Keliu Wu

List of Publications by Citations

143 papers	3,893 citations	30 h-index	59 g-index
152 ext. papers	4,946 ext. citations	5.1 avg, IF	5.97 L-index

#	Paper	IF	Citations
143	Wettability effect on nanoconfined water flow. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 3358-3363	11.5	289
142	Model for Surface Diffusion of Adsorbed Gas in Nanopores of Shale Gas Reservoirs. *Industrial & Engineering Chemistry Research*, **2015**, 54, 3225-3236	3.9	233
141	A model for multiple transport mechanisms through nanopores of shale gas reservoirs with real gas effect–adsorption-mechanic coupling. *International Journal of Heat and Mass Transfer*, **2016**, 93, 408-426	4.9	229
140	Water distribution characteristic and effect on methane adsorption capacity in shale clay. *International Journal of Coal Geology*, **2016**, 159, 135-154	5.5	203
139	Real gas transport through nanopores of varying cross-section type and shape in shale gas reservoirs. *Chemical Engineering Journal*, **2015**, 281, 813-825	14.7	190
138	Enhanced oil recovery techniques for heavy oil and oilsands reservoirs after steam injection. *Applied Energy*, **2019**, 239, 1190-1211	10.7	166
137	A Unified Model for Gas Transfer in Nanopores of Shale-Gas Reservoirs: Coupling Pore Diffusion and Surface Diffusion. *SPE Journal*, **2016**, 21, 1583-1611	3.1	159
136	Phase Equilibria of Confined Fluids in Nanopores of Tight and Shale Rocks Considering the Effect of Capillary Pressure and Adsorption Film. *Industrial & Engineering Chemistry Research*, **2016**, 55, 798-811	3.9	124
135	Study on gas flow through nano pores of shale gas reservoirs. *Fuel*, **2015**, 143, 107-117	7.1	121
134	Thickness and stability of water film confined inside nanoslits and nanocapillaries of shale and clay. *International Journal of Coal Geology*, **2017**, 179, 253-268	5.5	116
133	A model for gas transport in microfractures of shale and tight gas reservoirs. *AICHE Journal*, **2015**, 61, 2079-2088	3.6	116
132	Flow behavior of gas confined in nanoporous shale at high pressure: Real gas effect. *Fuel*, **2017**, 205, 173-183	7.1	112
131	Competitive adsorption of methane and ethane in montmorillonite nanopores of shale at supercritical conditions: A grand canonical Monte Carlo simulation study. *Chemical Engineering Journal*, **2019**, 355, 76-90	14.7	102
130	Water Sorption and Distribution Characteristics in Clay and Shale: Effect of Surface Force. *Energy & Fuels*, **2016**, 30, 8863-8874	4.1	99
129	Methane diffusion in shales with multiple pore sizes at supercritical conditions. *Chemical Engineering Journal*, **2018**, 334, 1455-1465	14.7	63
128	Methane storage in nanoporous material at supercritical temperature over a wide range of pressures. *Scientific Reports*, **2016**, 6, 33461	4.9	59
127	Gas Flow Behavior through Inorganic Nanopores in Shale Considering Confinement Effect and Moisture Content. *Industrial & Engineering Chemistry Research*, **2018**, 57, 3430-3440	3.9	50

126	A multi-site model to determine supercritical methane adsorption in energetically heterogeneous shales. *Chemical Engineering Journal*, **2018**, 349, 438-455	14.7	49
125	Transport capacity of gas confined in nanoporous ultra-tight gas reservoirs with real gas effect and water storage mechanisms coupling. *International Journal of Heat and Mass Transfer*, **2018**, 126, 1007-1018	4.9	47
124	An apparent liquid permeability model of dual-wettability nanoporous media: A case study of shale. *Chemical Engineering Science*, **2018**, 187, 280-291	4.4	44
123	Effect of water saturation on gas slippage in tight rocks. *Fuel*, **2018**, 225, 519-532	7.1	42
122	Methane adsorption behavior on shale matrix at in-situ pressure and temperature conditions: Measurement and modeling. *Fuel*, **2018**, 228, 39-49	7.1	41
121	A Comprehensive Model Coupling Embedded Discrete Fractures, Multiple Interacting Continua, and Geomechanics in Shale Gas Reservoirs with Multiscale Fractures. *Energy & Fuels*, **2017**, 31, 7758-7776	4.1	39
120	Apparent Permeability for Gas Flow in Shale Reservoirs Coupling Effects of Gas Diffusion and Desorption **2014**,		37
119	A fully-coupled semi-analytical model for effective gas/water phase permeability during coal-bed methane production. *Fuel*, **2018**, 223, 44-52	7.1	36
118	Effect of Pressure-Propagation Behavior on Production Performance: Implication for Advancing Low-Permeability Coalbed-Methane Recovery. *SPE Journal*, **2019**, 24, 681-697	3.1	36
117	Effects of energetic heterogeneity on gas adsorption and gas storage in geologic shale systems. *Applied Energy*, **2019**, 251, 113368	10.7	35
116	A Fractal Model for Gas–Water Relative Permeability in Inorganic Shale with Nanoscale Pores. *Transport in Porous Media*, **2018**, 122, 305-331	3.1	34
115	Manipulating the Flow of Nanoconfined Water by Temperature Stimulation. *Angewandte Chemie - International Edition*, **2018**, 57, 8432-8437	16.4	34
114	The second critical capillary number for chemical flooding in low permeability reservoirs: Experimental and numerical investigations. *Chemical Engineering Science*, **2019**, 196, 202-213	4.4	33
113	The modified gas-water two phase version flowing material balance equation for low permeability CBM reservoirs. *Journal of Petroleum Science and Engineering*, **2018**, 165, 726-735	4.4	30
112	A prediction model for desorption area propagation of coalbed methane wells with hydraulic fracturing. *Journal of Petroleum Science and Engineering*, **2019**, 175, 286-293	4.4	29
111	Wettability effect on nanoconfined water flow: Insights and perspectives. *Nano Today*, **2017**, 16, 7-8	17.9	25
110	Nanoconfinement Effect on n-Alkane Flow. *Journal of Physical Chemistry C*, **2019**, 123, 16456-16461	3.8	25
109	Effect of Polymer Degradation on Polymer Flooding in Heterogeneous Reservoirs. *Polymers*, **2018**, 10,	4.5	25

108	Effect of water saturation on gas slippage in circular and angular pores. *AICHE Journal*, **2018**, 64, 3529-3541	3.6	25
107	Real gas transport in tapered noncircular nanopores of shale rocks. *AICHE Journal*, **2017**, 63, 3224-3242	3.6	24
106	Real gas transport in shale matrix with fractal structures. *Fuel*, **2018**, 219, 353-363	7.1	23
105	An analytical model for gas transport through elliptical nanopores. *Chemical Engineering Science*, **2019**, 199, 199-209	4.4	22
104	Ultrahigh Water Flow Enhancement by Optimizing Nanopore Chemistry and Geometry. *Langmuir*, **2019**, 35, 8867-8873	4	20
103	Wettability effects on phase behavior and interfacial tension in shale nanopores. *Fuel*, **2021**, 290, 119983	7.1	19
102	A new rate-decline analysis of shale gas reservoirs: Coupling the self-diffusion and surface diffusion characteristics. *Journal of Petroleum Science and Engineering*, **2018**, 163, 166-176	4.4	18
101	Optimal nanocone geometry for water flow. *AICHE Journal*, **2022**, 68,	3.6	18
100	Modeling tracer flowback in tight oil reservoirs with complex fracture networks. *Journal of Petroleum Science and Engineering*, **2017**, 157, 1007-1020	4.4	17
99	Effect of pore geometry on nanoconfined water transport behavior. *AICHE Journal*, **2019**, 65, e16613	3.6	16
98	A fractal model for gas-water relative permeability curve in shale rocks. *Journal of Natural Gas Science and Engineering*, **2020**, 81, 103417	4.6	16
97	Non-Newtonian Flow Characteristics of Heavy Oil in the Bohai Bay Oilfield: Experimental and Simulation Studies. *Energies*, **2017**, 10, 1698	3.1	16
96	A dynamic predictive permeability model in coal reservoirs: Effects of shrinkage behavior caused by water desorption. *Journal of Petroleum Science and Engineering*, **2018**, 168, 533-541	4.4	16
95	An analytical model for transport capacity of water confined in nanopores. *International Journal of Heat and Mass Transfer*, **2019**, 138, 620-630	4.9	15
94	The effect of completion strategy on fracture propagation from multiple cluster perforations in fossil hydrogen energy development. *International Journal of Hydrogen Energy*, **2019**, 44, 7168-7180	6.7	15
93	Modeling the confined fluid flow in micro-nanoporous media under geological temperature and pressure. *International Journal of Heat and Mass Transfer*, **2019**, 145, 118758	4.9	14
92	Artificial neural network assisted two-phase flash calculations in isothermal and thermal compositional simulations. *Fluid Phase Equilibria*, **2019**, 486, 59-79	2.5	14
91	Environmental and economic benefits of Solvent-Assisted Steam-Gravity Drainage for bitumen through horizontal well: A comprehensive modeling analysis. *Energy*, **2018**, 164, 418-431	7.9	14

90	A Model for Real Gas Transfer in Nanopores of Shale Gas Reservoirs **2015**,		13
89	Molecular dynamics computations of brine-CO2/CH4-shale contact angles: Implications for CO2 sequestration and enhanced gas recovery. *Fuel*, **2020**, 280, 118590	7.1	13
88	Study of the confined behavior of hydrocarbons in organic nanopores by the potential theory. *Fluid Phase Equilibria*, **2016**, 429, 214-226	2.5	13
87	A unified model for the formation and distribution of both conventional and unconventional hydrocarbon reservoirs. *Geoscience Frontiers*, **2021**, 12, 695-711	6	13
86	Research on flow assurance of deepwater submarine natural gas pipelines: Hydrate prediction and prevention. *Journal of Loss Prevention in the Process Industries*, **2019**, 61, 130-146	3.5	12
85	Improved methods for determining effective sandstone reservoirs and evaluating hydrocarbon enrichment in petroliferous basins. *Applied Energy*, **2020**, 261, 114457	10.7	12
84	A fully-coupled gas-water two phase productivity equations for low-permeability CBM wells. *Journal of Petroleum Science and Engineering*, **2018**, 166, 611-620	4.4	12
83	A Critical Review of Enhanced Oil Recovery by Imbibition: Theory and Practice. *Energy & Fuels*, **2021**, 35, 5643-5670	4.1	12
82	Practical application of machine learning on fast phase equilibrium calculations in compositional reservoir simulations. *Journal of Computational Physics*, **2020**, 401, 109013	4.1	12
81	Determination of CH4, C2H6 and CO2 adsorption in shale kerogens coupling sorption-induced swelling. *Chemical Engineering Journal*, **2021**, 410, 127690	14.7	12
80	Fractal Characteristics of Lacustrine Tight Carbonate Nanoscale Reservoirs. *Energy & Fuels*, **2018**, 32, 107-118	4.1	12
79	Roles of multicomponent adsorption and geomechanics in the development of an Eagle Ford shale condensate reservoir. *Fuel*, **2019**, 242, 710-718	7.1	11
78	Combined Steam/Air Flooding Studies: Experiments, Numerical Simulation, and Field Test in the Qi-40 Block. *Energy & Fuels*, **2016**, 30, 2060-2065	4.1	11
77	Effects of helium adsorption in carbon nanopores on apparent void volumes and excess methane adsorption isotherms. *Fuel*, **2020**, 270, 117499	7.1	10
76	Assessment of energy efficiency and solvent retention inside steam chamber of steam- and solvent-assisted gravity drainage process. *Applied Energy*, **2018**, 226, 287-299	10.7	10
75	A Model for Surface Diffusion of Adsorbed Gas in Nanopores of Shale Gas Reservoirs **2015**,		10
74	Nanoconfined methane density over pressure and temperature: Wettability effect. *Journal of Natural Gas Science and Engineering*, **2022**, 99, 104426	4.6	10
73	Numerical simulation on natural gas migration and accumulation in sweet spots of tight reservoir. *Journal of Natural Gas Science and Engineering*, **2020**, 81, 103454	4.6	10

72	Comprehensive modeling of multiple transport mechanisms in shale gas reservoir production. *Fuel*, **2020**, 277, 118159	7.1	9
71	A Model for Gas Transport in Dual-Porosity Shale Rocks with Fractal Structures. *Industrial & Engineering Chemistry Research*, **2018**, 57, 6530-6537	3.9	9
70	Mechanism of Liquid-Phase Adsorption and Desorption in Coalbed Methane Systems: A New Insight Into an Old Problem. *SPE Reservoir Evaluation and Engineering*, **2017**, 20, 639-653	2.3	9
69	Analysis of production prediction in shale reservoirs: Influence of water film in inorganic matter. *Journal of Natural Gas Science and Engineering*, **2019**, 63, 1-9	4.6	9
68	Effect of Non-Newtonian Flow on Polymer Flooding in Heavy Oil Reservoirs. *Polymers*, **2018**, 10,	4.5	9
67	Mesoscopic method to study water flow in nanochannels with different wettability. *Physical Review E*, **2020**, 102, 013306	2.4	8
66	Performance of Solvent-Assisted Thermal Drainage process and its relationship to injection parameters: A comprehensive modeling. *Fuel*, **2018**, 225, 388-402	7.1	8
65	An analysis of stochastic discrete fracture networks on shale gas recovery. *Journal of Petroleum Science and Engineering*, **2018**, 167, 78-87	4.4	8
64	Capillary dynamic under nanoconfinement: Coupling the energy dissipation of contact line and confined water. *International Journal of Heat and Mass Transfer*, **2018**, 127, 329-338	4.9	8
63	On the Negative Excess Isotherms for Methane Adsorption at High Pressure: Modeling and Experiment. *SPE Journal*, **2019**, 24, 2504-2525	3.1	8
62	Semianalytical Analysis of Chamber Growth and Energy Efficiency of Solvent-Assisted Steam-Gravity Drainage Considering the Effect of Reservoir Heterogeneity along the Horizontal Well. *Energy & Fuels*, **2020**, 34, 5777-5787	4.1	8
61	Pore network modeling of thin water film and its influence on relative permeability curves in tight formations. *Fuel*, **2021**, 289, 119828	7.1	8
60	Nanoscale Free Gas Transport in Shale Rocks: A Hard-Sphere Based Model **2017**,		7
59	Effects of an adsorbent accessible volume on methane adsorption on shale. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 370, 113222	5.7	7
58	Novel prediction methods for under-saturated coalbed methane wells: Effect of drainage schedules. *Journal of Petroleum Science and Engineering*, **2019**, 181, 106215	4.4	7
57	Organic and Inorganic Pore Structure Analysis in Shale Matrix With Superposition Method **2014**,		7
56	Accelerating Flash Calculation using Compositional Space for Compositional Simulation. *Journal of Petroleum Science and Engineering*, **2017**, 159, 1000-1008	4.4	6
55	Effects of Temperature and Pressure on Spontaneous Counter-Current Imbibition in Unsaturated Porous Media. *Energy & Fuels*, **2019**, 33, 8544-8556	4.1	6

54	Gas Transport in Shale Nanopores with Mobile High-Viscosity Water Film. *Industrial & Engineering Chemistry Research*, **2018**, 57, 11219-11228	3.9	6
53	Manipulating the Flow of Nanoconfined Water by Temperature Stimulation. *Angewandte Chemie*, **2018**, 130, 8568-8573	3.6	6
52	Numerical Simulation Study on Steam-Assisted Gravity Drainage Performance in a Heavy Oil Reservoir with a Bottom Water Zone. *Energies*, **2017**, 10, 1999	3.1	6
51	A Simulation Model for Accurate Prediction of Uneven Proppant Distribution in the Marcellus Shale Coupled with Reservoir Geomechanics **2015**,		6
50	Fluid charging and hydrocarbon accumulation in the sweet spot, Ordos Basin, China. *Journal of Petroleum Science and Engineering*, **2021**, 200, 108391	4.4	6
49	An analysis of tracer flowback profiles to reduce uncertainty in fracture-network geometries. *Journal of Petroleum Science and Engineering*, **2019**, 173, 246-257	4.4	6
48	Novel optimization method for production strategy of coal-bed methane well: Implication from gas-water two-phase version productivity equations. *Journal of Petroleum Science and Engineering*, **2019**, 176, 632-639	4.4	5
47	Predicting the fracture initiation pressure for perforated water injection wells in fossil energy development. *International Journal of Hydrogen Energy*, **2019**, 44, 16257-16270	6.7	5
46	Effect of Pore Shape on Nanoconfined Gas Flow Behavior: Implication for Characterizing Permeability of Realistic Shale Matrix. *Industrial & Engineering Chemistry Research*, **2019**,	3.9	5
45	Nanoconfinement Effect on Surface Tension: Perspectives from Molecular Potential Theory. *Langmuir*, **2020**, 36, 8764-8776	4	5
44	Equivalent permeability of shale rocks: Simple and accurate empirical coupling of organic and inorganic matter. *Chemical Engineering Science*, **2020**, 216, 115491	4.4	5
43	New Models of Brittleness Index for Shale Gas Reservoirs: Weights of Brittle Minerals and Rock Mechanics Parameters **2015**,		5
42	The model for deliverability of gas well with complex shape sand bodies and small-scale reserve of Sulige Gas Field in China. *Journal of Petroleum Exploration and Production*, **2015**, 5, 277-284	2.2	4
41	Dynamic tracking model for the reservoir water flooding of a separated layer water injection based on a well temperature log. *Journal of Petroleum Exploration and Production*, **2015**, 5, 35-43	2.2	4
40	A quantitative model for evaluating the impact of volatile oil non-equilibrium phase transition on degassing. *Petroleum Exploration and Development*, **2012**, 39, 636-643	4.5	4
39	A new hydrate deposition prediction model considering hydrate shedding and decomposition in horizontal gas-dominated pipelines. *Petroleum Science and Technology*, **2019**, 37, 1370-1386	1.4	3
38	Shale gas transport in wedged nanopores with water films. *Journal of Natural Gas Science and Engineering*, **2019**, 66, 217-232	4.6	3
37	Dynamic wetting of solid-liquid-liquid system by molecular kinetic theory. *Journal of Colloid and Interface Science*, **2020**, 579, 470-478	9.3	3

36	Steam Conformance along Horizontal Well with Different Well Configurations of Single Tubing: An Experimental and Numerical Investigation. *SPE Production and Operations*, **2020**, 35, 549-563	0.6	3
35	Investigation of CO2 Enhanced Gas Recovery in Shale Plays **2016**,		3
34	A Novel Model of Brittleness Index for Shale Gas Reservoirs: Confining Pressure Effect **2015**,		3
33	Effect of Pore Structure on Slippage Effect in Unsaturated Tight Formation Using Pore Network Model. *Energy & Fuels*, **2021**, 35, 5789-5800	4.1	3
32	Effect of Dynamic Contact Angle on Spontaneous Capillary-Liquid-Liquid Imbibition by Molecular Kinetic Theory. *SPE Journal*, **2021**, 1-16	3.1	3
31	Effects of Nanoscale Pore Confinement on CO2 Displacement **2016**,		3
30	Effect of Confinement on Gas and Oil Relative Permeability During CO2 Flooding in Tight Oil Reservoirs **2016**,		3
29	Nanoconfined Methane Thermodynamic Behavior below Critical Temperature: Liquid–Vapor Coexistence Curve under Wettability Effect. *Industrial & Engineering Chemistry Research*,	3.9	3
28	An improved analytical model for low-salinity waterflooding. *Journal of Geophysics and Engineering*, **2018**, 15, 1602-1609	1.3	2
27	On the flow regime model for fast estimation of tight sandstone gas apparent permeability in high-pressure reservoirs. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, **2019**, 1-12	1.6	2
26	NANOSCALE PORE SIZE DISTRIBUTION EFFECTS ON GAS PRODUCTION FROM FRACTAL SHALE ROCKS. *Fractals*, **2019**, 27, 1950142	3.2	2
25	Water Distribution Characteristic and Effect on Methane Adsorption Capacity in Shale Clays **2015**,		2
24	A Model for Gas Transport in Micro Fractures of Shale and Tight Gas Reservoirs **2015**,		2
23	Numerical Simulation of Gas Mobility Control by Chemical Additives Injection and Foam Generation during Steam Assisted Gravity Drainage (SAGD). *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, **2020**, 1-15	1.6	2
22	Molecular-scale friction at a water–graphene interface and its relationship with slip behavior. *Physics of Fluids*, **2020**, 32, 092001	4.4	2
21	Effect of Wetting Hysteresis on Fluid Flow in Shale Oil Reservoirs. *Energy & Fuels*, **2021**, 35, 12075-12082	4.1	2
20	The increased viscosity effect for fracturing fluid imbibition in shale. *Chemical Engineering Science*, **2021**, 232, 116352	4.4	2
19	Model for Interfacial Tension of Nanoconfined Lennard-Jones Fluid. *Energy & Fuels*, **2021**, 35, 4044-4052	4.1	2

18	Polymer Flooding in Heterogeneous Heavy Oil Reservoirs: Experimental and Simulation Studies. *Polymers*, **2021**, 13,	4.5	2
17	An analytical model for water-oil two-phase flow in inorganic nanopores in shale oil reservoirs. *Petroleum Science*, **2021**,	4.4	2
16	Prediction of Hydrate Formation Risk Based on Temperature–Pressure Field Coupling in the Deepwater Gas Well Cleanup Process. *Energy & Fuels*, **2021**, 35, 2024-2032	4.1	2
15	Reconsideration of the Adsorption/Desorption Characteristics with the Influences of Water in Unconventional Gas Systems. *Geofluids*, **2020**, 2020, 1-8	1.5	1
14	Modelling the Apparent Viscosity of Water Confined in Nanoporous Shale: Effect of the Fluid/Pore-Wall Interaction **2020**,		1
13	Quasi-Continuum Water Flow under Nanoconfined Conditions: Coupling the Effective Viscosity and the Slip Length. *Industrial & Engineering Chemistry Research*, **2020**, 59, 20504-20514	3.9	1
12	Methane Transport through Nanoporous Shale with Sub-Irreducible Water Saturation **2017**,		1
11	Gas Slippage in Tight Rocks With Sub-irreducible Water Saturation **2017**,		1
10	The Model for Predicting Stream Breakthrough Timing during Steam Drive Development of Heavy Oil Reservoirs **2011**,		1
9	Vapor-Liquid Equilibria and Diffusion of CO2/n-Decane Mixture in the Nanopores of Shale Reservoirs **2020**,		1
8	Effect of Surface Force on Nanoconfined Shale-Gas Flow in Slit Channels. *SPE Journal*, **2021**, 26, 448-460	3.1	1
7	Investment Strategy of CO2-EOR in China: Analysis Based on Real Option Approach **2021**,		1
6	Effect of water behaviour on the oil transport in illite nanopores: Insights from a molecular dynamics study. *Journal of Molecular Liquids*, **2022**, 354, 118854	6	1
5	Comprehensive Model for Oil Transport Behavior in Nanopores: Interactions between Oil and Pore Surface. *Industrial & Engineering Chemistry Research*, **2020**, 59, 20527-20538	3.9	0
4	Gas storage and transport in porous media: From shale gas to helium-3. *Planetary and Space Science* , **2021**, 204, 105283	2	0
3	Mathematical model of dynamic imbibition in nanoporous reservoirs. *Petroleum Exploration and Development*, **2022**, 49, 170-178	4.5	0
2	Effect of Polymer Degradation on Polymer Flooding in Homogeneous Reservoirs. *MATEC Web of Conferences*, **2018**, 187, 01006	0.3	
1	A model of pressure distribution along the wellbore for the low water-producing gas well with multilayer commingled production. *Petroleum Science and Technology*,1-20	1.4	