

David R Cole

List of Publications by Year in descending order

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31
papers

1,109
citations

361413

20
h-index

434195

31
g-index

31
all docs

31
docs citations

31
times ranked

1229
citing authors

#	ARTICLE	IF	CITATIONS
1	Microbial metabolisms in a 2.5-km-deep ecosystem created by hydraulic fracturing in shales. <i>Nature Microbiology</i> , 2016, 1, 16146.	13.3	207
2	CO ₂ –C ₄ H ₁₀ Mixtures Simulated in Silica Slit Pores: Relation between Structure and Dynamics. <i>Journal of Physical Chemistry C</i> , 2015, 119, 15274-15284.	3.1	86
3	Coupled laboratory and field investigations resolve microbial interactions that underpin persistence in hydraulically fractured shales. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E6585-E6594.	7.1	69
4	Confined Water Determines Transport Properties of Guest Molecules in Narrow Pores. <i>ACS Nano</i> , 2016, 10, 7646-7656.	14.6	66
5	Sulfide Generation by Dominant <i>Halanaerobium</i> Microorganisms in Hydraulically Fractured Shales. <i>MSphere</i> , 2017, 2, .	2.9	62
6	Pore Size Effects on the Sorption of Supercritical CO ₂ in Mesoporous CPG-10 Silica. <i>Journal of Physical Chemistry C</i> , 2012, 116, 917-922.	3.1	50
7	Microstructural Characterization of Adsorption and Depletion Regimes of Supercritical Fluids in Nanopores. <i>Journal of Physical Chemistry C</i> , 2007, 111, 15736-15742.	3.1	47
8	Propane simulated in silica pores: Adsorption isotherms, molecular structure, and mobility. <i>Chemical Engineering Science</i> , 2015, 121, 292-299.	3.8	43
9	Genome-Resolved Metagenomics Extends the Environmental Distribution of the <i>Verrucomicrobia</i> Phylum to the Deep Terrestrial Subsurface. <i>MSphere</i> , 2019, 4, .	2.9	38
10	Members of <i>Marinobacter</i> and <i>Arcobacter</i> Influence System Biogeochemistry During Early Production of Hydraulically Fractured Natural Gas Wells in the Appalachian Basin. <i>Frontiers in Microbiology</i> , 2018, 9, 2646.	3.5	33
11	Propane–Water Mixtures Confined within Cylindrical Silica Nanopores: Structural and Dynamical Properties Probed by Molecular Dynamics. <i>Langmuir</i> , 2017, 33, 11310-11320.	3.5	30
12	Direct Measurements of Pore Fluid Density by Vibrating Tube Densimetry. <i>Langmuir</i> , 2012, 28, 5070-5078.	3.5	29
13	Dynamics of Propane in Nanoporous Silica Aerogel: A Quasielastic Neutron Scattering Study. <i>Journal of Physical Chemistry C</i> , 2015, 119, 18188-18195.	3.1	29
14	Role of Confinement on Adsorption and Dynamics of Ethane and an Ethane–CO ₂ Mixture in Mesoporous CPG Silica. <i>Journal of Physical Chemistry C</i> , 2016, 120, 4843-4853.	3.1	28
15	Comparative genomics and physiology of the genus <i>Methanohalophilus</i> , a prevalent methanogen in hydraulically fractured shale. <i>Environmental Microbiology</i> , 2018, 20, 4596-4611.	3.8	28
16	Sorption Phase of Supercritical CO ₂ in Silica Aerogel: Experiments and Mesoscale Computer Simulations. <i>Journal of Physical Chemistry C</i> , 2014, 118, 15525-15533.	3.1	24
17	N-octane diffusivity enhancement via carbon dioxide in silica slit-shaped nanopores – a molecular dynamics simulation. <i>Molecular Simulation</i> , 2016, 42, 745-752.	2.0	24
18	Molecular dynamics simulations of propane in slit shaped silica nano-pores: direct comparison with quasielastic neutron scattering experiments. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 32320-32332.	2.8	22

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19	Factors governing the behaviour of aqueous methane in narrow pores. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150019.	3.4	20
20	Aqueous Hydrogen Sulfide in Slit-Shaped Silica Nanopores: Confinement Effects on Solubility, Structural, and Dynamical Properties. Journal of Physical Chemistry C, 2018, 122, 14744-14755.	3.1	20
21	Effects of Confinement and Pressure on the Vibrational Behavior of Nano-Confined Propane. Journal of Physical Chemistry A, 2018, 122, 6736-6745.	2.5	20
22	In situ transformation of ethoxylate and glycol surfactants by shale-colonizing microorganisms during hydraulic fracturing. ISME Journal, 2019, 13, 2690-2700.	9.8	18
23	Sorption, Structure and Dynamics of CO ₂ and Ethane in Silicalite at High Pressure: A Combined Monte Carlo and Molecular Dynamics Simulation Study. Molecules, 2019, 24, 99.	3.8	18
24	CO ₂ Adsorption in Metal-Organic Framework Mg-MOF-74: Effects of Inter-Crystalline Space. Nanomaterials, 2020, 10, 2274.	4.1	18
25	Effects of water on the stochastic motions of propane confined in MCM-41-S pores. Physical Chemistry Chemical Physics, 2019, 21, 25035-25046.	2.8	16
26	Effects of inter-crystalline space on the adsorption of ethane and CO ₂ in silicalite: implications for enhanced adsorption. Physical Chemistry Chemical Physics, 2020, 22, 13951-13957.	2.8	14
27	Structure and dynamics of ethane confined in silica nanopores in the presence of CO ₂ . Journal of Chemical Physics, 2020, 152, 084707.	3.0	14
28	Comparative geochemistry of flowback chemistry from the Utica/Point Pleasant and Marcellus formations. Chemical Geology, 2021, 564, 120041.	3.3	11
29	Structure and dynamics of water on the forsterite surface. Physical Chemistry Chemical Physics, 2018, 20, 27822-27829.	2.8	10
30	Molecular Structure of Adsorbed Water Phases in Silica Nanopores. Journal of Physical Chemistry C, 2022, 126, 2885-2895.	3.1	8
31	Effect of Pore Connectivity on the Behavior of Fluids Confined in Sub-Nanometer Pores: Ethane and CO ₂ Confined in ZSM-22. Membranes, 2021, 11, 113.	3.0	7