

# Chun-Gang Xu

## List of Publications by Year in descending order

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74  
papers

3,170  
citations

147801

31  
h-index

155660

55  
g-index

76  
all docs

76  
docs citations

76  
times ranked

1423  
citing authors

#	ARTICLE	IF	CITATIONS
1	Research on micro mechanism and influence of hydrate-based methane-carbon dioxide replacement for realizing simultaneous clean energy exploitation and carbon emission reduction. <i>Chemical Engineering Science</i> , 2022, 248, 117266.	3.8	11
2	Review of methods and applications for promoting gas hydrate formation process. <i>Journal of Natural Gas Science and Engineering</i> , 2022, 101, 104528.	4.4	29
3	Gas-liquid asynchronous cooling promoting gas hydrate formation with high energy efficiency and its promoting mechanism. <i>Chemical Engineering Journal</i> , 2022, 438, 135631.	12.7	4
4	Research progress on the effects of nanoparticles on gas hydrate formation. <i>RSC Advances</i> , 2022, 12, 20227-20238.	3.6	9
5	A review of numerical research on gas production from natural gas hydrates in China. <i>Journal of Natural Gas Science and Engineering</i> , 2021, 85, 103713.	4.4	37
6	The Relationship between Thermal Characteristics and Microstructure/Composition of Carbon Dioxide Hydrate in the Presence of Cyclopentane. <i>Energies</i> , 2021, 14, 870.	3.1	2
7	Effect of H <sub>2</sub> O Molecules on the CO <sub>2</sub> Replacement in CH <sub>4</sub> Hydrate Behavior by Molecular Simulation. <i>Energy &amp; Fuels</i> , 2021, 35, 8126-8140.	5.1	8
8	Influence of nickel foam on kinetics and separation efficiency of hydrate-based Carbon dioxide separation. <i>Energy</i> , 2021, 231, 120826.	8.8	8
9	Exploring Guest-Host Interactions in Gas Hydrates: Insights from Quantum Mechanics. <i>Energy &amp; Fuels</i> , 2021, 35, 18604-18614.	5.1	5
10	Influence of Direct Current Voltage Accompanied by Charge Flow on CO <sub>2</sub> Hydrate Formation. <i>Frontiers in Energy Research</i> , 2021, 9, .	2.3	2
11	Microscopic Insights into the Effect of the Initial Gas-Liquid Interface on Hydrate Formation by <i>In-Situ</i> Raman in the System of Coalbed Methane and Tetrahydrofuran. <i>ACS Omega</i> , 2021, 6, 35467-35475.	3.5	3
12	Experimental and Modeling Study of Kinetics for Hydrate Decomposition Induced by Depressurization in a Porous Medium. <i>Frontiers in Energy Research</i> , 2021, 9, .	2.3	3
13	Studies on temperature characteristics and initial formation interface during cyclopentane-methane hydrate formation in large-scale equipment with bubbling. <i>Applied Energy</i> , 2020, 258, 114076.	10.1	10
14	Sulfonated poly (fluorenyl ether ketone nitrile) membranes used for high temperature PEM fuel cell. <i>Heliyon</i> , 2020, 6, e04855.	3.2	9
15	The Effect of CO <sub>2</sub> Partial Pressure on CH <sub>4</sub> Recovery in CH <sub>4</sub> -CO <sub>2</sub> Swap with Simulated IGCC Syngas. <i>Energies</i> , 2020, 13, 1017.	3.1	13
16	Effects of Salinity on Formation Behavior of Methane Hydrate in Montmorillonite. <i>Energies</i> , 2020, 13, 231.	3.1	8
17	Carbon dioxide hydrate separation from Integrated Gasification Combined Cycle (IGCC) syngas by a novel hydrate heat-mass coupling method. <i>Energy</i> , 2020, 199, 117420.	8.8	26
18	Study on the influencing factors of gas consumption in hydrate-based CO <sub>2</sub> separation in the presence of CP by Raman analysis. <i>Energy</i> , 2020, 198, 117316.	8.8	21

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19	Study on developing a novel continuous separation device and carbon dioxide separation by process of hydrate combined with chemical absorption. <i>Applied Energy</i> , 2019, 255, 113791.	10.1	38
20	Formation and Dissociation Behavior Studies of Hydrogen Hydrate in the presence of Tetrahydrofuran by using High Pressure DSC. <i>Energy Procedia</i> , 2019, 158, 5149-5155.	1.8	7
21	The plateau effects and crystal transition study in Tetrahydrofuran (THF)/CO <sub>2</sub> /H <sub>2</sub> hydrate formation processes. <i>Applied Energy</i> , 2019, 238, 195-201.	10.1	20
22	Effect of Fulvic Acid and Sodium Chloride on the Phase Equilibrium of Methane Hydrate in Mixed Sand-Clay Sediment. <i>Journal of Chemical &amp; Engineering Data</i> , 2019, 64, 632-639.	1.9	11
23	Experimental studies on hydrogen hydrate with tetrahydrofuran by differential scanning calorimeter and in-situ Raman. <i>Applied Energy</i> , 2019, 243, 1-9.	10.1	37
24	Insight into micro-mechanism of hydrate-based methane recovery and carbon dioxide capture from methane-carbon dioxide gas mixtures with thermal characterization. <i>Applied Energy</i> , 2019, 239, 57-69.	10.1	32
25	Methane hydrate formation and dissociation behaviors in montmorillonite. <i>Chinese Journal of Chemical Engineering</i> , 2019, 27, 1212-1218.	3.5	14
26	Research progress in hydrate-based technologies and processes in China: A review. <i>Chinese Journal of Chemical Engineering</i> , 2019, 27, 1998-2013.	3.5	41
27	Study on Temperature Characteristics of Hydrate Slurry during Cyclopentane-Methane Hydrate Formation. <i>Energy &amp; Fuels</i> , 2018, 32, 1558-1566.	5.1	1
28	Raman spectroscopic studies on carbon dioxide separation from fuel gas via clathrate hydrate in the presence of tetrahydrofuran. <i>Applied Energy</i> , 2018, 214, 92-102.	10.1	37
29	Effect of pressure on methane recovery from natural gas hydrates by methane-carbon dioxide replacement. <i>Applied Energy</i> , 2018, 217, 527-536.	10.1	88
30	Crystal morphology-based kinetic study of carbon dioxide-hydrogen-tetra-n-butyl ammonium bromide hydrates formation in a static system. <i>Energy</i> , 2018, 143, 546-553.	8.8	23
31	Evaluation of CO <sub>2</sub> hydrate formation from mixture of graphite nanoparticle and sodium dodecyl benzene sulfonate. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 59, 64-69.	5.8	65
32	Research on micro-mechanism and efficiency of CH <sub>4</sub> exploitation via CH <sub>4</sub> -CO <sub>2</sub> replacement from natural gas hydrates. <i>Fuel</i> , 2018, 216, 255-265.	6.4	56
33	The Formation of CH <sub>4</sub> Hydrate in the Slit Nanopore between the Smectite Basal Surfaces by Molecular Dynamics Simulation. <i>Energy &amp; Fuels</i> , 2018, 32, 6467-6474.	5.1	25
34	Recovery of methane from coal-bed methane gas mixture via hydrate-based methane separation method by adding anionic surfactants. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 2018, 40, 1019-1026.	2.3	18
35	Anti-Agglomerator of Tetra-n-Butyl Ammonium Bromide Hydrate and Its Effect on Hydrate-Based CO <sub>2</sub> Capture. <i>Energies</i> , 2018, 11, 399.	3.1	11
36	Methane recovery from natural gas hydrate with simulated IGCC syngas. <i>Energy</i> , 2017, 120, 192-198.	8.8	39

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37	Hydrate-based methane separation from coal mine methane gas mixture by bubbling using the scale-up equipment. <i>Applied Energy</i> , 2017, 204, 1526-1534.	10.1	52
38	Hydrate-based Capture of Acidic Gases for Clean Fuels with New Synergic Additives. <i>Energy Procedia</i> , 2017, 105, 648-653.	1.8	4
39	Hydrate-based acidic gases capture for clean methane with new synergic additives. <i>Applied Energy</i> , 2017, 207, 584-593.	10.1	39
40	Hydrate-based Methane Recovery from Coal Mine Methane Gas in Scale-up Equipment with Bubbling. <i>Energy Procedia</i> , 2017, 105, 4983-4989.	1.8	9
41	The effect of hydrate promoters on gas uptake. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 21769-21776.	2.8	50
42	Formation Behaviors of CO <sub>2</sub> Hydrate in Kaoline and Bentonite Clays with Partially Water Saturated. <i>Energy Procedia</i> , 2017, 143, 547-552.	1.8	11
43	Numerical Investigation of the Production Behavior of Methane Hydrates under Depressurization Conditions Combined with Well-Wall Heating. <i>Energies</i> , 2017, 10, 161.	3.1	11
44	Raman Spectroscopic Study on Hydrate-based Carbon Dioxide Separation from Fuel Gas in the Presence of THF. <i>Energy Procedia</i> , 2017, 143, 540-546.	1.8	4
45	A novel method for evaluating effects of promoters on hydrate formation. <i>Energy</i> , 2016, 102, 567-575.	8.8	12
46	Investigation into gas production from natural gas hydrate: A review. <i>Applied Energy</i> , 2016, 172, 286-322.	10.1	519
47	Molecular Dynamics Simulation of the Crystal Nucleation and Growth Behavior of Methane Hydrate in the Presence of the Surface and Nanopores of Porous Sediment. <i>Langmuir</i> , 2016, 32, 7975-7984.	3.5	60
48	Hydrate-based CO <sub>2</sub> capture and CH <sub>4</sub> purification from simulated biogas with synergic additives based on gas solvent. <i>Applied Energy</i> , 2016, 162, 1153-1159.	10.1	90
49	Hydrate-based hydrogen purification from simulated syngas with synergic additives. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 2649-2659.	7.1	28
50	Phase equilibrium and Raman spectroscopic studies of semi-clathrate hydrates for methane, nitrogen and tetra-butyl-ammonium fluoride. <i>Fluid Phase Equilibria</i> , 2016, 413, 48-52.	2.5	18
51	Raman Spectroscopic Analysis on the Hydrate Formed in the Hydrate-Based Flue Gas Separation Process in Presence of Sulfur Dioxide and Tetra-n-butyl Ammonium Bromide. <i>Spectroscopy Letters</i> , 2015, 48, 499-505.	1.0	4
52	Research progress on methane production from natural gas hydrates. <i>RSC Advances</i> , 2015, 5, 54672-54699.	3.6	94
53	Raman analysis on methane production from natural gas hydrate by carbon dioxide "methane replacement. <i>Energy</i> , 2015, 79, 111-116.	8.8	61
54	Hydrate-based Capture CO <sub>2</sub> and Purification CH <sub>4</sub> from Simulated Landfill Gas with Synergic Additives Based on Gas Solvent. <i>Energy Procedia</i> , 2014, 61, 450-454.	1.8	16

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55	Study of Hydrate-Based Methane Separation from Coal-Bed Methane in Scale-up Equipment with Bubbling. <i>Energy Procedia</i> , 2014, 61, 812-816.	1.8	6
56	Replacement of CH <sub>4</sub> in Hydrate in Porous Sediments with Liquid CO <sub>2</sub> Injection. <i>Chemical Engineering and Technology</i> , 2014, 37, 2022-2029.	1.5	20
57	Research progress of hydrate-based CO <sub>2</sub> separation and capture from gas mixtures. <i>RSC Advances</i> , 2014, 4, 18301-18316.	3.6	156
58	Study on Pilot-Scale CO <sub>2</sub> Separation from Flue Gas by the Hydrate Method. <i>Energy &amp; Fuels</i> , 2014, 28, 1242-1248.	5.1	61
59	Molecular dynamics simulation of the intercalation behaviors of methane hydrate in montmorillonite. <i>Journal of Molecular Modeling</i> , 2014, 20, 2311.	1.8	30
60	CO <sub>2</sub> (carbon dioxide) separation from CO <sub>2</sub> -H <sub>2</sub> (hydrogen) gas mixtures by gas hydrates in TBAB (tetra-n-butyl ammonium bromide) solution and Raman spectroscopic analysis. <i>Energy</i> , 2013, 59, 719-725.	8.8	110
61	Molecular dynamics simulation of methane hydrate dissociation by depressurisation. <i>Molecular Simulation</i> , 2013, 39, 251-260.	2.0	29
62	Similarity Analysis in Scaling a Gas Hydrates Reservoir. <i>Energies</i> , 2013, 6, 2468-2480.	3.1	5
63	Experimental Study on Methane Hydrate Dissociation by Depressurization in Porous Sediments. <i>Energies</i> , 2012, 5, 518-530.	3.1	41
64	Experimental Investigation of the Formation of Cyclopentane-Methane Hydrate in a Novel and Large-Size Bubble Column Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2012, 51, 5967-5975.	3.7	51
65	Integrated Process Study on Hydrate-Based Carbon Dioxide Separation from Integrated Gasification Combined Cycle (IGCC) Synthesis Gas in Scaled-Up Equipment. <i>Energy &amp; Fuels</i> , 2012, 26, 6442-6448.	5.1	45
66	Thermodynamic Equilibrium Conditions for Simulated Landfill Gas Hydrate Formation in Aqueous Solutions of Additives. <i>Journal of Chemical &amp; Engineering Data</i> , 2012, 57, 3290-3295.	1.9	38
67	Hydrate-Based Methane Separation from the Drainage Coal-Bed Methane with Tetrahydrofuran Solution in the Presence of Sodium Dodecyl Sulfate. <i>Energy &amp; Fuels</i> , 2012, 26, 1144-1151.	5.1	38
68	Hydrate-based carbon dioxide capture from simulated integrated gasification combined cycle gas. <i>Journal of Natural Gas Chemistry</i> , 2012, 21, 501-507.	1.8	31
69	Hydrate-based CO <sub>2</sub> (carbon dioxide) capture from IGCC (integrated gasification combined cycle) synthesis gas using bubble method with a set of visual equipment. <i>Energy</i> , 2012, 44, 358-366.	8.8	83
70	Effects of Tetrabutyl-(ammonium/phosphonium) Salts on Clathrate Hydrate Capture of CO <sub>2</sub> from Simulated Flue Gas. <i>Energy &amp; Fuels</i> , 2012, 26, 2518-2527.	5.1	93
71	Synergic effect of cyclopentane and tetra-n-butyl ammonium bromide on hydrate-based carbon dioxide separation from fuel gas mixture by measurements of gas uptake and X-ray diffraction patterns. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 720-727.	7.1	97
72	Effect of temperature fluctuation on hydrate-based CO <sub>2</sub> separation from fuel gas. <i>Journal of Natural Gas Chemistry</i> , 2011, 20, 647-653.	1.8	22

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73	Hydrate-based pre-combustion carbon dioxide capture process in the system with tetra-n-butyl ammonium bromide solution in the presence of cyclopentane. <i>Energy</i> , 2011, 36, 1394-1403.	8.8	170
74	Tetra-n-butyl ammonium bromide semi-clathrate hydrate process for post-combustion capture of carbon dioxide in the presence of dodecyl trimethyl ammonium chloride. <i>Energy</i> , 2010, 35, 3902-3908.	8.8	190