Zhengcai Zhang

List of Publications by Year
in descending order

24 papers	538 citations	623188 14 h-index	642321 23 g-index
24 all docs	24 docs citations	24 times ranked	378 citing authors

#	Article	IF	Citations
1	Microcanonical molecular simulations of methane hydrate nucleation and growth: evidence that direct nucleation to sI hydrate is among the multiple nucleation pathways. Physical Chemistry Chemical Physics, 2015, 17, 8870-8876.	1.3	94
2	Effects of ensembles on methane hydrate nucleation kinetics. Physical Chemistry Chemical Physics, 2016, 18, 15602-15608.	1.3	53
3	The effects of ice on methane hydrate nucleation: a microcanonical molecular dynamics study. Physical Chemistry Chemical Physics, 2017, 19, 19496-19505.	1.3	33
4	Bridging solution properties to gas hydrate nucleation through guest dynamics. Physical Chemistry Chemical Physics, 2018, 20, 24535-24538.	1.3	33
5	Mechanolysis mechanisms of the fused aromatic rings of anthracite coal under shear stress. Fuel, 2019, 253, 1247-1255.	3.4	33
6	Molecular Insight into the Growth of Hydrogen and Methane Binary Hydrates. Journal of Physical Chemistry C, 2018, 122, 7771-7778.	1.5	30
7	Nucleation probability and memory effect of methane-propane mixed gas hydrate. Fuel, 2021, 291, 120103.	3.4	29
8	Insight on the stability of polycrystalline natural gas hydrates by molecular dynamics simulations. Fuel, 2021, 289, 119946.	3.4	23
9	Characterizing key features in the formation of ice and gas hydrate systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180167.	1.6	22
10	Molecular Insights into Guest and Composition Dependence of Mixed Hydrate Nucleation. Journal of Physical Chemistry C, 2020, 124, 25078-25086.	1.5	20
11	Does Local Structure Bias How a Crystal Nucleus Evolves?. Journal of Physical Chemistry Letters, 2018, 9, 6991-6998.	2.1	19
12	Might a 2,2-Dimethylbutane Molecule Serve as a Site to Promote Gas Hydrate Nucleation?. Journal of Physical Chemistry C, 2019, 123, 20579-20586.	1.5	19
13	Nanopore Surfaces Control the Shale Gas Adsorption via Roughness and Layer-Accumulated Adsorption Potential: A Molecular Dynamics Study. Energy & Fuels, 2021, 35, 4893-4900.	2.5	16
14	Open questions on methane hydrate nucleation. Communications Chemistry, 2021, 4, .	2.0	15
15	Effects of cage type and adsorption face on the cageâ€“methane adsorption interaction: Implications for hydrate nucleation studies. Chemical Physics Letters, 2013, 575, 54-58.	1.2	14
16	Unraveling Mixed Hydrate Formation: Microscopic Insights into Early Stage Behavior. Journal of Physical Chemistry B, 2016, 120, 13218-13223.	1.2	14
17	Effect of guests on the adsorption interaction between a hydrate cage and guests. RSC Advances, 2016, 6, 106443-106452.	1.7	13
18	Revealing the Growth of H₂ + THF Binary Hydrate through Molecular Simulations. Energy & Fuels, 2020, 34, 15004-15010.	2.5	13

#	Article	IF	Citations
19	Molecular simulation study on the stability of methane hydrate confined in slit-shaped pores. Energy, 2022, 257, 124738.	4.5	12
20	Molecular study on the behavior of methane hydrate decomposition induced by ions electrophoresis. Fuel, 2022, 307, 121866.	3.4	11
21	Effects of gas reservoir configuration and pore radius on shale gas nanoflow: A molecular dynamics study. Journal of Chemical Physics, 2018, 148, 204703.	1.2	8
22	Effects of italicized angle and turning angle on shale gas nanoflows in non-straight nanopores: A nonequilibrium molecular dynamics study. Fuel, 2020, 278, 118275.	3.4	6
23	Comment on â€œIterative Cup Overlapping: An Efficient Identification Algorithm for Cage Structures of Amorphous Phase Hydratesâ€. Journal of Physical Chemistry B, 2021, 125, 5451-5453.	1.2	5
24	Revealing the growth mechanism of sH hydrate by molecular simulations. Journal of Molecular Liquids, 2022, 363, 119873.	2.3	3