

Jia-nan Zheng

List of Publications by Year in descending order

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90
papers

4,093
citations

94269

37
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128067

60
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docs citations

91
times ranked

1366
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of gas production from methane hydrates using depressurization, thermal stimulation and combined methods. <i>Applied Energy</i> , 2015, 145, 265-277.	5.1	328
2	The status of natural gas hydrate research in China: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2014, 31, 778-791.	8.2	235
3	Methane hydrate formation in excess water simulating marine locations and the impact of thermal stimulation on energy recovery. <i>Applied Energy</i> , 2016, 177, 409-421.	5.1	168
4	Analysis of heat transfer effects on gas production from methane hydrate by depressurization. <i>International Journal of Heat and Mass Transfer</i> , 2014, 77, 529-541.	2.5	143
5	Hydrate-based technology for CO ₂ capture from fossil fuel power plants. <i>Applied Energy</i> , 2014, 116, 26-40.	5.1	118
6	Hydrate reformation characteristics in natural gas hydrate dissociation process: A review. <i>Applied Energy</i> , 2019, 256, 113878.	5.1	115
7	Size Effect of Porous Media on Methane Hydrate Formation and Dissociation in an Excess Gas Environment. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 7981-7991.	1.8	108
8	Effect of NaCl on methane hydrate formation and dissociation in porous media. <i>Journal of Natural Gas Science and Engineering</i> , 2015, 27, 178-189.	2.1	104
9	Effect of depressurization pressure on methane recovery from hydrate "gas" water bearing sediments. <i>Fuel</i> , 2016, 166, 419-426.	3.4	93
10	Experimental study on the effect of methane hydrate decomposition on gas phase permeability of clayey sediments. <i>Applied Energy</i> , 2018, 230, 1304-1310.	5.1	86
11	Economic evaluation of energy efficient hydrate based desalination utilizing cold energy from liquefied natural gas (LNG). <i>Desalination</i> , 2019, 463, 69-80.	4.0	86
12	Gas recovery from depressurized methane hydrate deposits with different water saturations. <i>Applied Energy</i> , 2017, 187, 180-188.	5.1	85
13	Effects of cyclopentane on CO ₂ hydrate formation and dissociation as a co-guest molecule for desalination. <i>Journal of Chemical Thermodynamics</i> , 2017, 104, 9-15.	1.0	80
14	Effect of methane hydrate dissociation and reformation on the permeability of clayey sediments. <i>Applied Energy</i> , 2020, 261, 114479.	5.1	68
15	Investigation of the induction time for THF hydrate formation in porous media. <i>Journal of Natural Gas Science and Engineering</i> , 2015, 24, 357-364.	2.1	67
16	Dissociation characteristics of methane hydrates in South China Sea sediments by depressurization. <i>Applied Energy</i> , 2019, 243, 266-273.	5.1	67
17	Effects of operating mode and pressure on hydrate-based desalination and CO ₂ capture in porous media. <i>Applied Energy</i> , 2014, 135, 504-511.	5.1	66
18	Methane hydrate reformation in porous media with methane migration. <i>Chemical Engineering Science</i> , 2017, 168, 344-351.	1.9	66

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19	Visualization study on the promotion of natural gas hydrate production by water flow erosion. <i>Fuel</i> , 2019, 235, 63-71.	3.4	65
20	Production characteristics of two class water-excess methane hydrate deposits during depressurization. <i>Fuel</i> , 2018, 232, 99-107.	3.4	60
21	Effects of additives on continuous hydrate-based flue gas separation. <i>Applied Energy</i> , 2018, 221, 374-385.	5.1	57
22	Effects of C ₃ H ₈ on hydrate formation and dissociation for integrated CO ₂ capture and desalination technology. <i>Energy</i> , 2015, 93, 1971-1979.	4.5	56
23	Effects of pressure and sea water flow on natural gas hydrate production characteristics in marine sediment. <i>Applied Energy</i> , 2019, 238, 274-283.	5.1	55
24	Experimental investigation on novel desalination system via gas hydrate. <i>Desalination</i> , 2020, 478, 114284.	4.0	55
25	Progress and trends in hydrate based desalination (HBD) technology: A review. <i>Chinese Journal of Chemical Engineering</i> , 2019, 27, 2037-2043.	1.7	54
26	Dependence of the hydrate-based CO ₂ storage process on the hydrate reservoir environment in high-efficiency storage methods. <i>Chemical Engineering Journal</i> , 2021, 415, 128937.	6.6	54
27	MRI measurements of CO ₂ –CH ₄ hydrate formation and dissociation in porous media. <i>Fuel</i> , 2015, 140, 126-135.	3.4	53
28	Advances in nuclear magnetic resonance (NMR) techniques for the investigation of clathrate hydrates. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 74, 1346-1360.	8.2	52
29	The seepage characteristics of methane hydrate-bearing clayey sediments under various pressure gradients. <i>Energy</i> , 2020, 191, 116507.	4.5	52
30	Post-combustion CO ₂ capture and separation in flue gas based on hydrate technology: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 154, 111806.	8.2	52
31	Influence of Pore Size, Salinity and Gas Composition upon the Hydrate Formation Conditions. <i>Chinese Journal of Chemical Engineering</i> , 2010, 18, 292-296.	1.7	50
32	Hydrate slurry flow characteristics influenced by formation, agglomeration and deposition in a fully visual flow loop. <i>Fuel</i> , 2020, 277, 118066.	3.4	48
33	Investigation on the induction time of methane hydrate formation in porous media under quiescent conditions. <i>Journal of Petroleum Science and Engineering</i> , 2016, 145, 565-572.	2.1	46
34	New insights on water-gas flow and hydrate decomposition behaviors in natural gas hydrates deposits with various saturations. <i>Applied Energy</i> , 2020, 259, 114185.	5.1	46
35	Measurement of water phase permeability in the methane hydrate dissociation process using a new method. <i>International Journal of Heat and Mass Transfer</i> , 2018, 118, 1316-1324.	2.5	45
36	Characteristics of CO ₂ Hydrate Formation and Dissociation in Glass Beads and Silica Gel. <i>Energies</i> , 2012, 5, 925-937.	1.6	43

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37	Experimental investigation of natural gas hydrate production characteristics via novel combination modes of depressurization with water flow erosion. <i>Fuel</i> , 2019, 252, 295-303.	3.4	41
38	Analysis of the Physical Properties of Hydrate Sediments Recovered from the Pearl River Mouth Basin in the South China Sea: Preliminary Investigation for Gas Hydrate Exploitation. <i>Energies</i> , 2017, 10, 531.	1.6	37
39	Methane hydrate formation/reformation in three experimental modes: A preliminary investigation of blockage prevention during exploitation. <i>Journal of Natural Gas Science and Engineering</i> , 2015, 27, 1814-1820.	2.1	33
40	Quantitative analysis of methane hydrate formation in size-varied porous media for gas storage and transportation application. <i>Fuel</i> , 2021, 301, 121021.	3.4	33
41	Evaluation of Gas Production from Methane Hydrate Sediments with Heat Transfer from Over-Underburden Layers. <i>Energy & Fuels</i> , 2015, 29, 1028-1039.	2.5	32
42	CO ₂ Hydrate Formation Characteristics in a Water/Brine-Saturated Silica Gel. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 10753-10761.	1.8	31
43	Experimental observation of methane hydrate dissociation via different depressurization modes under water phase flow. <i>Fuel</i> , 2021, 283, 118908.	3.4	30
44	Permeability estimation of porous media by using an improved capillary bundle model based on micro-CT derived pore geometries. <i>Heat and Mass Transfer</i> , 2017, 53, 49-58.	1.2	29
45	Dynamic measurements of methane hydrate formation/dissociation in different gas flow direction. <i>Applied Energy</i> , 2018, 227, 703-709.	5.1	29
46	Effects of water-gas two-phase flow on methane hydrate dissociation in porous media. <i>Fuel</i> , 2019, 255, 115637.	3.4	29
47	Experimental investigation on the decomposition characteristics of natural gas hydrates in South China Sea sediments by a micro-differential scanning calorimeter. <i>Applied Energy</i> , 2019, 254, 113653.	5.1	29
48	NMR quantitative investigation on methane hydrate formation characteristics under different driving forces. <i>Fuel</i> , 2020, 261, 116364.	3.4	28
49	Ice behaviors and heat transfer characteristics during the isothermal production process of methane hydrate reservoirs by depressurization. <i>Energy</i> , 2021, 232, 121030.	4.5	28
50	Quantitative analysis of CO ₂ hydrate formation in porous media by proton NMR. <i>AIChE Journal</i> , 2020, 66, e16820.	1.8	27
51	Dissociation characteristics of methane hydrate using depressurization combined with thermal stimulation. <i>Chinese Journal of Chemical Engineering</i> , 2019, 27, 2089-2098.	1.7	26
52	Gas permeability characteristics of marine sediments with and without methane hydrates in a core holder. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 76, 103215.	2.1	26
53	Behaviour of hydrate-based technology for H ₂ /CO ₂ separation in glass beads. <i>Separation and Purification Technology</i> , 2015, 141, 170-178.	3.9	24
54	Effects of underlying gas on formation and gas production of methane hydrate in muddy low-permeability cores. <i>Fuel</i> , 2022, 309, 122128.	3.4	24

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55	Gas production enhancement effect of underlying gas on methane hydrates in marine sediments by depressurization. <i>Fuel</i> , 2022, 310, 122415.	3.4	24
56	CO ₂ /N ₂ mixture sequestration in depleted natural gas hydrate reservoirs. <i>Journal of Petroleum Science and Engineering</i> , 2019, 175, 72-82.	2.1	23
57	Equilibrium conditions for CO ₂ hydrate in porous medium. <i>Journal of Chemical Thermodynamics</i> , 2011, 43, 334-338.	1.0	22
58	Experimental investigation into the dissociation of methane hydrate near ice-freezing point induced by depressurization and the concomitant metastable phases. <i>Journal of Natural Gas Science and Engineering</i> , 2019, 65, 125-134.	2.1	22
59	Effect of multiphase flow on natural gas hydrate production in marine sediment. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 73, 103066.	2.1	22
60	The enhancement effect of water-gas two-phase flow on depressurization process: Important for gas hydrate production. <i>Applied Energy</i> , 2020, 276, 115559.	5.1	22
61	CO ₂ sequestration in depleted methane hydrate deposits with excess water. <i>International Journal of Energy Research</i> , 2018, 42, 2536-2547.	2.2	21
62	Gas production from different classes of methane hydrate deposits by the depressurization method. <i>International Journal of Energy Research</i> , 2019, 43, 5493-5505.	2.2	21
63	An improved model for predicting hydrate phase equilibrium in marine sediment environment. <i>Journal of Natural Gas Chemistry</i> , 2010, 19, 241-245.	1.8	20
64	The synthetic effect of traditional-thermodynamic-factors (temperature, salinity, pressure) and fluid flow on natural gas hydrate recovery behaviors. <i>Energy</i> , 2021, 233, 121147.	4.5	18
65	Hydrate phase equilibrium measurements for (THF+SDS+CO ₂ +N ₂) aqueous solution systems in porous media. <i>Fluid Phase Equilibria</i> , 2014, 370, 12-18.	1.4	17
66	MRI observation of CO ₂ -C ₃ H ₈ hydrate-induced water migration in glass sand. <i>Chemical Engineering Science</i> , 2019, 207, 1096-1106.	1.9	17
67	Formation and production characteristics of methane hydrates from marine sediments in a core holder. <i>Applied Energy</i> , 2020, 275, 115393.	5.1	17
68	Molecular dynamics simulation of the effects of different thermodynamic parameters on methane hydrate dissociation: An analysis of temperature, pressure and gas concentrations. <i>Fluid Phase Equilibria</i> , 2020, 516, 112606.	1.4	17
69	Thermodynamics analysis and temperature response mechanism during methane hydrate production by depressurization. <i>Energy</i> , 2022, 241, 122902.	4.5	17
70	Utilization of water-gas flow on natural gas hydrate recovery with different depressurization modes. <i>Fuel</i> , 2021, 288, 119583.	3.4	16
71	Experimental analysis on thermodynamic stability and methane leakage during solid fluidization process of methane hydrate. <i>Fuel</i> , 2021, 284, 119020.	3.4	16
72	Production Behaviors of Water-Saturated Methane Hydrate Deposits during the Depressurization with/without Thermal Water Compensation Process. <i>Energy & Fuels</i> , 2021, 35, 1638-1647.	2.5	16

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73	Application of X-ray Computed Tomography Technology in Gas Hydrate. <i>Energy Technology</i> , 2019, 7, 1800699.	1.8	15
74	Phase Equilibrium Data of CO ₂ -MCP Hydrates and CO ₂ Gas Uptake Comparisons with CO ₂ -CP Hydrates and CO ₂ -C ₃ H ₈ Hydrates. <i>Journal of Chemical & Engineering Data</i> , 2019, 64, 372-379.	1.0	15
75	Kinetics and spatial distribution of tetrahydrofuran/methane hydrate formation in an unstirred reactor: Application in natural gas storage. <i>Fuel</i> , 2021, 300, 121011.	3.4	14
76	Dynamic permeability and gas production characteristics of methane hydrate-bearing marine muddy cores: Experimental and modeling study. <i>Fuel</i> , 2021, 306, 121630.	3.4	14
77	Thermodynamics analysis and ice behavior during the depressurization process of methane hydrate reservoir. <i>Energy</i> , 2022, 250, 123801.	4.5	14
78	Characterizing the Dissolution Rate of CO ₂ -Brine in Porous Media under Gaseous and Supercritical Conditions. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 4.	1.3	13
79	Effects of Halogen Ions on Phase Equilibrium of Methane Hydrate in Porous Media. <i>International Journal of Thermophysics</i> , 2012, 33, 821-830.	1.0	12
80	Behaviors of NaCl Ions Intruding into Methane Hydrate under a Static Electric Field. <i>Journal of Physical Chemistry C</i> , 2021, 125, 18483-18493.	1.5	11
81	High resolution MRI studies of CO ₂ hydrate formation and dissociation near the gas-water interface. <i>Chemical Engineering Journal</i> , 2021, 425, 131426.	6.6	11
82	Research on the CO ₂ Gas Uptake of Different Hydrate Structures with Cyclopentane or Methyl-cyclopentane as Co-guest Molecules. <i>Energy Procedia</i> , 2017, 105, 4133-4139.	1.8	9
83	Effects of temperature holding on methane hydrate decomposition process by thermal stimulation. <i>Journal of Chemical Thermodynamics</i> , 2021, 159, 106487.	1.0	9
84	Production Characteristics of Natural Gas Hydrate in Muddy Marine Sediments of Different Moistures by Depressurization. <i>Energy & Fuels</i> , 2022, 36, 1522-1530.	2.5	9
85	Effects of Multiple Factors on Methane Hydrate Reformation in a Porous Medium. <i>ChemistrySelect</i> , 2017, 2, 6030-6035.	0.7	8
86	In-situ investigation on methane hydrate decomposition characteristics under variational seawater flow process. <i>Fuel</i> , 2022, 310, 122123.	3.4	7
87	Effects of Particle Sizes on Growth Characteristics of Propane Hydrate in Uniform/Nonuniform Sands for Desalination Application. <i>Energy & Fuels</i> , 2022, 36, 1003-1014.	2.5	7
88	MRI investigation of water-oil two phase flow in straight capillary, bifurcate channel and monolayered glass bead pack. <i>Magnetic Resonance Imaging</i> , 2015, 33, 918-926.	1.0	5
89	Visualization study on the promotion of depressurization and water flow erosion for gas hydrate production. <i>Energy Procedia</i> , 2019, 158, 5563-5568.	1.8	5
90	Effect of Methane Solubility on Hydrate Formation and Dissociation: Review and Perspectives. <i>Energy & Fuels</i> , 2022, 36, 7269-7283.	2.5	5