

Jerome A Neufeld

List of Publications by Year in descending order

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69
papers

2,127
citations

304602

22
h-index

243529

44
g-index

78
all docs

78
docs citations

78
times ranked

1469
citing authors

#	ARTICLE	IF	CITATIONS
1	The Fluid Mechanics of Carbon Dioxide Sequestration. Annual Review of Fluid Mechanics, 2014, 46, 255-272.	10.8	288
2	Convective dissolution of carbon dioxide in saline aquifers. Geophysical Research Letters, 2010, 37, .	1.5	266
3	Spatial and temporal evolution of injected CO ₂ 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.	1.4	98
5	Viscous Control of Peeling an Elastic Sheet by Bending and Pulling. Physical Review Letters, 2013, 111, 154501.	2.9	93
6	Spreading and convective dissolution of carbon dioxide in vertically confined, horizontal aquifers. Water Resources Research, 2012, 48, .	1.7	84
7	Two-phase gravity currents in porous media. Journal of Fluid Mechanics, 2011, 678, 248-270.	1.4	82
8	Ultimate Regime of High Rayleigh Number Convection in a Porous Medium. Physical Review Letters, 2012, 108, 224503.	2.9	81
9	High Rayleigh number convection in a three-dimensional porous medium. Journal of Fluid Mechanics, 2014, 748, 879-895.	1.4	61
10	Modelling carbon dioxide sequestration in layered strata. Journal of Fluid Mechanics, 2009, 625, 353-370.	1.4	55
11	Fluid injection into a confined porous layer. Journal of Fluid Mechanics, 2014, 745, 592-620.	1.4	55
12	Earth's inner core: Innermost inner core or hemispherical variations?. Earth and Planetary Science Letters, 2014, 385, 181-189.	1.8	45
13	The effect of a fissure on storage in a porous medium. Journal of Fluid Mechanics, 2009, 639, 239-259.	1.4	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, .	1.6	40
15	The dynamics of miscible viscous fingering from onset to shutdown. Journal of Fluid Mechanics, 2018, 837, 520-545.	1.4	40
16	Leakage from gravity currents in a porous medium. Part 1. A localized sink. Journal of Fluid Mechanics, 2011, 666, 391-413.	1.4	29
17	Crystal settling and convection in the Shiant Isles Main Sill. Contributions To Mineralogy and Petrology, 2017, 172, 7.	1.2	29
18	Flow-induced compaction of a deformable porous medium. Physical Review E, 2016, 93, 023116.	0.8	28

#	ARTICLE	IF	CITATIONS
19	Stability of columnar convection in a porous medium. <i>Journal of Fluid Mechanics</i> , 2013, 737, 205-231.	1.4	27
20	Constraints on asteroid magnetic field evolution and the radii of meteorite parent bodies from thermal modelling. <i>Earth and Planetary Science Letters</i> , 2019, 521, 68-78.	1.8	24
21	Static and dynamic fluid-driven fracturing of adhered elastica. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	23
22	Leakage from gravity currents in a porous medium. Part 2. A line sink. <i>Journal of Fluid Mechanics</i> , 2011, 666, 414-427.	1.4	22
23	The competition between gravity and flow focusing in two-layered porous media. <i>Journal of Fluid Mechanics</i> , 2013, 720, 5-14.	1.4	22
24	Interface pinning of immiscible gravity-exchange flows in porous media. <i>Physical Review E</i> , 2013, 87, 023015.	0.8	20
25	High Rayleigh number convection in a porous medium containing a thin low-permeability layer. <i>Journal of Fluid Mechanics</i> , 2014, 756, 844-869.	1.4	20
26	The Topâ€Down Solidification of Iron Asteroids Driving Dynamo Evolution. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 1331-1356.	1.5	20
27	Tidal Groundingâ€Line Migration Modulated by Subglacial Hydrology. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089088.	1.5	20
28	An inverse method for estimating thickness and volume with time of a thin CO ₂ -filled layer at the Sleipner Field, North Sea. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 5068-5085.	1.4	19
29	Stable and unstable miscible displacements in layered porous media. <i>Journal of Fluid Mechanics</i> , 2019, 869, 468-499.	1.4	19
30	Shear-enhanced convection in a mushy layer. <i>Journal of Fluid Mechanics</i> , 2008, 612, 339-361.	1.4	18
31	Axisymmetric viscous gravity currents flowing over a porous medium. <i>Journal of Fluid Mechanics</i> , 2009, 622, 135-144.	1.4	18
32	Heat Production and Tidally Driven Fluid Flow in the Permeable Core of Enceladus. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006209.	1.5	18
33	An experimental study of shear-enhanced convection in a mushy layer. <i>Journal of Fluid Mechanics</i> , 2008, 612, 363-385.	1.4	17
34	Shallow, gravity-driven flow in a poro-elastic layer. <i>Journal of Fluid Mechanics</i> , 2015, 778, 335-360.	1.4	17
35	On the mechanisms of icicle evolution. <i>Journal of Fluid Mechanics</i> , 2010, 647, 287-308.	1.4	16
36	Upscaling multiphase viscous-to-capillary transitions in heterogeneous porous media. <i>Journal of Fluid Mechanics</i> , 2021, 911, .	1.4	16

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37	The Thermal Evolution of Planetesimals During Accretion and Differentiation: Consequences for Dynamo Generation by Thermally-Driven Convection. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006704.	1.5	14
38	Indentation of a floating elastic sheet: geometry versus applied tension. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20170335.	1.0	13
39	CO ₂ Dissolution Trapping Rates in Heterogeneous Porous Media. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087001.	1.5	13
40	Orientation of Tabular Mafic Intrusions Controls Convective Vigour and Crystallization Style. <i>Journal of Petrology</i> , 2017, 58, 2035-2053.	1.1	11
41	Fluid migration between confined aquifers. <i>Journal of Fluid Mechanics</i> , 2014, 757, 330-353.	1.4	10
42	The feasibility of thermal and compositional convection in Earth's inner core. <i>Geophysical Journal International</i> , 2015, 201, 764-782.	1.0	10
43	Stratified gravity currents in porous media. <i>Journal of Fluid Mechanics</i> , 2016, 791, 329-357.	1.4	10
44	Self-similar dynamics of two-phase flows injected into a confined porous layer. <i>Journal of Fluid Mechanics</i> , 2019, 877, 882-921.	1.4	10
45	Two-phase gravity currents in layered porous media. <i>Journal of Fluid Mechanics</i> , 2021, 922, .	1.4	10
46	Topographic controls on gravity currents in porous media. <i>Journal of Fluid Mechanics</i> , 2013, 734, 317-337.	1.4	9
47	Two-phase gravity currents resulting from the release of a fixed volume of fluid in a porous medium. <i>Journal of Fluid Mechanics</i> , 2017, 832, 550-577.	1.4	9
48	The influence of a poroelastic till on rapid subglacial flooding and cavity formation. <i>Journal of Fluid Mechanics</i> , 2018, 855, 1170-1207.	1.4	9
49	Shock formation in two-layer equal-density viscous gravity currents. <i>Journal of Fluid Mechanics</i> , 2019, 863, 730-756.	1.4	9
50	Controls on the geometry and evolution of thin-skinned fold-thrust belts, and applications to the Makran accretionary prism and Indo-Burman Ranges. <i>Geophysical Journal International</i> , 2019, 218, 247-267.	1.0	9
51	Dispersive entrainment into gravity currents in porous media. <i>Journal of Fluid Mechanics</i> , 2020, 886, .	1.4	9
52	Leakage dynamics of fault zones: experimental and analytical study with application to CO ₂ storage. <i>Journal of Fluid Mechanics</i> , 2022, 931, .	1.4	9
53	Shear flow, phase change and matched asymptotic expansions: Pattern formation in mushy layers. <i>Physica D: Nonlinear Phenomena</i> , 2011, 240, 140-149.	1.3	8
54	Horizontal miscible displacements through porous media: the interplay between viscous fingering and gravity segregation. <i>Journal of Fluid Mechanics</i> , 2022, 935, .	1.4	8

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55	Microstructural evidence for crystallization regimes in mafic intrusions: a case study from the Little Minch Sill Complex, Scotland. <i>Contributions To Mineralogy and Petrology</i> , 2018, 173, 97.	1.2	7
56	The relaxation time for viscous and porous gravity currents following a change in flux. <i>Journal of Fluid Mechanics</i> , 2017, 821, 330-342.	1.4	6
57	Formation of the Lunar Primary Crust From a Long-Lived Slushy Magma Ocean. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	6
58	Leakage from inclined porous reservoirs. <i>Journal of Fluid Mechanics</i> , 2011, 673, 395-405.	1.4	5
59	Propagation of viscous currents on a porous substrate with finite capillary entry pressure. <i>Journal of Fluid Mechanics</i> , 2016, 801, 65-90.	1.4	5
60	The elastic Landau-Levich problem on a slope. <i>Journal of Fluid Mechanics</i> , 2020, 883, .	1.4	5
61	Maximal liquid bridges between horizontal cylinders. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20160233.	1.0	4
62	Application of gravity currents to the migration of CO2 in heterogeneous saline formations. <i>Energy Procedia</i> , 2009, 1, 3331-3338.	1.8	3
63	Flow of buoyant granular materials along a free surface. <i>Journal of Fluid Mechanics</i> , 2018, 848, 312-339.	1.4	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	1.1	3
65	Fluid invasion of an unsaturated leaky porous layer. <i>Journal of Fluid Mechanics</i> , 2015, 777, 97-121.	1.4	2
66	On the dynamics of a thin viscous film spreading between a permeable horizontal plate and an elastic sheet. <i>Journal of Fluid Mechanics</i> , 2018, 841, 989-1011.	1.4	2
67	Deformation of an Elastic Beam on a Winkler Foundation. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2020, 87, .	1.1	2
68	Permeability measurements using oscillatory flows. <i>Experiments in Fluids</i> , 2020, 61, 1.	1.1	1
69	Two-phase gravity currents in porous media. <i>Journal of Fluid Mechanics</i> , 0, , 1-23.	1.4	1