Zachary Aman

List of Publications by Year
in descending order

106 papers	4,154 citations	101384 36 h-index	118652 62 g-index
107 all docs	107 docs citations	107 times ranked	2387 citing authors

#	Article	IF	Citations
1	The impact of mono-ethylene glycol and kinetic inhibitors on methane hydrate formation. Chemical Engineering Journal, 2022, 427, 131531.	6.6	14
2	Nanostructure, electrochemistry and potential-dependent lubricity of the catanionic surface-active ionic liquid [P6,6,6,14] [AOT]. Journal of Colloid and Interface Science, 2022, 608, 2120-2130.	5.0	8
3	Insights into CO2-CH4 hydrate exchange in porous media using magnetic resonance. Fuel, 2022, 312, 122830.	3.4	7
4	Self-assembled nanostructure induced in deep eutectic solvents via an amphiphilic hydrogen bond donor. Journal of Colloid and Interface Science, 2022, 616, 121-128.	5.0	13
5	Micromechanical Force Measurement of Clotted Blood Particle Cohesion: Understanding Thromboembolic Aggregation Mechanisms. Cardiovascular Engineering and Technology, 2022, 13, 816-828.	0.7	1
6	Nucleation rates of carbon dioxide hydrate. Chemical Engineering Journal, 2022, 443, 136359.	6.6	13
7	Dynamics of methane hydrate particles in water-dominant systems during transient flow. Fuel, 2022, 324, 124772.	3.4	0
8	Extracting nucleation rates from ramped temperature measurements of gas hydrate formation. Chemical Engineering Journal, 2022, 450, 137895.	6.6	13
9	Cyclodextrins as eco-friendly nucleation promoters for methane hydrate. Chemical Engineering Journal, 2021, 417, 127932.	6.6	19
10	The choice of droplet size probability distribution function for oil spill modeling is not trivial. Marine Pollution Bulletin, 2021, 163, 111920.	2.3	5
11	Investigating hydrate formation rate and the viscosity of hydrate slurries in water-dominant flow: Flowloop experiments and modelling. Fuel, 2021, 292, 120193.	3.4	22
12	The delay of gas hydrate formation by kinetic inhibitors. Chemical Engineering Journal, 2021, 411, 128478.	6.6	46
13	Behavior of Methane Hydrate-in-Water Slurries from Shut-in to Flow Restart. Energy & Fuels, 2021, 35, 13086-13097.	2.5	2
14	Hydrate Risk Management in Gas Transmission Lines. Energy & Fuels, 2021, 35, 14265-14282.	2.5	22
15	High-resolution performance tests of nucleation and growth suppression by two kinetic hydrate inhibitors. Chemical Engineering Science, 2021, 244, 116776.	1.9	18
16	Gas hydrate nucleation in acoustically levitated water droplets. Chemical Engineering Journal, 2021, , 133494.	6.6	9
17	Effect of hydrate anti-agglomerants on water-in-crude oil emulsion stability. Journal of Petroleum Exploration and Production, 2020, 10, 139-148.	1.2	4
18	Rheological Method To Describe Metastable Hydrate-in-Oil Slurries. Energy & Fuels, 2020, 34, 7955-7964.	2.5	10

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19	Simulating Deep Oil Spills Beyond the Gulf of Mexico. , 2020, , 315-336.		3
20	Far-Field Modeling of aÂDeep-Sea Blowout: Sensitivity Studies of Initial Conditions, Biodegradation, Sedimentation, and Subsurface Dispersant Injection on Surface Slicks and Oil Plume Concentrations. , 2020, , 170-192.		10
21	Summary of Contemporary Research on theÂUse of Chemical Dispersants for Deep-Sea Oil Spills. , 2020, , 494-512.		3
22	Stem Cell Mechanosensation on Gelatin Methacryloyl (GelMA) Stiffness Gradient Hydrogels. Annals of Biomedical Engineering, 2020, 48, 893-902.	1.3	72
23	Hydrate Growth on Methane Gas Bubbles in the Presence of Salt. Langmuir, 2020, 36, 84-95.	1.6	23
24	High-Fidelity Evaluation of Hybrid Gas Hydrate Inhibition Strategies. Energy & Fuels, 2020, 34, 15983-15989.	2.5	11
25	NMR-Compatible Sample Cell for Gas Hydrate Studies in Porous Media. Energy & Fuels, 2020, 34, 12388-12398.	2.5	11
26	Hydrate Management in Restart Operations of a Subsea Jumper. , 2020, , .		3
27	Hydrate Blockage Assessment in a Pilot-Scale Subsea Jumper. , 2020, , .		4
28	Managing Hydrate Formation in Subsea Production. , 2020, , .		2
29	Gas hydrates in sustainable chemistry. Chemical Society Reviews, 2020, 49, 5225-5309.	18.7	443
30	Gas hydrate formation probability and growth rate as a function of kinetic hydrate inhibitor (KHI) concentration. Chemical Engineering Journal, 2020, 388, 124177.	6.6	47
31	Jet Formation at the Spill Site and Resulting Droplet Size Distributions. , 2020, , 43-64.		5
32	Behavior of Rising Droplets and Bubbles: Impact on the Physics of Deep-Sea Blowouts and Oil Fate. , 2020, , 65-82.		6
33	EXPERIMENTAL INVESTIGATION, SCALE-UP AND MODELING OF DROPLET SIZE DISTRIBUTIONS IN TURBULENT MULTIPHASE JETS. Multiphase Science and Technology, 2020, 32, 113-136.	0.2	7
34	Validation of a Novel MEG Sensor Employing a Pilot-Scale Subsea Jumper. , 2020, , .		2
35	Development of a Model and Simulation Tool to Predict Hydrate Growth in Flowlines for Gas Hydrate Production. , 2020, , .		0
36	Carbon Dioxide Capture from Flue Gas Using Tri-Sodium Phosphate as an Effective Sorbent. Energies, 2019, 12, 2889.	1.6	6

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37	Volume Adaptation Controls Stem Cell Mechanotransduction. ACS Applied Materials & Interfaces, 2019, 11, 45520-45530.	4.0	57
38	Resolving the dilemma of dispersant use for deep oil spill response. Environmental Research Letters, 2019, 14, 091002.	2.2	4
39	Use of Terahertz Waves To Monitor Moisture Content in High-Pressure Natural Gas Pipelines. Energy & Fuels, 2019, 33, 8026-8031.	2.5	13
40	Thermophysical Study of Binary Systems of <i>tert</i>-Amyl Methyl Ether with <i>n</i>-Hexane and <i>m</i>-Xylene. Journal of Chemical & Engineering Data, 2019, 64, 459-470.	1.0	4
41	Emulsion Breakage Mechanism Using Pressurized Carbon Dioxide. Energy & Fuels, 2019, 33, 4939-4945.	2.5	2
42	Gas hydrate formation probability distributions: Induction times, rates of nucleation and growth. Fuel, 2019, 252, 448-457.	3.4	53
43	Application of a Transient Deposition Model for Hydrate Management in a Subsea Gas-Condensate Tieback. , 2019, , .		1
44	Nano- and Macroscale Study of the Lubrication of Titania Using Pure and Diluted Ionic Liquids. Frontiers in Chemistry, 2019, 7, 287.	1.8	20
45	Hydrate nucleation and growth on water droplets acoustically-levitated in high-pressure natural gas. Physical Chemistry Chemical Physics, 2019, 21, 21685-21688.	1.3	24
46	The use of computational fluid dynamics to predict the turbulent dissipation rate and droplet size in a stirred autoclave. Chemical Engineering Science, 2019, 196, 433-443.	1.9	13
47	Gas Hydrate Formation Probability Distributions: The Effect of Shear and Comparisons with Nucleation Theory. Langmuir, 2018, 34, 3186-3196.	1.6	43
48	Engineering spheroids potentiating cell-cell and cell-ECM interactions by self-assembly of stem cell microlayer. Biomaterials, 2018, 165, 105-120.	5.7	84
49	Characterising thermally controlled CH₄â€“CO₂ hydrate exchange in unconsolidated sediments. Energy and Environmental Science, 2018, 11, 1828-1840.	15.6	70
50	Rapid Simulation of Solid Deposition in Cryogenic Heat Exchangers To Improve Risk Management in Liquefied Natural Gas Production. Energy & Fuels, 2018, 32, 255-267.	2.5	16
51	Deposition and Shear Stress Initial Investigations for Hydrate Blockage. , 2018, , .		5
52	Quantitative Ranking and Development of Hydrate Anti-Agglomerants. , 2018, , .		5
53	Subcooling and Induction Time Measurements of Probabilistic Hydrate Formation. , 2018, , .		1
54	A New Rheology Model for Hydrate-in-Oil Slurries. , 2018, , .		2

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55	Risk-Based Flow Assurance Design for Natural Gas Hydrate Production Systems. , 2018, , .		5
56	Characterisation of hyaluronic acid methylcellulose hydrogels for 3D bioprinting. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 77, 389-399.	1.5	125
57	Modelling hydrate deposition and sloughing in gas-dominant pipelines. Journal of Chemical Thermodynamics, 2018, 117, 81-90.	1.0	38
58	Simulating Hydrate Growth and Transport Behavior in Gas-Dominant Flow. Energy & Fuels, 2018, 32, 1012-1023.	2.5	40
59	Correlation between rate of deposition and temperature of asphaltene particles. Materials Today: Proceedings, 2018, 5, 22128-22136.	0.9	1
60	BP Gulf Science Data Reveals Ineffectual Subsea Dispersant Injection for the Macondo Blowout. Frontiers in Marine Science, 2018, 5, .	1.2	20
61	Influence of Graphene Nanoplatelet and Silver Nanoparticle on the Rheological Properties of WaterBased Mud â€. Applied Sciences (Switzerland), 2018, 8, 1386.	1.3	23
62	Quantifying the Effect of Salinity on Oilfield Water-in-Oil Emulsion Stability. Energy & Fuels, 2018, 32, 10042-10049.	2.5	39
63	Microscale Detection of Hydrate Blockage Onset in High-Pressure Gasâ€"Water Systems. Energy & Fuels, 2017, 31, 4875-4885.	2.5	24
64	Gas Hydrate Thermodynamic Inhibition with MDEA for Reduced MEG Circulation. Journal of Chemical & Engineering Data, 2017, 62, 2578-2583.	1.0	36
65	Characterization of Crude Oils That Naturally Resist Hydrate Plug Formation. Energy & Fuels, 2017, 31, 5806-5816.	2.5	17
66	Reduction of Clathrate Hydrate Film Growth Rate by Naturally Occurring Surface Active Components. Energy & Fuels, 2017, 31, 5798-5805.	2.5	32
67	High pressure rheological measurements of gas hydrate-in-oil slurries. Journal of Non-Newtonian Fluid Mechanics, 2017, 248, 40-49.	1.0	51
68	Hydrate Plug Dissociation via Active Heating: Uniform Heating and a Simple Predictive Model. Energy & Fuels, 2016, 30, 9275-9284.	2.5	6
69	Crystal growth phenomena of CH4Â+ÂC3H8Â+ÂCO2 ternary gas hydrate systems. Journal of Natural Gas Science and Engineering, 2016, 35, 1426-1434.	2.1	9
70	Hydrate formation and deposition in a gas-dominant flowloop: Initial studies of the effect of velocity and subcooling. Journal of Natural Gas Science and Engineering, 2016, 35, 1490-1498.	2.1	65
71	Interfacial phenomena in gas hydrate systems. Chemical Society Reviews, 2016, 45, 1678-1690.	18.7	189
72	Rapid assessments of hydrate blockage risk in oil-continuous flowlines. Journal of Natural Gas Science and Engineering, 2016, 30, 284-294.	2.1	20

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73	Raman Spectroscopic Studies of Clathrate Hydrate Formation in the Presence of Hydrophobized Particles. Journal of Physical Chemistry A, 2016, 120, 417-424.	1.1	40
74	Gas hydrate plug formation in partially-dispersed waterâ€“oil systems. Chemical Engineering Science, 2016, 140, 337-347.	1.9	69
75	Development of a Tool to Assess Hydrate-Plug-Formation Risk in Oil-Dominant Pipelines. SPE Journal, 2015, 20, 884-892.	1.7	21
76	Intercomparison of oil spill prediction models for accidental blowout scenarios with and without subsea chemical dispersant injection. Marine Pollution Bulletin, 2015, 96, 110-126.	2.3	90
77	Effect of Brine Salinity on the Stability of Hydrate-in-Oil Dispersions and Water-in-Oil Emulsions. Energy & Fuels, 2015, 29, 7948-7955.	2.5	30
78	High-pressure visual experimental studies of oil-in-water dispersion droplet size. Chemical Engineering Science, 2015, 127, 392-400.	1.9	55
79	Hydrate plug formation risk with varying watercut and inhibitor concentrations. Chemical Engineering Science, 2015, 126, 711-718.	1.9	79
80	Hydrate Shell Growth Measured Using NMR. Langmuir, 2015, 31, 8786-8794.	1.6	44
81	Micromechanical Cohesive Force Measurements between Precipitated Asphaltene Solids and Cyclopentane Hydrates. Energy & Fuels, 2015, 29, 6277-6285.	2.5	18
82	Methane Hydrate Bed Formation in a Visual Autoclave: Cold Restart and Reynolds Number Dependence. Journal of Chemical & Engineering Data, 2015, 60, 409-417.	1.0	22
83	Assessing the risk of hydrate plug formation: a new probability and management tool. APPEA Journal, 2015, 55, 477.	0.4	1
84	Attributes and behaviours of crude oils that naturally inhibit hydrate plug formation. APPEA Journal, 2015, 55, 416.	0.4	2
85	Quantitative kinetic inhibitor comparisons and memory effect measurements from hydrate formation probability distributions. Chemical Engineering Science, 2014, 107, 1-12.	1.9	87
86	Underinhibited Hydrate Formation and Transport Investigated Using a Single-Pass Gas-Dominant Flowloop. Energy & Fuels, 2014, 28, 7274-7284.	2.5	107
87	Hydrate Formation in Gas-Dominant Systems Using a Single-Pass Flowloop. Energy & Fuels, 2014, 28, 3043-3052.	2.5	107
88	Adhesion force interactions between cyclopentane hydrate and physically and chemically modified surfaces. Physical Chemistry Chemical Physics, 2014, 16, 25121-25128.	1.3	45
89	Effect of Kinetic Hydrate Inhibitor Polyvinylcaprolactam on Cyclopentane Hydrate Cohesion Forces and Growth. Energy & Fuels, 2014, 28, 3632-3637.	2.5	22
90	Corrosion inhibitor interaction at hydrateâ€“oil interfaces from differential scanning calorimetry measurements. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2014, 448, 81-87.	2.3	27

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91	Response to Comment on â€œEvolution of the Macondo Well Blowout: Simulating the Effects of the Circulation and Synthetic Dispersants on the Subsea Oil Transportâ€ Environmental Science & Technology, 2013, 47, 11906-11907.	4.6	13
92	Measurements of Cohesion Hysteresis between Cyclopentane Hydrates in Liquid Cyclopentane. Energy & Fuels, 2013, 27, 5168-5174.	2.5	9
93	Adhesion Force between Cyclopentane Hydrate and Mineral Surfaces. Langmuir, 2013, 29, 15551-15557.	1.6	53
94	Hydrate formation and particle distributions in gasâ€"water systems. Chemical Engineering Science, 2013, 104, 177-188.	1.9	59
95	Multiphase flow modeling of gas hydrates with a simple hydrodynamic slug flow model. Chemical Engineering Science, 2013, 99, 298-304.	1.9	59
96	Surfactant Adsorption and Interfacial Tension Investigations on Cyclopentane Hydrate. Langmuir, 2013, 29, 2676-2682.	1.6	92
97	Interfacial Tension and Mineral Adhesion Properties of Cyclopentane Hydrate. , 2013, , .		0
98	Lowering of Clathrate Hydrate Cohesive Forces by Surface Active Carboxylic Acids. Energy & Fuels, 2012, 26, 5102-5108.	2.5	50
99	Evolution of the Macondo Well Blowout: Simulating the Effects of the Circulation and Synthetic Dispersants on the Subsea Oil Transport. Environmental Science & Technology, 2012, 46, 13293-13302.	4.6	168
100	Surface Evolution of the Deepwater Horizon Oil Spill Patch: Combined Effects of Circulation and Wind-Induced Drift. Environmental Science & Technology, 2012, 46, 7267-7273.	4.6	125
101	Micromechanical cohesion force measurements to determine cyclopentane hydrate interfacial properties. Journal of Colloid and Interface Science, 2012, 376, 283-288.	5.0	91
102	Interfacial mechanisms governing cyclopentane clathrate hydrate adhesion/cohesion. Physical Chemistry Chemical Physics, 2011, 13, 19796.	1.3	203
103	The Effect of Chemistry and System Conditions on Hydrate Interparticle Adhesion Forces Toward Aggregation and Hydrate Plug Formation. , 2011, , .		4
104	Adhesion force between cyclopentane hydrates and solid surface materials. Journal of Colloid and Interface Science, 2010, 343, 529-536.	5.0	137
105	Influence of Model Oil with Surfactants and Amphiphilic Polymers on Cyclopentane Hydrate Adhesion Forces. Energy & Fuels, 2010, 24, 5441-5445.	2.5	87
106	Micromechanical Adhesion Force Measurements between Hydrate Particles in Hydrocarbon Oils and Their Modifications. Energy & Fuels, 2009, 23, 5966-5971.	2.5	94