Matthew T Reagan

List of Publications by Year
in descending order

56 papers	3,561 citations	201674 27 h-index	243625 44 g-index
57 all docs	57 docs citations	57 times ranked	2040 citing authors

#	Article	IF	Citations
1	Development of lean, efficient, and fast physics-framed deep-learning-based proxy models for subsurface carbon storage. International Journal of Greenhouse Gas Control, 2022, 114, 103562.	4.6	12
2	Numerical Simulations in Support of a Long-Term Test of Gas Production from Hydrate Accumulations on the Alaska North Slope: Reservoir Response to Interruptions of Production (Shut-Ins). Energy & Fuels, 2022, 36, 3496-3525.	5.1	15
3	A New Modeling Framework for Multi-Scale Simulation of Hydraulic Fracturing and Production from Unconventional Reservoirs. Energies, 2021, 14, 641.	3.1	10
4	The hydration of bentonite buffer material revealed by modeling analysis of a long-term in situ test. Applied Clay Science, 2020, 185, 105360.	5.2	18
5	Evaluation of hydrocarbon broaching after subsurface containment failure, Gulf of Mexico. AAPG Bulletin, 2020, 104, 845-862.	1.5	2
6	Simulation of Gas Production from Multilayered Hydrate-Bearing Media with Fully Coupled Flow, Thermal, Chemical and Geomechanical Processes Using TOUGH+Millstone. Part 3: Production Simulation Results. Transport in Porous Media, 2019, 129, 179-202.	2.6	19
7	Simulation of Gas Production from Multilayered Hydrate-Bearing Media with Fully Coupled Flow, Thermal, Chemical and Geomechanical Processes Using TOUGHÂ+ÂMillstone. Part 1: Numerical Modeling of Hydrates. Transport in Porous Media, 2019, 128, 405-430.	2.6	36
8	System response to gas production from a heterogeneous hydrate accumulation at the UBGH2-6 site of the Ulleung basin in the Korean East Sea. Journal of Petroleum Science and Engineering, 2019, 178, 655-665.	4.2	23
9	Simulation of Gas Production from Multilayered Hydrate-Bearing Media with Fully Coupled Flow, Thermal, Chemical and Geomechanical Processes Using TOUGH+Millstone. Part 2: Geomechanical Formulation and Numerical Coupling. Transport in Porous Media, 2019, 128, 221-241.	2.6	21
10	Evaluation of the performance of the oceanic hydrate accumulation at site NGHP-02-09 in the Krishna-Godavari Basin during a production test and during single and multi-well production scenarios. Marine and Petroleum Geology, 2019, 108, 660-696.	3.3	80
11	Transport and Fate of Natural Gas and Brine Escaping from a Hydrocarbon Reservoir Through a Failed Deepwater Well in the Oceanic Subsurface of the Gulf of Mexico. Transport in Porous Media, 2019, 127, 459-480.	2.6	7
12	India National Gas Hydrate Program Expedition 02 summary of scientific results: Numerical simulation of reservoir response to depressurization. Marine and Petroleum Geology, 2019, 108, 154-166.	3.3	79
13	Geomechanical Stability and Overall System Behavior of Sloping Oceanic Accumulations of Hydrates Responding to Dissociation Stimuli. , 2018, , .		3
14	Fast parametric relationships for the large-scale reservoir simulation of mixed CH4-CO2 gas hydrate systems. Computers and Geosciences, 2017, 103, 191-203.	4.2	4
15	Identifying chemicals of concern in hydraulic fracturing fluids used for oil production. Environmental Pollution, 2017, 220, 413-420.	7.5	77
16	Numerical simulation of the environmental impact of hydraulic fracturing of tight/shale gas reservoirs on nearâ€surface groundwater: Background, base cases, shallow reservoirs, shortâ€term gas, and water transport. Water Resources Research, 2015, 51, 2543-2573.	4.2	96
17	Field-Scale Simulation of Production from Oceanic Gas Hydrate Deposits. Transport in Porous Media, 2015, 108, 151-169.	2.6	70
18	MeshVoro: A three-dimensional Voronoi mesh building tool for the TOUGH family of codes. Computers and Geosciences, 2014, 70, 26-34.	4.2	16

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19	System Response During Short- and Long-Term Gas Production from a Gas Hydrate Deposit at the Site of a Planned Field Test in the Ulleung Basin of the Korean East Sea. , 2014, , .		6
20	SeTES: A self-teaching expert system for the analysis, design, and prediction of gas production from unconventional gas resources. Computers and Geosciences, 2013, 58, 100-115.	4.2	2
21	Feasibility of gas production from a gas hydrate accumulation at the UBGH2-6 site of the Ulleung basin in the Korean East Sea. Journal of Petroleum Science and Engineering, 2013, 108, 180-210.	4.2	85
22	Gas Hydrates as a Potential Energy Source: State of Knowledge and Challenges. , 2013, , 977-1033.		21
23	Marine methane cycle simulations for the period of early global warming. Journal of Geophysical Research, 2011, 116, .	3.3	18
24	Correction to â€œMarine methane cycle simulations for the period of early global warmingâ€. Journal of Geophysical Research, 2011, 116, .	3.3	1
25	Gas production from a cold, stratigraphically-bounded gas hydrate deposit at the Mount Elbert Gas Hydrate Stratigraphic Test Well, Alaska North Slope: Implications of uncertainties. Marine and Petroleum Geology, 2011, 28, 517-534.	3.3	172
26	Evaluation of the Hydrate Deposit at the PBU L-106 Site, North Slope, Alaska, for a Long-Term Test of Gas Production. , 2011, , .		2
27	Contribution of oceanic gas hydrate dissociation to the formation of Arctic Ocean methane plumes. Journal of Geophysical Research, 2011, 116, .	3.3	41
28	Polynomial chaos for uncertainty quantification in geophysics. , 2011, , .		2
29	Evaluation of the Gas Production Potential of Some Particularly Challenging Types of Oceanic Hydrate Deposits. Transport in Porous Media, 2011, 90, 269-299.	2.6	105
30	Estimating the upper limit of gas production from Class 2 hydrate accumulations in the permafrost: 1. Concepts, system description, and the production base case. Journal of Petroleum Science and Engineering, 2011, 76, 194-204.	4.2	88
31	Estimating the upper limit of gas production from Class 2 hydrate accumulations in the permafrost: 2. Alternative well designs and sensitivity analysis. Journal of Petroleum Science and Engineering, 2011, 76, 124-137.	4.2	57
32	Challenges, Uncertainties, and Issues Facing Gas Production From Gas-Hydrate Deposits. SPE Reservoir Evaluation and Engineering, 2011, 14, 76-112.	1.8	257
33	The Effect of Reservoir Heterogeneity on Gas Production From Hydrate Accumulations in the Permafrost. , 2010, , .		15
34	Evaluation of Alternative Horizontal Well Designs for Gas Production from Hydrate Deposits in the Shenhu Area, South China Sea. , 2010, , .		17
35	Preliminary Evaluation of the Production Potential of Recently Discovered Hydrate Deposits in the Gulf of Mexico. , 2010, , .		8
36	Geochemistry of clathrateâ€derived methane in Arctic ocean waters. Geophysical Research Letters, 2010, 37, .	4.0	11

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37	Occurrence of gas hydrate in Oligocene Frio sand: Alaminos Canyon Block 818: Northern Gulf of Mexico. Marine and Petroleum Geology, 2009, 26, 1499-1512.	3.3	97
38	Large-scale simulation of methane hydrate dissociation along the West Spitsbergen Margin. Geophysical Research Letters, 2009, 36, .	4.0	49
39	Toward Production From Gas Hydrates: Current Status, Assessment of Resources, and Simulation-Based Evaluation of Technology and Potential. SPE Reservoir Evaluation and Engineering, 2009, 12, 745-771.	1.8	335
40	Evaluation of the Gas Production Potential of Marine Hydrate Deposits in the Ulleung Basin of the Korean East Sea. SPE Journal, 2009, 14, 759-781.	3.1	124
41	Dynamic response of oceanic hydrate deposits to ocean temperature change. Journal of Geophysical Research, 2008, 113, .	3.3	83
42	Sensitivity Analysis of Gas Production From Class 2 and Class 3 Hydrate Deposits. , 2008, , .		17
43	Strategies for Gas Production From Oceanic Class 3 Hydrate Accumulations. , 2007, , .		113
44	Gas Production From Oceanic Class 2 Hydrate Accumulations. , 2007, , .		64
45	Oceanic gas hydrate instability and dissociation under climate change scenarios. Geophysical Research Letters, 2007, 34, .	4.0	83
46	Quantifying uncertainty in chemical systems modeling. International Journal of Chemical Kinetics, 2005, 37, 368-382.	1.6	91
47	Spectral stochastic uncertainty quantification in chemical systems. Combustion Theory and Modelling, 2004, 8, 607-632.	1.9	101
48	Natural Convection in a Closed Cavity under Stochastic Non-Boussinesq Conditions. SIAM Journal of Scientific Computing, 2004, 26, 375-394.	2.8	33
49	Uncertainty quantification in reacting-flow simulations through non-intrusive spectral projection. Combustion and Flame, 2003, 132, 545-555.	5.2	290
50	Analysis of parametric uncertainty propagation in detailed combustion chemistry. , 2003, , 1501-1505.		0
51	A Stochastic Projection Method for Fluid Flow. Journal of Computational Physics, 2002, 181, 9-44.	3.8	427
52	The Zeno (Z=1) Behavior of Water: A Molecular Simulation Study. International Journal of Thermophysics, 2001, 22, 149-160.	2.1	7
53	Azeotropic distillation with an internal decanter. Computers and Chemical Engineering, 2000, 24, 2435-2446.	3.8	14
54	The Zeno (Z= 1) Behavior of Equations of State: An Interpretation across Scales from Macroscopic to Molecular. Journal of Physical Chemistry B, 2000, 104, 9513-9525.	2.6	62

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55	Molecular Simulations of Dense Hydrothermal NaClâ˘H2O Solutions from Subcritical to Supercritical Conditions. Journal of Physical Chemistry B, 1999, 103, 7935-7941.	2.6	44
56	Chemical reactions and phase equilibria of model halocarbons and salts in sub- and supercritical water (200â€"300 bar, 100â€"600Â°C). Journal of Supercritical Fluids, 1998, 13, 225-240.	3.2	30