Jerome A Neufeld

List of Publications by Year
in descending order

69	2,127	304701	243610
papers	citations	22 h-index	44 g-index

78	78	78	1469
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Fluid Mechanics of Carbon Dioxide Sequestration. Annual Review of Fluid Mechanics, 2014, 46, 255-272.	25.0	288
2	Convective dissolution of carbon dioxide in saline aquifers. Geophysical Research Letters, 2010, 37, .	4.0	266
3	Spatial and temporal evolution of injected CO₂ at the Sleipner Field, North Sea. Journal of Geophysical Research, 2012, 117, .	3.3	108
4	Convective shutdown in a porous medium at high Rayleigh number. Journal of Fluid Mechanics, 2013, 719, 551-586.	3.4	98
5	Viscous Control of Peeling an Elastic Sheet by Bending and Pulling. Physical Review Letters, 2013, 111, 154501.	7.8	93
6	Spreading and convective dissolution of carbon dioxide in vertically confined, horizontal aquifers. Water Resources Research, 2012, 48, .	4.2	84
7	Two-phase gravity currents in porous media. Journal of Fluid Mechanics, 2011, 678, 248-270.	3.4	82
8	Ultimate Regime of High Rayleigh Number Convection in a Porous Medium. Physical Review Letters, 2012, 108, 224503.	7.8	81
9	High Rayleigh number convection in a three-dimensional porous medium. Journal of Fluid Mechanics, 2014, 748, 879-895.	3.4	61
10	Modelling carbon dioxide sequestration in layered strata. Journal of Fluid Mechanics, 2009, 625, 353-370.	3.4	55
11	Fluid injection into a confined porous layer. Journal of Fluid Mechanics, 2014, 745, 592-620.	3.4	55
12	EarthÊ¼s inner core: Innermost inner core or hemispherical variations?. Earth and Planetary Science Letters, 2014, 385, 181-189.	4.4	45
13	The effect of a fissure on storage in a porous medium. Journal of Fluid Mechanics, 2009, 639, 239-259.	3.4	44
14	The effects of capillary forces on the axisymmetric propagation of two-phase, constant-flux gravity currents in porous media. Physics of Fluids, 2013, 25, .	4.0	40
15	The dynamics of miscible viscous fingering from onset to shutdown. Journal of Fluid Mechanics, 2018, 837, 520-545.	3.4	40
16	Leakage from gravity currents in a porous medium. Part 1. A localized sink. Journal of Fluid Mechanics, 2011, 666, 391-413.	3.4	29
17	Crystal settling and convection in the Shiant Isles Main Sill. Contributions To Mineralogy and Petrology, 2017, 172, 7.	3.1	29
18	Flow-induced compaction of a deformable porous medium. Physical Review E, 2016, 93, 023116.	2.1	28

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19	Stability of columnar convection in a porous medium. Journal of Fluid Mechanics, 2013, 737, 205-231.	3.4	27
20	Constraints on asteroid magnetic field evolution and the radii of meteorite parent bodies from thermal modelling. Earth and Planetary Science Letters, 2019, 521, 68-78.	4.4	24
21	Static and dynamic fluid-driven fracturing of adhered elastica. Physical Review Fluids, 2018, 3, .	2.5	23
22	Leakage from gravity currents in a porous medium. Part 2. A line sink. Journal of Fluid Mechanics, 2011, 666, 414-427.	3.4	22
23	The competition between gravity and flow focusing in two-layered porous media. Journal of Fluid Mechanics, 2013, 720, 5-14.	3.4	22
24	Interface pinning of immiscible gravity-exchange flows in porous media. Physical Review E, 2013, 87, 023015.	2.1	20
25	High Rayleigh number convection in a porous medium containing a thin low-permeability layer. Journal of Fluid Mechanics, 2014, 756, 844-869.	3.4	20
26	The Topâ€Down Solidification of Iron Asteroids Driving Dynamo Evolution. Journal of Geophysical Research E: Planets, 2019, 124, 1331-1356.	3.6	20
27	Tidal Groundingâ€Line Migration Modulated by Subglacial Hydrology. Geophysical Research Letters, 2020, 47, e2020GL089088.	4.0	20
28	An inverse method for estimating thickness and volume with time of a thin CO‹sub›2‹/sub›â€filled layer at the Sleipner Field, North Sea. Journal of Geophysical Research: Solid Earth, 2016, 121, 5068-5085.	3.4	19
29	Stable and unstable miscible displacements in layered porous media. Journal of Fluid Mechanics, 2019, 869, 468-499.	3.4	19
30	Shear-enhanced convection in a mushy layer. Journal of Fluid Mechanics, 2008, 612, 339-361.	3.4	18
31	Axisymmetric viscous gravity currents flowing over a porous medium. Journal of Fluid Mechanics, 2009, 622, 135-144.	3.4	18
32	Heat Production and Tidally Driven Fluid Flow in the Permeable Core of Enceladus. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006209.	3.6	18
33	An experimental study of shear-enhanced convection in a mushy layer. Journal of Fluid Mechanics, 2008, 612, 363-385.	3.4	17
34	Shallow, gravity-driven flow in a poro-elastic layer. Journal of Fluid Mechanics, 2015, 778, 335-360.	3.4	17
35	On the mechanisms of icicle evolution. Journal of Fluid Mechanics, 2010, 647, 287-308.	3.4	16
36	Upscaling multiphase viscous-to-capillary transitions in heterogeneous porous media. Journal of Fluid Mechanics, 2021, 911, .	3.4	16

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37	The Thermal Evolution of Planetesimals During Accretion and Differentiation: Consequences for Dynamo Generation by Thermallyâ€Driven Convection. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006704.	3.6	14
38	Indentation of a floating elastic sheet: geometry versus applied tension. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20170335.	2.1	13
39	CO₂ Dissolution Trapping Rates in Heterogeneous PorousÂMedia. Geophysical Research Letters, 2020, 47, e2020GL087001.	4.0	13
40	Orientation of Tabular Mafic Intrusions Controls Convective Vigour and Crystallization Style. Journal of Petrology, 2017, 58, 2035-2053.	2.8	11
41	Fluid migration between confined aquifers. Journal of Fluid Mechanics, 2014, 757, 330-353.	3.4	10
42	The feasibility of thermal and compositional convection in Earth's inner core. Geophysical Journal International, 2015, 201, 764-782.	2.4	10
43	Stratified gravity currents in porous media. Journal of Fluid Mechanics, 2016, 791, 329-357.	3.4	10
44	Self-similar dynamics of two-phase flows injected into a confined porous layer. Journal of Fluid Mechanics, 2019, 877, 882-921.	3.4	10
45	Two-phase gravity currents in layered porous media. Journal of Fluid Mechanics, 2021, 922, .	3.4	10
46	Topographic controls on gravity currents in porous media. Journal of Fluid Mechanics, 2013, 734, 317-337.	3.4	9
47	Two-phase gravity currents resulting from the release of a fixed volume of fluid in a porousÂmedium. Journal of Fluid Mechanics, 2017, 832, 550-577.	3.4	9
48	The influence of a poroelastic till on rapid subglacial flooding and cavity formation. Journal of Fluid Mechanics, 2018, 855, 1170-1207.	3.4	9
49	Shock formation in two-layer equal-density viscous gravity currents. Journal of Fluid Mechanics, 2019, 863, 730-756.	3.4	9
50	Controls on the geometry and evolution of thin-skinned fold-thrust belts, and applications to the Makran accretionary prism and Indoâ€“Burman Ranges. Geophysical Journal International, 2019, 218, 247-267.	2.4	9
51	Dispersive entrainment into gravity currents in porous media. Journal of Fluid Mechanics, 2020, 886, .	3.4	9
52	Leakage dynamics of fault zones: experimental and analytical study with application to CO₂ storage. Journal of Fluid Mechanics, 2022, 931, .	3.4	9
53	Shear flow, phase change and matched asymptotic expansions: Pattern formation in mushy layers. Physica D: Nonlinear Phenomena, 2011, 240, 140-149.	2.8	8
54	Horizontal miscible displacements through porous media: the interplay between viscous fingering and gravity segregation. Journal of Fluid Mechanics, 2022, 935, .	3.4	8

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55	Microstructural evidence for crystallization regimes in mafic intrusions: a case study from the Little Minch Sill Complex, Scotland. Contributions To Mineralogy and Petrology, 2018, 173, 97.	3.1	7
56	The relaxation time for viscous and porous gravity currents following a change in flux. Journal of Fluid Mechanics, 2017, 821, 330-342.	3.4	6
57	Formation of the Lunar Primary Crust From a Longâ€Lived Slushy Magma Ocean. Geophysical Research Letters, 2022, 49, .	4.0	6
58	Leakage from inclined porous reservoirs. Journal of Fluid Mechanics, 2011, 673, 395-405.	3.4	5
59	Propagation of viscous currents on a porous substrate with finite capillary entry pressure. Journal of Fluid Mechanics, 2016, 801, 65-90.	3.4	5
60	The elastic Landauâ€“Levich problem on a slope. Journal of Fluid Mechanics, 2020, 883, .	3.4	5
61	Maximal liquid bridges between horizontal cylinders. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160233.	2.1	4
62	Application of gravity currents to the migration of CO2 in heterogeneous saline formations. Energy Procedia, 2009, 1, 3331-3338.	1.8	3
63	Flow of buoyant granular materials along a freeÂsurface. Journal of Fluid Mechanics, 2018, 848, 312-339.	3.4	3
64	Water flow through sediments and at the ice-sediment interface beneath Sermeq Kujalleq (Store) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	2.2	3
65	Fluid invasion of an unsaturated leaky porous layer. Journal of Fluid Mechanics, 2015, 777, 97-121.	3.4	2
66	On the dynamics of a thin viscous film spreading between a permeable horizontal plate and an elastic sheet. Journal of Fluid Mechanics, 2018, 841, 989-1011.	3.4	2
67	Deformation of an Elastic Beam on a Winkler Foundation. Journal of Applied Mechanics, Transactions ASME, 2020, 87, .	2.2	2
68	Permeability measurements using oscillatory flows. Experiments in Fluids, 2020, 61, 1.	2.4	1
69	Two-phase gravity currents in porous media. Journal of Fluid Mechanics, 0, , 1-23.	3.4	1