Mehdi Ostadhassan

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2029024/publications.pdf

Version: 2024-02-01

133	3,352	156536	214428
papers	citations	32	50
		h-index	g-index

138	138	138	2209
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nanoscale pore structure characterization of the Bakken shale in the USA. Fuel, 2017, 209, 567-578.	3.4	221
2	Applications of nano-indentation methods to estimate nanoscale mechanical properties of shale reservoir rocks. Journal of Natural Gas Science and Engineering, 2016, 35, 1310-1319.	2.1	150
3	A comprehensive pore structure study of the Bakken Shale with SANS, N2 adsorption and mercury intrusion. Fuel, 2019, 245, 274-285.	3.4	106
4	A new approach in petrophysical rock typing. Journal of Petroleum Science and Engineering, 2018, 166, 445-464.	2.1	97
5	Pore characterization of 3D-printed gypsum rocks: a comprehensive approach. Journal of Materials Science, 2018, 53, 5063-5078.	1.7	92
6	Raman spectroscopy to study thermal maturity and elastic modulus of kerogen. International Journal of Coal Geology, 2018, 185, 103-118.	1.9	91
7	Multifractal analysis of gas adsorption isotherms for pore structure characterization of the Bakken Shale. Fuel, 2018, 219, 296-311.	3.4	84
8	Microstructural and geomechanical analysis of Bakken shale at nanoscale. Journal of Petroleum Science and Engineering, 2017, 153, 133-144.	2.1	80
9	Statistical grid nanoindentation analysis to estimate macro-mechanical properties of the Bakken Shale. Journal of Natural Gas Science and Engineering, 2018, 53, 181-190.	2.1	69
10	NMR relaxometry a new approach to detect geochemical properties of organic matter in tight shales. Fuel, 2019, 235, 167-177.	3.4	68
11	Application of PeakForce tapping mode of atomic force microscope to characterize nanomechanical properties of organic matter of the Bakken Shale. Fuel, 2018, 233, 894-910.	3.4	66
12	Quantification of the microstructures of Bakken shale reservoirs using multi-fractal and lacunarity analysis. Journal of Natural Gas Science and Engineering, 2017, 39, 62-71.	2.1	61
13	Organofacies study of the Bakken source rock in North Dakota, USA, based on organic petrology and geochemistry. International Journal of Coal Geology, 2018, 188, 79-93.	1.9	58
14	Nanomechanical characterization of organic matter in the Bakken formation by microscopy-based method. Marine and Petroleum Geology, 2018, 96, 128-138.	1.5	58
15	Multi-scale fractal analysis of pores in shale rocks. Journal of Applied Geophysics, 2017, 140, 1-10.	0.9	56
16	The impact of pore size distribution data presentation format on pore structure interpretation of shales. Advances in Geo-Energy Research, 2019, 3, 187-197.	3.1	56
17	Multifractal characteristics of Longmaxi Shale pore structures by N2 adsorption: A model comparison. Journal of Petroleum Science and Engineering, 2018, 168, 330-341.	2.1	55
18	Can 3-D Printed Gypsum Samples Replicate Natural Rocks? An Experimental Study. Rock Mechanics and Rock Engineering, 2018, 51, 3061-3074.	2.6	54

#	Article	IF	Citations
19	Nanopore structures of isolated kerogen and bulk shale in Bakken Formation. Fuel, 2018, 226, 441-453.	3.4	52
20	Microstructure characteristics and fractal analysis of 3D-printed sandstone using micro-CT and SEM-EDS. Journal of Petroleum Science and Engineering, 2019, 175, 1039-1048.	2.1	48
21	Nano-dynamic mechanical analysis (nano-DMA) of creep behavior of shales: Bakken case study. Journal of Materials Science, 2018, 53, 4417-4432.	1.7	47
22	Application of nanoindentation to characterize creep behavior of oil shales. Journal of Petroleum Science and Engineering, 2018, 167, 729-736.	2.1	46
23	Correlating Rock-Evalâ„¢ Tmax with bitumen reflectance from organic petrology in the Bakken Formation. International Journal of Coal Geology, 2019, 205, 87-104.	1.9	44
24	A further verification of FZI* and PSRTI: Newly developed petrophysical rock typing indices. Journal of Petroleum Science and Engineering, 2019, 175, 693-705.	2.1	44
25	Multi-scale evaluation of mechanical properties of the Bakken shale. Journal of Materials Science, 2019, 54, 2133-2151.	1.7	43
26	Nanopore structure comparison between shale oil and shale gas: examples from the Bakken and Longmaxi Formations. Petroleum Science, 2019, 16, 77-93.	2.4	42
27	Flow modeling in shale gas reservoirs: A comprehensive review. Journal of Natural Gas Science and Engineering, 2020, 83, 103535.	2.1	37
28	Evaluating Molecular Evolution of Kerogen by Raman Spectroscopy: Correlation with Optical Microscopy and Rock-Eval Pyrolysis. Energies, 2018, 11, 1406.	1.6	36
29	Multi-scale assessment of mechanical properties of organic-rich shales: A coupled nanoindentation, deconvolution analysis, and homogenization method. Journal of Petroleum Science and Engineering, 2019, 174, 80-91.	2.1	36
30	Estimating thermal maturity of organic-rich shale from well logs: Case studies of two shale plays. Fuel, 2019, 235, 1195-1206.	3.4	35
31	Estimating permeability of shale-gas reservoirs from porosity and rock compositions. Geophysics, 2018, 83, MR283-MR294.	1.4	34
32	Fractal and Multifractal Characteristics of Pore Throats in the Bakken Shale. Transport in Porous Media, 2019, 126, 579-598.	1.2	34
33	Understanding organic matter heterogeneity and maturation rate by Raman spectroscopy. International Journal of Coal Geology, 2019, 206, 46-64.	1.9	33
34	Layered metalâ€“organic framework based on tetracyanonickelate as a cathode material for in situ Li-ion storage. RSC Advances, 2019, 9, 21363-21370.	1.7	32
35	New technique of True Effective Mobility (TEM-Function) in dynamic rock typing: Reduction of uncertainties in relative permeability data for reservoir simulation. Journal of Petroleum Science and Engineering, 2019, 179, 210-227.	2.1	32
36	Evaluation of different machine learning frameworks to predict CNL-FDC-PEF logs via hyperparameters optimization and feature selection. Journal of Petroleum Science and Engineering, 2022, 208, 109463.	2.1	32

#	Article	IF	Citations
37	From excess to absolute adsorption isotherm: The effect of the adsorbed density. Chemical Engineering Journal, 2021, 425, 131495.	6.6	31
38	Characterization of geochemical properties and microstructures of the Bakken Shale in North Dakota. International Journal of Coal Geology, 2018, 190, 84-98.	1.9	30
39	Coordinating gallium hexacyanocobaltate: Prussian blue-based nanomaterial for Li-ion storage. RSC Advances, 2019, 9, 26668-26675.	1.7	28
40	Creep Behavior of Shale: Nanoindentation vs. Triaxial Creep Tests. Rock Mechanics and Rock Engineering, 2021, 54, 321-335.	2.6	28
41	Pore structure and adsorption hysteresis of the middle Jurassic Xishanyao shale formation in the Southern Junggar Basin, northwest China. Energy Exploration and Exploitation, 2021, 39, 761-778.	1.1	28
42	Prediction of Dead Oil Viscosity: Machine Learning vs. Classical Correlations. Energies, 2021, 14, 930.	1.6	28
43	Pd modified prussian blue frameworks: Multiple electron transfer pathways for improving catalytic activity toward hydrogenation of nitroaromatics. Molecular Catalysis, 2020, 492, 110967.	1.0	26
44	Reassessment of CO2 sequestration in tight reservoirs and associated formations. Journal of Petroleum Science and Engineering, 2021, 206, 109071.	2.1	26
45	Experimental Study on the Impact of Thermal Maturity on Shale Microstructures Using Hydrous Pyrolysis. Energy & Fuels, 2019, 33, 9702-9719.	2.5	25
46	Structural Evolution of Organic Matter in Deep Shales by Spectroscopy (¹H and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387	2.5	25
47	Comparison of fractal dimensions from nitrogen adsorption data in shale via different models. RSC Advances, 2021, 11, 2298-2306.	1.7	25
48	Molecular weight variations of kerogen during maturation with MALDI-TOF-MS. Fuel, 2020, 269, 117452.	3.4	25
49	Graphite carbon-encapsulated metal nanoparticles derived from Prussian blue analogs growing on natural loofa as cathode materials for rechargeable aluminum-ion batteries. Scientific Reports, 2019, 9, 13665.	1.6	23
50	Chemical heterogeneity of organic matter at nanoscale by AFM-based IR spectroscopy. Fuel, 2020, 261, 116454.	3.4	22
51	A case study of petrophysical rock typing and permeability prediction using machine learning in a heterogenous carbonate reservoir in Iran. Scientific Reports, 2022, 12, 4505.	1.6	22
52	Geomechanical Upscaling Methods: Comparison and Verification via 3D Printing. Energies, 2019, 12, 382.	1.6	21
53	Nanoscale Pore Structure Characterization of Tight Oil Formation: A Case Study of the Bakken Formation. Energy & Fuels, 2019, 33, 6008-6019.	2.5	21
54	Multifractal Characteristics of MIP-Based Pore Size Distribution of 3D-Printed Powder-Based Rocks: A Study of Post-Processing Effect. Transport in Porous Media, 2019, 129, 599-618.	1.2	21

#	Article	IF	Citations
55	A new model to estimate permeability using mercury injection capillary pressure data: Application to carbonate and shale samples. Journal of Natural Gas Science and Engineering, 2020, 84, 103691.	2.1	20
56	A new framework for selection of representative samples for special core analysis. Petroleum Research, 2020, 5, 210-226.	1.6	20
57	Pore Structure Alteration of Organic-Rich Shale with Sc-CO₂ Exposure: the Bakken Formation. Energy & Fuels, 2021, 35, 5074-5089.	2.5	20
58	Integrating advanced soft computing techniques with experimental studies for pore structure analysis of Qingshankou shale in Southern Songliao Basin, NE China. International Journal of Coal Geology, 2022, 257, 103998.	1.9	20
59	AFM vs. Nanoindentation: Nanomechanical properties of organic-rich Shale. Marine and Petroleum Geology, 2021, 132, 105229.	1.5	18
60	Natural fractures in metamorphic basement reservoirs in the Liaohe Basin, China. Marine and Petroleum Geology, 2020, 119, 104479.	1.5	17
61	Hydrocarbon saturation in shale oil reservoirs by inversion of dielectric dispersion logs. Fuel, 2020, 266, 116934.	3.4	17
62	Sulfur Differentiation in Organic-Rich Shales and Carbonates via Open-System Programmed Pyrolysis and Oxidation: Insights into Fluid Souring and H₂S Production in the Bakken Shale, United States. Energy & Fuels, 2021, 35, 12030-12044.	2.5	17
63	Evaluating Single-Parameter parabolic failure criterion in wellbore stability analysis. Journal of Natural Gas Science and Engineering, 2018, 50, 166-180.	2.1	16
64	A cost-effective chemo-thermo-poroelastic wellbore stability model for mud weight design during drilling through shale formations. Journal of Rock Mechanics and Geotechnical Engineering, 2020, 12, 768-779.	3.7	16
65	Prediction of Water Saturation from Well Log Data by Machine Learning Algorithms: Boosting and Super Learner. Journal of Marine Science and Engineering, 2021, 9, 666.	1.2	16
66	Optimal Separation of CO₂/CH₄/Brine with Amorphous Kerogen: A Thermodynamics and Kinetics Study. Journal of Physical Chemistry C, 2019, 123, 20877-20883.	1.5	15
67	Natural Fractures in Carbonate Basement Reservoirs of the Jizhong Sub-Basin, Bohai Bay Basin, China: Key Aspects Favoring Oil Production. Energies, 2020, 13, 4635.	1.6	15
68	Effective fractures and their contribution to the reservoirs in deep tight sandstones in the Kuqa Depression, Tarim Basin, China. Marine and Petroleum Geology, 2021, 124, 104824.	1.5	15
69	Organic geochemistry, oil-source rock, and oil-oil correlation study in a major oilfield in the Middle East. Journal of Petroleum Science and Engineering, 2021, 207, 109074.	2.1	15
70	Adsorption based realistic molecular model of amorphous kerogen. RSC Advances, 2020, 10, 23312-23320.	1.7	14
71	A chemo-mechanical snapshot of in-situ conversion of kerogen to petroleum. Geochimica Et Cosmochimica Acta, 2020, 273, 37-50.	1.6	14
72	Joint optimization of constrained well placement and control parameters using teaching-learning based optimization and an inter-distance algorithm. Journal of Petroleum Science and Engineering, 2021, 203, 108652.	2.1	14

#	Article	IF	Citations
73	Petrophysical characteristics and log identification of lacustrine shale lithofacies: A case study of the first member of Qingshankou Formation in the Songliao Basin, Northeast China. Interpretation, 2020, 8, SL45-SL57.	0.5	14
74	Natural fractures in tight gas volcanic reservoirs and their influences on production in the Xujiaweizi depression, Songliao Basin, China. AAPG Bulletin, 2020, 104, 2099-2123.	0.7	14
75	Measurement of Solubility of CO2 in NaCl, CaCl2, MgCl2 and MgCl2 + CaCl2 Brines at Temperatures from 298 to 373 K and Pressures up to 20 MPa Using the Potentiometric Titration Method. Energies, 2021, 14, 7222.	1.6	14
76	Predicting the surfactant-polymer flooding performance in chemical enhanced oil recovery: Cascade neural network and gradient boosting decision tree. AEJ - Alexandria Engineering Journal, 2022, 61, 7715-7731.	3.4	14
77	Abnormal behavior during nanoindentation holding stage: Characterization and explanation. Journal of Petroleum Science and Engineering, 2019, 173, 733-747.	2.1	13
78	Image analysis of the pore structures: An intensive study for Middle Bakken. Journal of Natural Gas Science and Engineering, 2019, 61, 32-45.	2.1	13
79	A comparison study of the unloading behavior in shale samples in nanoindentation experiments using different models. Journal of Petroleum Science and Engineering, 2020, 186, 106715.	2.1	13
80	Preliminary Investigation of the Effects of Thermal Maturity on Redox-Sensitive Trace Metal Concentration in the Bakken Source Rock, North Dakota, USA. ACS Omega, 2020, 5, 7135-7148.	1.6	12
81	Nanochemo-mechanical characterization of organic shale through AFM and EDS. , 2017, , .		12
82	Porosity prediction from pre-stack seismic data via committee machine with optimized parameters. Journal of Petroleum Science and Engineering, 2022, 210, 110067.	2.1	12
83	Estimation of thermal maturity in the Bakken source rock from a combination of well logs, North Dakota, USA. Marine and Petroleum Geology, 2019, 105, 32-44.	1.5	11
84	Modeling Interfacial Tension of N2/CO2 Mixture + n-Alkanes with Machine Learning Methods: Application to EOR in Conventional and Unconventional Reservoirs by Flue Gas Injection. Minerals (Basel, Switzerland), 2022, 12, 252.	0.8	11
85	Characterization and Consecutive Prediction of Pore Structures in Tight Oil Reservoirs. Energies, 2018, 11, 2705.	1.6	10
86	Timeâ€frequency decomposition of seismic signals via quantum swarm evolutionary matching pursuit. Geophysical Prospecting, 2019, 67, 1701-1719.	1.0	10
87	Bacterial vs. thermal degradation of algal matter: Analysis from a physicochemical perspective. International Journal of Coal Geology, 2020, 223, 103465.	1.9	10
88	Experimental Measurement and Equilibrium Modeling of Adsorption of Asphaltenes from Various Origins onto the Magnetite Surface under Static and Dynamic Conditions. ACS Omega, 2021, 6, 24256-24268.	1.6	10
89	A geomechanical study of Bakken Formation considering the anisotropic behavior of shale layers. Journal of Petroleum Science and Engineering, 2018, 165, 567-574.	2.1	9
90	Study on array laterolog response simulation and mud-filtrate invasion correction. Advances in Geo-Energy Research, 2019, 3, 175-186.	3.1	9

#	Article	IF	Citations
91	Evaluating the Impact of Mechanical Properties of Kerogen on Hydraulic Fracturing of Organic Rich Formations. , 2018, , .		8
92	Refracturing: well selection, treatment design, and lessons learnedâ€"a review. Arabian Journal of Geosciences, 2019, 12, 1.	0.6	8
93	Determination of Clay Bound Water in Shales from NMR Signals: The Fractal Theory. Energy & Fuels, 2021, 35, 18406-18413.	2.5	8
94	Pore Structure Analysis by Using Atomic Force Microscopy. , 2016, , .		7
95	Characterizing Pore Size Distributions of Shale. , 2019, , 3-20.		7
96	Backtracking to Parent Maceral from Produced Bitumen with Raman Spectroscopy. Minerals (Basel,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.8	7
97	A real-world impact of offset frac-hits by rate transient analysis in the Bakken and Three Forks, North Dakota, USA. Journal of Petroleum Science and Engineering, 2022, 208, 109710.	2.1	7
98	TGA and elemental analysis of type II kerogen from the Bakken supported by HRTEM. Journal of Natural Gas Science and Engineering, 2022, 103, 104606.	2.1	7
99	Natural fractures in deep tight gas sandstone reservoirs in the thrust belt of the southern Junggar Basin, northwestern China. Interpretation, 2020, 8, SP81-SP93.	0.5	6
100	Microstructural analysis of organic matter in shale by SAXS and WAXS methods. Petroleum Science, 2022, 19, 979-989.	2.4	6
101	An insight into CO2 sequestration and EGR in Longmaxi and Niutitang shale formations via experimental analysis. Fuel, 2022, 324, 124776.	3.4	6
102	Potential Application of Atomic Force Microscopy in Characterization of Nano-pore Structures of Bakken Formation. , 2016, , .		5
103	Sedimentary architecture of hyperpycnal flow deposits: Cretaceous Sangyuan outcrop, from the Luanping Basin, North East China. Marine and Petroleum Geology, 2020, 121, 104593.	1.5	5
104	Understanding the creep behavior of shale via nano-DMA method. Energy Reports, 2021, 7, 7478-7487.	2.5	5
105	Joint optimization of constrained well placement and control parameters with a quantum-inspired cell-based quality gate function. Journal of Petroleum Science and Engineering, 2021, 209, 109854.	2.1	5
106	Integrated Reservoir Characterization of the Middle Bakken in the Blue Buttes Field, Williston Basin, North Dakota. , 2017, , .		4
107	Quantifying the Nano-Mechanical Signature of Shale Oil Formations by Grid Nanoindentation. , 2017, , .		4
108	1D mechanical earth modeling in the Permian Lucaogou Shale of the Santanghu Basin, Northwest China, from a complete set of laboratory data. Interpretation, 2021, 9, T357-T372.	0.5	4

#	Article	IF	Citations
109	Experimental Investigation of Solid Organic Matter with a 2D NMR T₁â€“T₂ Map. Energy & Fuels, 2021, 35, 15709-15720.	2.5	4
110	Controls of fault-bend fold on natural fractures: Insight from discrete element simulation and outcrops in the southern margin of the Junggar Basin, Western China. Marine and Petroleum Geology, 2022, 138, 105541.	1.5	4
111	Compositional Modeling of the Oil Formation Volume Factor of Crude Oil Systems: Application of Intelligent Models and Equations of State. ACS Omega, 2022, 7, 24256-24273.	1.6	4
112	Diffusivity and hydrophobic hydration of hydrocarbons in supercritical CO₂ and aqueous brine. RSC Advances, 2020, 10, 37938-37946.	1.7	3
113	Evaluation of 3D printed microfluidic networks to study fluid flow in rocks. Oil and Gas Science and Technology, 2021, 76, 50.	1.4	3
114	Proper Experimental Parameters in N2 Adsorption: The Effects of Data Points and Equilibrium Interval Time. Energy & Fuels, 0, , .	2.5	3
115	Stable Isotope Geochemistry of the Organic Elements within Shales and Crude Oils: A Comprehensive Review. Molecules, 2022, 27, 34.	1.7	3
116	Performance of Silicon Carbide Nanomaterials in Separation Process. Separation and Purification Reviews, 2023, 52, 205-220.	2.8	3
117	Nanoscale mechanical properties of 3D printed gypsum-powder-based rocks by nanoindentation and numerical modeling. Rapid Prototyping Journal, 2019, 25, 1295-1308.	1.6	2
118	Theoretical Prediction of the Occurrence of Gas Hydrate Stability Zones: A Case Study of the Mohe Basin, Northeast China. ACS Omega, 2021, 6, 35810-35820.	1.6	2
119	Modeling of Brine/CO2/Mineral Wettability Using Gene Expression Programming (GEP): Application to Carbon Geo-Sequestration. Minerals (Basel, Switzerland), 2022, 12, 760.	0.8	2
120	Multiscale characterization of pore structures of shale: quantification from SEM image analysis. , 2016, , .		1
121	A preliminary optimization of borehole microseismic array design with a multiple criteria decision analysis. Journal of Applied Geophysics, 2018, 157, 87-95.	0.9	1
122	Rate Transient Analysis. SpringerBriefs in Petroleum Geoscience & Engineering, 2022, , 65-99.	0.1	1
123	Estimation of Mechanical Properties of the Bakken Shales Through Convolutional Neural Networks. Rock Mechanics and Rock Engineering, 2022, 55, 1213-1225.	2.6	1
124	Incorporating Geomechanics into the Decline-Curve Analysis of Naturally Fractured Reservoirs. , 2011, , .		0
125	A Multidisciplinary Study of Stimulation Designs in the Three Forks Formation, ND. , 2015, , .		0
126	Quantification of the Microstructure Heterogeneities of Bakken Shale Reservoirs from Multi-Fractal Analysis. , 2017, , .		0

#	Article	IF	Citations
127	Microstructures and Geochemical Characteristics of Bakken Shale Formations. , 2017, , .		0
128	Nano-mechanical Properties. SpringerBriefs in Petroleum Geoscience & Engineering, 2018, , 71-89.	0.1	0
129	Geochemical Properties. SpringerBriefs in Petroleum Geoscience & Engineering, 2018, , 57-70.	0.1	0
130	Pressure Transient Analysis. SpringerBriefs in Petroleum Geoscience & Engineering, 2022, , 35-64.	0.1	0
131	Unconventional Oil and Gas Reservoirs. SpringerBriefs in Petroleum Geoscience & Engineering, 2022, , 1-10.	0.1	0
132	Unconventional Reservoir Engineering. SpringerBriefs in Petroleum Geoscience & Engineering, 2022, , 11-34.	0.1	0
133	Pore Structures. SpringerBriefs in Petroleum Geoscience & Engineering, 2018, , 17-56.	0.1	0