Tianbiao He

List of Publications by Year
in descending order

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81 papers	7,645 citations	70961 41 h-index	62479 80 g-index
81 all docs	81 docs citations	81 times ranked	2896 citing authors

#	Article	IF	Citations
1	Progress and prospect of hydrate-based desalination technology. Frontiers in Energy, 2022, 16, 445-459.	1.2	10
2	Neural network-inspired performance enhancement of synthetic natural gas liquefaction plant with different minimum approach temperatures. Fuel, 2022, 308, 121858.	3.4	9
3	Boiling heat transfer mechanism of environmental-friendly refrigerants: A review. International Journal of Refrigeration, 2022, 133, 214-225.	1.8	17
4	Optimization and analysis of a novel hydrogen liquefaction process for circulating hydrogen refrigeration. International Journal of Hydrogen Energy, 2022, 47, 348-364.	3.8	26
5	Solidified Hydrogen Storage (Solid-HyStore) via Clathrate Hydrates. Chemical Engineering Journal, 2022, 431, 133702.	6.6	21
6	Assessment of working fluids, thermal resources and cooling utilities for Organic Rankine Cycles: State-of-the-art comparison, challenges, commercial status, and future prospects. Energy Conversion and Management, 2022, 252, 115055.	4.4	48
7	An electrical resistivity-based method for measuring semi-clathrate hydrate formation kinetics: Application for cold storage and transport. Applied Energy, 2022, 308, 118397.	5.1	23
8	Effect of Cyclopentane and Graphite on the Kinetics of CO2/C3H8 Formation for Hydrate-Based Desalination. Lecture Notes in Civil Engineering, 2022, , 400-408.	0.3	0
9	Influence of transient heat flux on boiling flow pattern in a straight microchannel applied in concentrator photovoltaic systems. International Journal of Heat and Mass Transfer, 2022, 190, 122792.	2.5	7
10	Key factors influencing the kinetics of tetra-n-butylammonium bromide hydrate formation as a cold storage and transport material. Chemical Engineering Journal, 2022, 446, 136843.	6.6	14
11	Significance of Low Stirring Modes on the Kinetics of Methane Hydrate Formation. Energy & Fuels, 2022, 36, 7676-7686.	2.5	5
12	System perspective on cleaner technologies for renewable methane production and utilisation towards carbon neutrality: Principles, techno-economics, and carbon footprints. Fuel, 2022, 327, 125130.	3.4	19
13	An experimental study on effects of oily content on flow pattern transition over horizontal tubes in a sewage source heat pump system. International Journal of Thermal Sciences, 2022, 181, 107779.	2.6	3
14	Amino Acids as Kinetic Promoters for Gas Hydrate Applications: A Mini Review. Energy & Fuels, 2021, 35, 7553-7571.	2.5	97
15	Black Hole-Inspired Optimal Design of Biomethane Liquefaction Process for Small-Scale Applications. Frontiers in Energy Research, 2021, 9, .	1.2	8
16	Hydrates for cold energy storage and transport: A review. Advances in Applied Energy, 2021, 2, 100022.	6.6	83
17	Organic Rankine cycle integrated with hydrate-based desalination for a sustainable energyâ€“water nexus system. Applied Energy, 2021, 291, 116839.	5.1	18
18	Stability analysis of methane hydrates for gas storage application. Chemical Engineering Journal, 2021, 415, 128927.	6.6	42

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19	A robust and highly efficient phase boundary method for determining the thermodynamic equilibrium conditions of bulk gas hydrate systems. Fluid Phase Equilibria, 2021, 540, 113034.	1.4	12
20	Teaching-learning self-study approach for optimal retrofitting of dual mixed refrigerant LNG process: Energy and exergy perspective. Applied Energy, 2021, 298, 117187.	5.1	23
21	Effects of cooling and heating sources properties and working fluid selection on cryogenic organic Rankine cycle for LNG cold energy utilization. Energy Conversion and Management, 2021, 247, 114706.	4.4	45
22	A critical review on measures to suppress flow boiling instabilities in microchannels. Heat and Mass Transfer, 2021, 57, 889-910.	1.2	31
23	Technoâ€Economic Evaluation of Cyclopentane Hydrateâ€Based Desalination with Liquefied Natural Gas Cold Energy Utilization. Energy Technology, 2020, 8, 1900212.	1.8	24
24	Exergoeconomic analysis and optimization of a Gas Turbine-Modular Helium Reactor with new organic Rankine cycle for efficient design and operation. Energy Conversion and Management, 2020, 204, 112311.	4.4	24
25	Unsteady heat transfer properties of spray falling over a horizontal tube in an oily sewage source heat pump. Applied Thermal Engineering, 2020, 179, 115675.	3.0	19
26	Cascade utilization of LNG cold energy by integrating cryogenic energy storage, organic Rankine cycle and direct cooling. Applied Energy, 2020, 277, 115570.	5.1	75
27	Seawater based mixed methane-THF hydrate formation at ambient temperature conditions. Applied Energy, 2020, 271, 115158.	5.1	29
28	Shuffled Complex Evolution-Based Performance Enhancement and Analysis of Cascade Liquefaction Process for Large-Scale LNG Production. Energies, 2020, 13, 2511.	1.6	13
29	Impact of mixed refrigerant selection on energy and exergy performance of natural gas liquefaction processes. Energy, 2020, 199, 117378.	4.5	38
30	Hydrate-based desalination (HyDesal) process employing a novel prototype design. Chemical Engineering Science, 2020, 218, 115563.	1.9	47
31	Single-Solution-Based Vortex Search Strategy for Optimal Design of Offshore and Onshore Natural Gas Liquefaction Processes. Energies, 2020, 13, 1732.	1.6	19
32	Dual-effect single-mixed refrigeration cycle: An innovative alternative process for energy-efficient and cost-effective natural gas liquefaction. Applied Energy, 2020, 268, 115022.	5.1	44
33	Effects of temperature and pressure on the methane hydrate formation with the presence of tetrahydrofuran (THF) as a promoter in an unstirred tank reactor. Fuel, 2019, 255, 115705.	3.4	58
34	Numerical study on heat transfer of oily wastewater spray falling film over a horizontal tube in a sewage source heat pump. International Journal of Heat and Mass Transfer, 2019, 142, 118423.	2.5	22
35	Kinetic promotion of mixed methane-THF hydrate by additives: Opportune to energy storage. Energy Procedia, 2019, 158, 5287-5292.	1.8	12
36	Utilization of CO2 in renewable DME fuel production: A life cycle analysis (LCA)-based case study in China. Fuel, 2019, 254, 115627.	3.4	27

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37	Improved Kinetics and Water Recovery with Propane as Co-Guest Gas on the Hydrate-Based Desalination (HyDesal) Process. ChemEngineering, 2019, 3, 31.	1.0	19
38	Economic evaluation of energy efficient hydrate based desalination utilizing cold energy from liquefied natural gas (LNG). Desalination, 2019, 463, 69-80.	4.0	86
39	Morphology Study of Mixed Methaneâ€“Tetrahydrofuran Hydrates with and without the Presence of Salt. Energy & Fuels, 2019, 33, 4865-4876.	2.5	41
40	PMV-based dynamic optimization of energy consumption for a residential task/ambient air conditioning system in different climate zones. Renewable Energy, 2019, 142, 41-54.	4.3	37
41	A novel inlet air cooling system based on liquefied natural gas cold energy utilization for improving power plant performance. Energy Conversion and Management, 2019, 187, 41-52.	4.4	48
42	LNG cold energy utilization: Prospects and challenges. Energy, 2019, 170, 557-568.	4.5	236
43	A comprehensive optimization and comparison of modified single mixed refrigerant and parallel nitrogen expansion liquefaction process for small-scale mobile LNG plant. Energy, 2019, 167, 1-12.	4.5	76
44	Conventional and microwave-assisted pyrolysis of gumwood: A comparison study using thermodynamic evaluation and hydrogen production. Fuel Processing Technology, 2019, 184, 1-11.	3.7	82
45	A review of solidified natural gas (SNG) technology for gas storage via clathrate hydrates. Applied Energy, 2018, 216, 262-285.	5.1	420
46	A novel conceptual design of hydrate based desalination (HyDesal) process by utilizing LNG cold energy. Applied Energy, 2018, 222, 13-24.	5.1	131
47	A review of gas hydrate growth kinetic models. Chemical Engineering Journal, 2018, 342, 9-29.	6.6	211
48	Review on the design and optimization of natural gas liquefaction processes for onshore and offshore applications. Chemical Engineering Research and Design, 2018, 132, 89-114.	2.7	138
49	Experimental study on CO 2 frosting and clogging in a brazed plate heat exchanger for natural gas liquefaction process. Cryogenics, 2018, 91, 128-135.	0.9	10
50	Alleviation of Foam Formation in a Surfactant Driven Gas Hydrate System: Insights via a Detailed Morphological Study. ACS Applied Energy Materials, 2018, 1, 6899-6911.	2.5	64
51	Morphology Study on the Effect of Thermodynamic Inhibitors during Methane Hydrate Formation in the Presence of NaCl. Crystal Growth and Design, 2018, 18, 6984-6994.	1.4	22
52	A Review of Clathrate Hydrate Based Desalination To Strengthen Energyâ€“Water Nexus. ACS Sustainable Chemistry and Engineering, 2018, 6, 8093-8107.	3.2	275
53	Kinetic Evaluation of Cyclopentane as a Promoter for CO₂ Capture via a Clathrate Process Employing Different Contact Modes. ACS Sustainable Chemistry and Engineering, 2018, 6, 11913-11921.	3.2	55
54	Effect of KCl and MgCl2 on the kinetics of methane hydrate formation and dissociation in sandy sediments. Energy, 2017, 137, 518-529.	4.5	61

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55	An innovative approach to enhance methane hydrate formation kinetics with leucine for energy storage application. Applied Energy, 2017, 188, 190-199.	5.1	180
56	A Review of Clathrate Hydrate Nucleation. ACS Sustainable Chemistry and Engineering, 2017, 5, 11176-11203.	3.2	224
57	Mechanism of methane hydrate formation in the presence of hollow silica. Korean Journal of Chemical Engineering, 2016, 33, 2050-2062.	1.2	32
58	Impact of fixed bed reactor orientation, liquid saturation, bed volume and temperature on the clathrate hydrate process for pre-combustion carbon capture. Journal of Natural Gas Science and Engineering, 2016, 35, 1499-1510.	2.1	29
59	Review of natural gas hydrates as an energy resource: Prospects and challenges. Applied Energy, 2016, 162, 1633-1652.	5.1	1,328
60	Carbon dioxide hydrate kinetics in porous media with and without salts. Applied Energy, 2016, 162, 1131-1140.	5.1	113
61	Dynamic simulation of mixed refrigerant process for small-scale LNG plant in skid mount packages. Energy, 2016, 97, 350-358.	4.5	32
62	CO₂ capture using the clathrate hydrate process employing cellulose foam as a porous media. Canadian Journal of Chemistry, 2015, 93, 808-814.	0.6	39
63	Optimal synthesis of expansion liquefaction cycle for distributed-scale LNG (liquefied natural gas) plant. Energy, 2015, 88, 268-280.	4.5	52
64	A review of the hydrate based gas separation (HBGS) process forÂcarbon dioxide pre-combustion capture. Energy, 2015, 85, 261-279.	4.5	481
65	Effect of NaCl on methane hydrate formation and dissociation in porous media. Journal of Natural Gas Science and Engineering, 2015, 27, 178-189.	2.1	104
66	Investigation on the roles of activated carbon particle sizes on methane hydrate formation and dissociation. Chemical Engineering Science, 2015, 126, 383-389.	1.9	103
67	Enhanced carbon dioxide hydrate formation kinetics in a fixed bed reactor filled with metallic packing. Chemical Engineering Science, 2015, 122, 78-85.	1.9	80
68	Performance improvement of nitrogen expansion liquefaction process for small-scale LNG plant. Cryogenics, 2014, 61, 111-119.	0.9	58
69	Formation and Dissociation Kinetics of Methane Hydrates in Seawater and Silica Sand. Energy & Fuels, 2014, 28, 2708-2716.	2.5	132
70	Design and Optimization of a Novel Mixed Refrigerant Cycle Integrated with NGL Recovery Process for Small-Scale LNG Plant. Industrial & Engineering Chemistry Research, 2014, 53, 5545-5553.	1.8	68
71	A novel process for small-scale pipeline natural gas liquefaction. Applied Energy, 2014, 115, 17-24.	5.1	38
72	Unusual behavior of propane as a co-guest during hydrate formation in silica sand: Potential application to seawater desalination and carbon dioxide capture. Chemical Engineering Science, 2014, 117, 342-351.	1.9	131

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73	A novel conceptual design of parallel nitrogen expansion liquefaction process for small-scale LNG (liquefied natural gas) plant in skid-mount packages. Energy, 2014, 75, 349-359.	4.5	69
74	Seawater desalination by gas hydrate process and removal characteristics of dissolved ions (Na+, K+,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	4.6	299
75	Design and optimization of natural gas liquefaction process by utilizing gas pipeline pressure energy. Applied Thermal Engineering, 2013, 57, 1-6.	3.0	39
76	Medium pressure hydrate based gas separation (HBGS) process for pre-combustion capture of carbon dioxide employing a novel fixed bed reactor. International Journal of Greenhouse Gas Control, 2013, 17, 206-214.	2.3	107
77	Pre-combustion capture of carbon dioxide in a fixed bed reactor using the clathrate hydrate process. Energy, 2013, 50, 364-373.	4.5	222
78	Morphology of Methane Hydrate Formation in Porous Media. Energy & Fuels, 2013, 27, 3364-3372.	2.5	145
79	Adsorption and Desorption Experimental Study of Carbon Dioxide/Methane Mixture Gas on 13X-Type Molecular Sieves. Journal of Chemical Engineering of Japan, 2013, 46, 811-820.	0.3	6
80	Enhanced rate of gas hydrate formation in a fixed bed column filled with sand compared to a stirred vessel. Chemical Engineering Science, 2012, 68, 617-623.	1.9	292
81	Gas Hydrate Formation in a Variable Volume Bed of Silica Sand Particles. Energy & Fuels, 2009, 23, 5496-5507.	2.5	218