

# Vladimir Alvarado

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2183496/publications.pdf>

Version: 2024-02-01

123  
papers

4,134  
citations

136950

32  
h-index

138484

58  
g-index

129  
all docs

129  
docs citations

129  
times ranked

2921  
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced Oil Recovery: An Update Review. <i>Energies</i> , 2010, 3, 1529-1575.	3.1	808
2	Effect of Salinity on Water-in-Crude Oil Emulsion: Evaluation through Drop-Size Distribution Proxy. <i>Energy &amp; Fuels</i> , 2011, 25, 260-268.	5.1	163
3	Effect of nanoparticles/nanofluids on the rheology of heavy crude oil and its mobility on porous media at reservoir conditions. <i>Fuel</i> , 2016, 184, 222-232.	6.4	143
4	Flow of oil-water emulsions through a constricted capillary. <i>International Journal of Multiphase Flow</i> , 2009, 35, 507-515.	3.4	139
5	EOR: Current Status and Opportunities. , 2010, , .		133
6	Pore Scale and Macroscopic Displacement Mechanisms in Emulsion Flooding. <i>Transport in Porous Media</i> , 2012, 94, 197-206.	2.6	113
7	Experimental and Theoretical Study of Viscosity Reduction in Heavy Crude Oils by Addition of Nanoparticles. <i>Energy &amp; Fuels</i> , 2017, 31, 1329-1338.	5.1	105
8	The effects of SiO <sub>2</sub> nanoparticles on the thermal stability and rheological behavior of hydrolyzed polyacrylamide based polymeric solutions. <i>Journal of Petroleum Science and Engineering</i> , 2017, 159, 841-852.	4.2	99
9	Effects of asphaltenes and organic acids on crude oil-brine interfacial visco-elasticity and oil recovery in low-salinity waterflooding. <i>Fuel</i> , 2016, 185, 151-163.	6.4	94
10	Rheological demonstration of alteration in the heavy crude oil fluid structure upon addition of nanoparticles. <i>Fuel</i> , 2017, 189, 322-333.	6.4	74
11	Capillary-driven mobility control in macro emulsion flow in porous media. <i>International Journal of Multiphase Flow</i> , 2012, 43, 62-65.	3.4	72
12	Dynamic flow response of crude oil-in-water emulsion during flow through porous media. <i>Fuel</i> , 2014, 135, 38-45.	6.4	71
13	Stability Proxies for Water-in-Oil Emulsions and Implications in Aqueous-based Enhanced Oil Recovery. <i>Energies</i> , 2011, 4, 1058-1086.	3.1	68
14	ASP design for the Minnelusa formation under low-salinity conditions: Impacts of anhydrite on ASP performance. <i>Fuel</i> , 2013, 105, 368-382.	6.4	64
15	Interfacial Viscoelasticity of Crude Oil/Brine: An Alternative Enhanced-Oil-Recovery Mechanism in Smart Waterflooding. <i>SPE Journal</i> , 2018, 23, 803-818.	3.1	63
16	Impact of ionic strength on partitioning of naphthenic acids in water-crude oil systems - Determination through high-field NMR spectroscopy. <i>Fuel</i> , 2013, 112, 236-248.	6.4	62
17	Selection of EOR/IOR Opportunities Based on Machine Learning. , 2002, , .		60
18	Experiments and network model of flow of oil-water emulsion in porous media. <i>Physical Review E</i> , 2011, 84, 046305.	2.1	59

#	ARTICLE	IF	CITATIONS
19	Ensemble of SVMs for Improving Brain Computer Interface P300 Speller Performances. Lecture Notes in Computer Science, 2005, , 45-50.	1.3	58
20	Enhanced Oil Recovery Concepts. , 2010, , 7-16.		57
21	Experimental Study of Porosity Changes in Shale Caprocks Exposed to CO <sub>2</sub> -Saturated Brines I: Evolution of Mineralogy, Pore Connectivity, Pore Size Distribution, and Surface Area. Environmental Engineering Science, 2016, 33, 725-735.	1.6	56
22	A microfluidic flow focusing platform to screen the evolution of crude oil-brine interfacial elasticity. Lab on A Chip, 2016, 16, 3074-3081.	6.0	56
23	Interfacial Visco-Elasticity of Crude Oil - Brine: An Alternative EOR Mechanism in Smart Waterflooding. , 2014, , .		55
24	Reactivity of dolomite in water-saturated supercritical carbon dioxide: Significance for carbon capture and storage and for enhanced oil and gas recovery. Energy Conversion and Management, 2013, 65, 564-573.	9.2	54
25	Opportunities of Downhole Dielectric Heating in Venezuela: Three Case Studies Involving Medium, Heavy and Extra-Heavy Crude Oil Reservoirs. , 2002, , .		52
26	Interfacial rheological insights of sulfate-enriched smart-water at low and high-salinity in carbonates. Fuel, 2017, 207, 402-412.	6.4	51
27	Effects of Aqueous-Phase Salinity on Water-in-Crude Oil Emulsion Stability. Journal of Dispersion Science and Technology, 2012, 33, 165-170.	2.4	50
28	Economic co-optimization of oil recovery and CO2 sequestration. Applied Energy, 2018, 222, 132-147.	10.1	50
29	Role of Acid Components and Asphaltenes in Wyoming Water-in-Crude Oil Emulsions. Energy & Fuels, 2011, 25, 4606-4613.	5.1	43
30	Oil recovery modeling of macro-emulsion flooding at low capillary number. Journal of Petroleum Science and Engineering, 2014, 119, 112-122.	4.2	43
31	Geochemical modeling and experimental evaluation of high-pH floods: Impact of Water-Rock interactions in sandstone. Fuel, 2012, 92, 216-230.	6.4	41
32	Role of active clays on alkaline-surfactant-polymer formulation performance in sandstone formations. Fuel, 2013, 104, 593-606.	6.4	39
33	Influence of Aqueous-Phase Ionic Strength and Composition on the Dynamics of Water-Crude Oil Interfacial Film Formation. Energy & Fuels, 2016, 30, 9170-9180.	5.1	37
34	Analysis of capillary pressure and relative permeability hysteresis under low-salinity waterflooding conditions. Fuel, 2016, 180, 228-243.	6.4	35
35	Effect of CO2-brine-rock reactions on pore architecture and permeability in dolostone: Implications for CO2 storage and EOR. International Journal of Greenhouse Gas Control, 2021, 107, 103283.	4.6	35
36	Snap-off of a liquid drop immersed in another liquid flowing through a constricted capillary. AIChE Journal, 2009, 55, 1993-1999.	3.6	34

#	ARTICLE	IF	CITATIONS
37	Effect of Alkalinity on Oil Recovery During Polymer Floods in Sandstone. SPE Reservoir Evaluation and Engineering, 2012, 15, 195-209.	1.8	34
38	Effect of hydraulic fracturing on long-term storage of CO <sub>2</sub> in stimulated saline aquifers. Applied Energy, 2013, 102, 1091-1104.	10.1	34
39	Impact of Polar Components on Crude Oil-Water interfacial Film Formation: A Mechanisms for Low-Salinity Waterflooding. , 2014, , .		31
40	Probing Interfacial Water-in-Crude Oil Emulsion Stability Controls Using Electrorheology. Energy & Fuels, 2010, 24, 6359-6365.	5.1	30
41	Kaolinite and Silica Dispersions in Low-Salinity Environments: Impact on a Water-in-Crude Oil Emulsion Stability. Energies, 2011, 4, 1763-1778.	3.1	30
42	Direct Current Electrorheological Stability Determination of Water-in-Crude Oil Emulsions. Journal of Physical Chemistry B, 2009, 113, 13811-13816.	2.6	29
43	Effect of SiO <sub>2</sub> -based nanofluids in the reduction of naphtha consumption for heavy and extra-heavy oils transport: Economic impacts on the Colombian market. Energy Conversion and Management, 2017, 148, 30-42.	9.2	29
44	Impact of sub-core scale heterogeneity on CO <sub>2</sub> /brine multiphase flow for geological carbon storage in the upper Minnelusa sandstones. Journal of Hydrology, 2021, 599, 126481.	5.4	26
45	Multiscale petrophysical characterization and flow unit classification of the Minnelusa eolian sandstones. Journal of Hydrology, 2022, 607, 127466.	5.4	24
46	CO <sub>2</sub> Saturation, Distribution and Seismic Response in Two-Dimensional Permeability Model. Environmental Science & Technology, 2011, 45, 9435-9441.	10.0	23
47	Low-Field Nuclear Magnetic Resonance Characterization of Carbonate and Sandstone Reservoirs From Rock Spring Uplift of Wyoming. Journal of Geophysical Research: Solid Earth, 2018, 123, 7444-7460.	3.4	23
48	Experimental Study of Porosity Changes in Shale Caprocks Exposed to Carbon Dioxide-Saturated Brine II: Insights from Aqueous Geochemistry. Environmental Engineering Science, 2016, 33, 736-744.	1.6	22
49	Effects of low-salinity waterflooding on capillary pressure hysteresis. Fuel, 2017, 207, 336-343.	6.4	22
50	Effects of pore-level reaction on dispersion in porous media. Chemical Engineering Science, 1997, 52, 2865-2881.	3.8	21
51	Conceptual Darcy-Scale Model of Oil Displacement with Macroemulsion. Energy & Fuels, 2013, 27, 1967-1973.	5.1	21
52	A rock physics and seismic reservoir characterization study of the Rock Springs Uplift, a carbon dioxide sequestration site in Southwestern Wyoming. International Journal of Greenhouse Gas Control, 2017, 63, 296-309.	4.6	21
53	Effective EOR Decision Strategies With Limited Data: Field Cases Demonstration. SPE Reservoir Evaluation and Engineering, 2009, 12, 551-561.	1.8	19
54	Use of Gas Adsorption and Inversion Methods for Shale Pore Structure Characterization. Energies, 2021, 14, 2880.	3.1	19

#	ARTICLE	IF	CITATIONS
55	Snap-off in constricted capillary with elastic interface. <i>Physics of Fluids</i> , 2016, 28, .	4.0	18
56	Mitigation of anhydrite dissolution in alkaline floods through injection of conditioned water. <i>Fuel</i> , 2013, 107, 330-342.	6.4	16
57	Sensitivity analysis of Gassmann's fluid substitution equations: Some implications in feasibility studies of time-lapse seismic reservoir monitoring. <i>Journal of Applied Geophysics</i> , 2006, 59, 47-62.	2.1	15
58	Screening Strategy for Chemical Enhanced Oil Recovery in Wyoming Basins. , 2008, , .		15
59	Upscaling of upward CO <sub>2</sub> migration in 2D system. <i>Advances in Water Resources</i> , 2012, 46, 46-54.	3.8	15
60	Smart Water Flooding in Berea Sandstone at Low Temperature: Is Wettability Alteration the Sole Mechanism at Play?. , 2017, , .		15
61	Microscale modeling of fluid flowâ€œGeomechanicsâ€œseismicity: Relationship between permeability and seismic source response in deformed rock joints. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 6958-6975.	3.4	14
62	Dynamic Network Model of Mobility Control in Emulsion Flow Through Porous Media. <i>Transport in Porous Media</i> , 2013, 98, 427-441.	2.6	13
63	Influence of silica nanoparticles on heavy oil microrheology via time-domain NMR T <sub>2</sub> and diffusion probes. <i>Fuel</i> , 2019, 241, 962-972.	6.4	13
64	Engineering Design Challenges and Opportunities beyond Waterflooding in Offshore Reservoirs. , 2013, , .		12
65	Surfactant Behavior Analysis in Enhanced Oil Recovery Blends Using One-Dimensional Proton Nuclear Magnetic Resonance. <i>Energy &amp; Fuels</i> , 2016, 30, 63-71.	5.1	12
66	Anomalous Heavy-Oil Rheological Thinning Behavior upon Addition of Nanoparticles: Departure from Einsteinâ€™s Theory. <i>Chemical Engineering Communications</i> , 2017, 204, 648-657.	2.6	12
67	Link Between CO <sub>2</sub> -Induced Wettability and Pore Architecture Alteration. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088490.	4.0	12
68	Effect of Salinity and pH on Pickering Emulsion Stability. , 2008, , .		11
69	Impact of Three-Phase Relative Permeability Model on Recovery in Mixed Media: Miscibility, IFT, and Hysteresis Issues. <i>Energy &amp; Fuels</i> , 2010, 24, 5765-5772.	5.1	11
70	Geochemically Based Modeling of pH-Sensitive Polymer Injection in Berea Sandstone. <i>Energy &amp; Fuels</i> , 2011, 25, 4024-4035.	5.1	11
71	WAG Pilot at VLE Field and IOR Opportunities for Mature Fields at Maracaibo Lake. , 2001, , .		10
72	Considerations of Adjusted Brine Chemistry for Waterflooding in Offshore Environments. , 2015, , .		10

#	ARTICLE	IF	CITATIONS
73	Ionic strength-dependent pre-asymptotic diffusion coefficient distribution in porous media - Determination through the pulsed field gradient technique. Journal of Natural Gas Science and Engineering, 2018, 49, 250-259.	4.4	10
74	Quantitative Acoustic Emissions Source Mechanisms Analysis of Soft and Competent Rocks through Micromechanics-Seismicity Coupled Modeling. International Journal of Geomechanics, 2021, 21, .	2.7	10
75	Title is missing!. Transport in Porous Media, 1998, 32, 139-161.	2.6	9
76	Effective EOR Decision Strategies with Limited Data: Field Cases Demonstration. , 2008, , .		9
77	Modeling CO2 saturation distribution in eolian systems. International Journal of Greenhouse Gas Control, 2012, 11, 110-116.	4.6	9
78	Water-alternating-macroemulsion reservoir simulation through capillary number-dependent modeling. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2017, 39, 4135-4145.	1.6	9
79	Stability of liquid bridges with elastic interface. RSC Advances, 2017, 7, 49344-49352.	3.6	9
80	Effect of fracture roughness on seismic source and fluid transport responses. Geophysical Research Letters, 2014, 41, 1530-1536.	4.0	7
81	A New Model for Describing the Rheological Behavior of Heavy and Extra Heavy Crude Oils in the Presence of Nanoparticles. Energies, 2017, 10, 2064.	3.1	7
82	Time-Domain Nuclear Magnetic Resonance Determination of Wettability Alteration: Analysis for Low-Salinity Water. Applied Sciences (Switzerland), 2020, 10, 1017.	2.5	7
83	Integration of a Risk Management Tool and an Analytical Simulator for Assisted Decision-Making in IOR. , 2006, , .		6
84	Flow of Oil-Water Emulsion Through Constricted Capillary Tubes. AIP Conference Proceedings, 2008, , .	0.4	6
85	Unveiling stimulation fluid-driven alterations in shale pore architecture through combined interpretation of TD-NMR and multi-component gas adsorption. Fuel, 2021, 297, 120744.	6.4	6
86	Scaling of heterogeneous distributions of conductances: Renormalization versus exact results. Physical Review E, 1998, 58, 771-778.	2.1	5
87	Effect of Alkalinity on Oil Recovery During Polymer Floods in Sandstone. , 2011, , .		5
88	Geochemical Modeling and Experimental Evaluation of High-Ph Floods: Impact of Water-Rock Interactions in Sandstone. , 2011, , .		5
89	Impact of Alkaline-Surfactant-Polymer Flooding Model on Upscaled Recovery Predictions: Medium and Heavy Oils. , 2014, , .		5
90	Efficient modeling of seismic signature of patchy saturation for time lapse monitoring of carbon sequestrated deep saline reservoirs. Applied Energy, 2014, 114, 445-455.	10.1	5

#	ARTICLE	IF	CITATIONS
91	Physicochemical Constraints on Surfactant Blends under Harsh Conditions and Evaluation of a Proposed Solution. Energy & Fuels, 2017, 31, 95-106.	5.1	5
92	Select Naphthenic Acids Beneficially Impact Oil-Water Dynamics During Smart Waterflooding. , 2018, , .		5
93	Reservoir Development Plans. , 2010, , 1-5.		4
94	CO 2 saturation, distribution and seismic response in 2D dimensional permeability model. , 2011, , .		4
95	Economic Co-optimization of Oil Recovery and CO2 Sequestration. , 2014, , .		4
96	EOR's Current Status. , 2010, , 133-156.		3
97	Prediction of Transport Properties of Deformed Natural Fracture Through Micro-scale Hydro-mechanical Modeling. Transport in Porous Media, 2014, 104, 1-23.	2.6	3
98	Efficient modeling of seismic signature of patchy saturation for time lapse monitoring of carbon sequestered deep saline reservoirs. Applied Energy, 2014, 114, 445-455.	10.1	3
99	Time-lapse monitoring carbon sequestered brine aquifers—a feasibility study. , 2010, , .		3
100	Time-lapse seismic modeling assisted by numerical reservoir simulation of water and gas flooding scenarios in oil reservoirs. Revista Brasileira De Geofisica, 2008, 26, 195-209.	0.2	3
101	Influence of interfacial responses of Berea Sandstone in low-salinity waterflooding environments. Fuel, 2022, 311, 121712.	6.4	3
102	Integration of a Risk Management Tool and an Analytical Simulator for Assisted Decision-Making in IOR. , 2006, , .		2
103	Prestack Waveform Inversion—the present state and the road ahead. , 2010, , .		2
104	Analysis of <sc>ZTE MRI</sc> application to sandstone and carbonate. AICHE Journal, 2021, 67, e17074.	3.6	2
105	Towards more realistic (e.g., non-associative) AND- and OR-operations in fuzzy logic. , 0, , .		1
106	Selection of Three-Phase Relative Permeability Model for Mixed-Wet Reservoirs. , 2010, , .		1
107	Simulations and Simulation Options. , 2010, , 17-42.		1
108	Screening Methods. , 2010, , 43-80.		1

#	ARTICLE	IF	CITATIONS
109	New Upscaling Scheme for Capillary Dominant Displacement. , 2012, , .		1
110	Sensitivity Study on Storage of CO <sub>2</sub> in Saline Aquifer with Fracture-Surrogate Models Based on the Tensleep Formation. , 2014, , .		1
111	Analysis of Physico-Chemical Constraints on Surfactant Blends for Offshore Reservoirs. , 2016, , .		1
112	Amphiphilic second-order phase transitions determined through NMR. Journal of Molecular Liquids, 2018, 268, 647-657.	4.9	1
113	Time-Dependent Mechanical Response of Ice Adhesion on Aluminum Substrates. ACS Applied Materials & Interfaces, 2021, 13, 14662-14668.	8.0	1
114	Time-lapse critical reflection: Sensitivity and uncertainty analysis. , 2007, , .		1
115	Seismic signature of a patchy saturation and its implication to time-lapse monitoring of carbon-sequestered deep saline reservoirs. , 2011, , .		1
116	Assessment of permeability changes during rock deformation and failure of a sandstone sample using a stress-dependent pore network model. Geomechanics and Geophysics for Geo-Energy and Geo-Resources, 2022, 8, 1.	2.9	1
117	Hydrodynamic dispersion in a hierarchical network with a power-law distribution of conductances. Physical Review E, 2005, 71, 036304.	2.1	0
118	Evaluating Soft Issues. , 2010, , 81-89.		0
119	Economic Considerations and Framing. , 2010, , 91-111.		0
120	Introduction to special section: Multidisciplinary studies for geologic and geophysical characterization of CO <sub>2</sub> storage reservoirs. Interpretation, 2017, 5, SSi-SSii.	1.1	0
121	Sensitivity Analysis in Various Inversion Schemes for evaluating Saturation and Pressure changes in the Context of 4D seismic studies. , 2005, , .		0
122	Modelagem ssmica time-lapse com base em simulaço de fluxo em reservat³rios. , 2007, , .		0
123	Critical reflection time lapse: sensibility and analysis of uncertainties of P-wave velocity changes caused by critical offset variation due to the reservoir fluid substitution. , 2007, , .		0