH4 hydrate. Chemical Engineering Journal, 2020, 393, 124466.	12.7	17
74	The dual-functional roles of N2 gas for the exploitation of natural gas hydrates: An inhibitor for dissociation and an external guest for replacement. Energy, 2021, 232, 121054.	8.8	16
75	Application of Gibbsâ€™ model to urban drainage networks: a case study in southwestern Chicago, USA. Hydrological Processes, 2014, 28, 1148-1158.	2.6	15
76	Structural Transformation of Isopropylamine Semiclathrate Hydrates in the Presence of Methane as a Coguest. Journal of Physical Chemistry B, 2012, 116, 13476-13480.	2.6	14
77	Incorporation of ammonium fluoride into clathrate hydrate lattices and its significance in inhibiting hydrate formation. Chemical Communications, 2015, 51, 8761-8764.	4.1	14
78	Optimal driving force for the dissociation of CH4 hydrates in hydrate-bearing sediments using depressurization. Energy, 2021, 223, 120047.	8.8	14
79	SF6 Hydrate Formation in Various Reaction Media: A Preliminary Study on Hydrate-Based Greenhouse Gas Separation. Environmental Science & Technology, 2019, 53, 12945-12952.	10.0	13
80	A novel discovery of a gaseous sH clathrate hydrate former. Chemical Engineering Journal, 2019, 359, 775-778.	12.7	12
81	Theoretically achievable efficiency of hydrate-based desalination and its significance for evaluating kinetic desalination performance of gaseous hydrate formers. Desalination, 2022, 524, 115487.	8.2	12
82	Experimental Measurement and Thermodynamic Modeling of Hydrate-Phase Equilibria for the Ternary C₂H₆+ NaCl + Water and C₃H₈+ NaCl + Water Mixtures in Silica Gel Pores. Energy & Fuels, 2010, 24, 6074-6080.	5.1	10
83	Synergistic inhibition effects of hydrophilic monomeric substances on CH4 hydrate as revealed by experimental and computational approaches. Chemical Engineering Journal, 2021, 426, 130794.	12.7	10
84	Experimental and computational investigation of hydrophilic monomeric substances as novel CO2 hydrate inhibitors and potential synergists. Energy, 2022, 244, 123136.	8.8	10
85	Structural transition and phase behavior of N2 gas hydrates with pinacolyl alcohol and tert-amyl alcohol. Fluid Phase Equilibria, 2015, 393, 85-90.	2.5	9
86	Thermodynamic phase equilibria and cage occupancy of NF 3 hydrate. Fluid Phase Equilibria, 2018, 471, 55-60.	2.5	9
87	Influence of feed gas composition on structural transformation and guest exchange behaviors in sH hydrate â€“ Flue gas replacement for energy recovery and CO2 sequestration. Energy, 2020, 207, 118299.	8.8	8
88	Multifractal properties of the peak flow distribution on stochastic drainage networks. Stochastic Environmental Research and Risk Assessment, 2014, 28, 1157-1165.	4.0	7
89	Guestâ€“Guest Interactions and Co-Occupation by Distinct Guests in the Metastable State of Clathrate Hydrates. Journal of Physical Chemistry C, 2019, 123, 3811-3816.	3.1	7
90	Fused aromatic networks as a new class of gas hydrate inhibitors. Chemical Engineering Journal, 2022, 433, 133691.	12.7	7

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91	Improved Experimental Determinations of Phase Equilibria and Structural Transitions of Mixed Gas Hydrates under Isothermal Conditions. Energy & Fuels, 2013, 27, 5144-5152.	5.1	6
92	Multifractal characteristics of the jet turbulent intensity depending on the outfall nozzle geometry. Stochastic Environmental Research and Risk Assessment, 2016, 30, 653-664.	4.0	6
93	Phase equilibria, dissociation enthalpies, and Raman spectroscopic analyses of N 2 Â+ tetra-n-butyl ammonium chloride (TBAC) semiclathrates. Fluid Phase Equilibria, 2016, 413, 86-91.	2.5	6
94	Phase equilibria and azeotropic behavior of C2F6+ N2 gas hydrates. Journal of Chemical Thermodynamics, 2018, 117, 43-47.	2.0	6
95	Experimental investigation of the exact role of large-molecule guest substances (LMGSs) in determining phase equilibria and structures of natural gas hydrates. Energy, 2021, 215, 119219.	8.8	6
96	Thermodynamic and structural features of chlorodifluoromethane (a slâ€“sII dual hydrate former) + external guest (N₂ or CH₄) hydrates and their significance for greenhouse gas separation. Physical Chemistry Chemical Physics, 2021, 23, 15693-15701.	2.8	6
97	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
98	Mechanism and kinetics of guest exchange in sII hydrate â€“ Flue gas replacement as revealed by experimental and computational approaches for hydrocarbon recovery and CO2 sequestration. Chemical Engineering Journal, 2021, 417, 128119.	12.7	5
99	The impact of the abnormal salinity enrichment in pore water on the thermodynamic stability of marine natural gas hydrates in the Arctic region. Science of the Total Environment, 2021, 799, 149357.	8.0	5
100	Kinetic Selectivity of SF₆ during Formation and Dissociation of SF₆ + N₂ Hydrates and Its Significance in Hydrate-Based Greenhouse Gas Separation. ACS Sustainable Chemistry and Engineering, 2021, 9, 14152-14160.	6.7	5
101	Thermodynamic and Structural Investigation of Xe and Kr Hydrates Containing Tetrahydrofuran for Applications in Gas Capture and Storage. Energy & Fuels, 2022, 36, 10652-10658.	5.1	4
102	Phase equilibria of tetra-iso-amyl ammonium bromide (TiAAB) semiclathrates with CO2, N2, or CO2Â+ÂN2. Journal of Chemical Thermodynamics, 2020, 142, 106024.	2.0	3
103	Complex Phase Behaviors and Structural Coexistence of Natural Gas Hydrates Containing Large-Molecule Guest Substances. Energy & Fuels, 2021, 35, 6081-6089.	5.1	3
104	MULTIFRACTAL CHARACTERISTICS OF AXISYMMETRIC JET TURBULENCE INTENSITY FROM RANS NUMERICAL SIMULATION. Fractals, 2018, 26, 1850008.	3.7	2
105	The effect of nozzle geometry on the turbulence evolution in an axisymmetric jet flow: A focus on fractals. Physica A: Statistical Mechanics and Its Applications, 2020, 550, 124145.	2.6	2
106	Connectivity-informed drainage network generation using deep convolution generative adversarial networks. Scientific Reports, 2021, 11, 1519.	3.3	2
107	One-Step DME Synthesis from Coal-Derived, CO-Rich Syngas in a Slurry Reactor. Journal of Chemical Engineering of Japan, 2008, 41, 585-589.	0.6	2
108	Science Walden: Exploring the Convergence of Environmental Technologies with Design and Art. Sustainability, 2017, 9, 35.	3.2	1

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109	Impact of High Methane Flux on the Properties of Pore Fluid and Methane-Derived Authigenic Carbonate in the ARAON Mounds, Chukchi Sea. Frontiers in Marine Science, 0, 9, .	2.5	1