# Zhengcai Zhang

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 24 papers | 538 citations | 623734 14 h-index | 642732 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. | 2.8 | 94 |
| 2 | Effects of ensembles on methane hydrate nucleation kinetics. Physical Chemistry Chemical Physics, 2016, 18, 15602-15608. | 2.8 | 53 |
| 3 | The effects of ice on methane hydrate nucleation: a microcanonical molecular dynamics study. Physical Chemistry Chemical Physics, 2017, 19, 19496-19505. | 2.8 | 33 |
| 4 | Bridging solution properties to gas hydrate nucleation through guest dynamics. Physical Chemistry Chemical Physics, 2018, 20, 24535-24538. | 2.8 | 33 |
| 5 | Mechanolysis mechanisms of the fused aromatic rings of anthracite coal under shear stress. Fuel, 2019, 253, 1247-1255. | 6.4 | 33 |
| 6 | Molecular Insight into the Growth of Hydrogen and Methane Binary Hydrates. Journal of Physical Chemistry C, 2018, 122, 7771-7778. | 3.1 | 30 |
| 7 | Nucleation probability and memory effect of methane-propane mixed gas hydrate. Fuel, 2021, 291, 120103. | 6.4 | 29 |
| 8 | Insight on the stability of polycrystalline natural gas hydrates by molecular dynamics simulations. Fuel, 2021, 289, 119946. | 6.4 | 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. | 3.4 | 22 |
| 10 | Molecular Insights into Guest and Composition Dependence of Mixed Hydrate Nucleation. Journal of Physical Chemistry C, 2020, 124, 25078-25086. | 3.1 | 20 |
| 11 | Does Local Structure Bias How a Crystal Nucleus Evolves?. Journal of Physical Chemistry Letters, 2018, 9, 6991-6998. | 4.6 | 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. | 3.1 | 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. | 5.1 | 16 |
| 14 | Open questions on methane hydrate nucleation. Communications Chemistry, 2021, 4, . | 4.5 | 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. | 2.6 | 14 |
| 16 | Unraveling Mixed Hydrate Formation: Microscopic Insights into Early Stage Behavior. Journal of Physical Chemistry B, 2016, 120, 13218-13223. | 2.6 | 14 |
| 17 | Effect of guests on the adsorption interaction between a hydrate cage and guests. RSC Advances, 2016, 6, 106443-106452. | 3.6 | 13 |
| 18 | Revealing the Growth of H<sub>2</sub> + THF Binary Hydrate through Molecular Simulations. Energy & Fuels, 2020, 34, 15004-15010. | 5.1 | 13 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Molecular simulation study on the stability of methane hydrate confined in slit-shaped pores. Energy, 2022, 257, 124738. | 8.8 | 12 |
| 20 | Molecular study on the behavior of methane hydrate decomposition induced by ions electrophoresis. Fuel, 2022, 307, 121866. | 6.4 | 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. | 3.0 | 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. | 6.4 | 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. | 2.6 | 5 |
| 24 | Revealing the growth mechanism of sH hydrate by molecular simulations. Journal of Molecular Liquids, 2022, 363, 119873. | 4.9 | 3 |