Matthew T Reagan

List of Publications by Year
in descending order

56	3,561	201674	243625
papers	citations	27 h-index	44 g-index

57	57	57	2040
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Stochastic Projection Method for Fluid Flow. Journal of Computational Physics, 2002, 181, 9-44.	3.8	427
2	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
3	Uncertainty quantification in reacting-flow simulations through non-intrusive spectral projection. Combustion and Flame, 2003, 132, 545-555.	5.2	290
4	Challenges, Uncertainties, and Issues Facing Gas Production From Gas-Hydrate Deposits. SPE Reservoir Evaluation and Engineering, 2011, 14, 76-112.	1.8	257
5	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
6	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
7	Strategies for Gas Production From Oceanic Class 3 Hydrate Accumulations. , 2007, , .		113
8	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
9	Spectral stochastic uncertainty quantification in chemical systems. Combustion Theory and Modelling, 2004, 8, 607-632.	1.9	101
10	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
11	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
12	Quantifying uncertainty in chemical systems modeling. International Journal of Chemical Kinetics, 2005, 37, 368-382.	1.6	91
13	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
14	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
15	Oceanic gas hydrate instability and dissociation under climate change scenarios. Geophysical Research Letters, 2007, 34, .	4.0	83
16	Dynamic response of oceanic hydrate deposits to ocean temperature change. Journal of Geophysical Research, 2008, 113, .	3.3	83
17	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
18	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

#	Article	IF	Citations
19	Identifying chemicals of concern in hydraulic fracturing fluids used for oil production. Environmental Pollution, 2017, 220, 413-420.	7.5	77
20	Field-Scale Simulation of Production from Oceanic Gas Hydrate Deposits. Transport in Porous Media, 2015, 108, 151-169.	2.6	70
21	Gas Production From Oceanic Class 2 Hydrate Accumulations. , 2007, , .		64
22	The Zeno (Z= 1) Behavior of Equations of State:Â An Interpretation across Scales from Macroscopic to Molecular. Journal of Physical Chemistry B, 2000, 104, 9513-9525.	2.6	62
23	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
24	Largeâ€scale simulation of methane hydrate dissociation along the West Spitsbergen Margin. Geophysical Research Letters, 2009, 36, .	4.0	49
25	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
26	Contribution of oceanic gas hydrate dissociation to the formation of Arctic Ocean methane plumes. Journal of Geophysical Research, 2011, 116, .	3.3	41
27	Simulation of Gas Production from Multilayered Hydrate-Bearing Media with Fully Coupled Flow, Thermal, Chemical and Geomechanical Processes Using TOUGHÀ+ÂMillstone. Part 1: Numerical Modeling of Hydrates. Transport in Porous Media, 2019, 128, 405-430.	2.6	36
28	Natural Convection in a Closed Cavity under Stochastic Non-Boussinesq Conditions. SIAM Journal of Scientific Computing, 2004, 26, 375-394.	2.8	33
29	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
30	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
31	Gas Hydrates as a Potential Energy Source: State of Knowledge and Challenges. , 2013, , 977-1033.		21
32	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
33	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
34	Marine methane cycle simulations for the period of early global warming. Journal of Geophysical Research, 2011, 116, .	3.3	18
35	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
36	Sensitivity Analysis of Gas Production From Class 2 and Class 3 Hydrate Deposits. , 2008, , .		17

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37	Evaluation of Alternative Horizontal Well Designs for Gas Production from Hydrate Deposits in the Shenhu Area, South China Sea. , 2010, , .		17
38	MeshVoro: A three-dimensional Voronoi mesh building tool for the TOUGH family of codes. Computers and Geosciences, 2014, 70, 26-34.	4.2	16
39	The Effect of Reservoir Heterogeneity on Gas Production From Hydrate Accumulations in the Permafrost. , 2010, , .		15
40	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
41	Azeotropic distillation with an internal decanter. Computers and Chemical Engineering, 2000, 24, 2435-2446.	3.8	14
42	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
43	Geochemistry of clathrateâ€derived methane in Arctic ocean waters. Geophysical Research Letters, 2010, 37, .	4.0	11
44	A New Modeling Framework for Multi-Scale Simulation of Hydraulic Fracturing and Production from Unconventional Reservoirs. Energies, 2021, 14, 641.	3.1	10
45	Preliminary Evaluation of the Production Potential of Recently Discovered Hydrate Deposits in the Gulf of Mexico. , 2010, , .		8
46	The Zeno (Z=1) Behavior of Water: A Molecular Simulation Study. International Journal of Thermophysics, 2001, 22, 149-160.	2.1	7
47	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
48	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
49	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
50	Geomechanical Stability and Overall System Behavior of Sloping Oceanic Accumulations of Hydrates Responding to Dissociation Stimuli. , 2018, , .		3
51	Evaluation of the Hydrate Deposit at the PBU L-106 Site, North Slope, Alaska, for a Long-Term Test of Gas Production. , 2011, , .		2
52	Polynomial chaos for uncertainty quantification in geophysics. , 2011, , .		2
53	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
54	Evaluation of hydrocarbon broaching after subsurface containment failure, Gulf of Mexico. AAPG Bulletin, 2020, 104, 845-862.	1.5	2

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55	Correction to â€œMarine methane cycle simulations for the period of early global warmingâ€• Journal of Geophysical Research, 2011, 116, .	3.3	1
56	Analysis of parametric uncertainty propagation in detailed combustion chemistry. , 2003, , 1501-1505.		0