Alan Chave

List of Publications by Year
in descending order

121	6,849	66234	71532
papers	citations	42 h-index	76 g-index

127	127	127	2809
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Characterization of Periodicity in the Voltage Time Series of a Riometer. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027160.	0.8	0
2	Constraints on the resistivity of the oceanic lithosphere and asthenosphere from seafloor ocean tidal electromagnetic measurements. Geophysical Journal International, 2019, 219, 464-478.	1.0	9
3	On the physical principles underlying electromagnetic induction. Geophysics, 2019, 84, W21-W32.	1.4	12
4	Energy flow in terrestrial controlled-source electromagnetic geophysics. European Journal of Physics, 2019, 40, 065202.	0.3	2
5	A multitaper spectral estimator for time-series with missing data. Geophysical Journal International, 2019, 218, 2165-2178.	1.0	7
6	Highâ€Q Spectral Peaks and Nonstationarity in the Deep Ocean Infragravity Wave Band: Tidal Harmonics and Solar Normal Modes. Journal of Geophysical Research: Oceans, 2019, 124, 2072-2087.	1.0	6
7	3D inversion of natural-source electromagnetic data from distributed-acquisition systems. , 2018, , .		0
8	Estimation of the Magnetotelluric Response Function: The Path from Robust Estimation to a StableÂMaximum Likelihood Estimator. Surveys in Geophysics, 2017, 38, 837-867.	2.1	28
9	On the physics of frequency domain controlled source electromagnetics in shallow water, 2: transverse anisotropy. Geophysical Journal International, 2017, 211, 1046-1061.	1.0	5
10	On the Physics of Towed Streamer Controlled Source Electromagnetics in Shallow Water in the Presence of Transverse Anisotropy. , 2017, , .		0
11	On the physics of frequency-domain controlled source electromagnetics in shallow water. 1: isotropic conductivity. Geophysical Journal International, 2017, 208, 1026-1042.	1.0	13
12	Comment on â€˜Robust error on magnetotelluric impedance estimatesâ€™ by P. Wawrzyniak, P. Sailhac and G. Marquis,Geophysical Prospecting, 61, 533-546. Geophysical Prospecting, 2016, 64, 247-249.	1.0	1
13	A note about Gaussian statistics on a sphere. Geophysical Journal International, 2015, 203, 893-895.	1.0	3
14	Robust magnetotelluric inversion. Geophysical Journal International, 2014, 196, 1365-1374.	1.0	5
15	On the statistics of magnetotelluric rotational invariants. Geophysical Journal International, 2014, 196, 111-130.	1.0	6
16	Magnetotelluric data, stable distributions and impropriety: an existential combination. Geophysical Journal International, 2014, 198, 622-636.	1.0	28
17	Distortion of magnetotelluric data: its identification and removal. , 2012, , 219-302.		51
18	The Magnetotelluric Method. , 2012, , .		354

#	Article	IF	Citations
19	Electromagnetic constraints on a melt region beneath the central Mariana backâ€arc spreading ridge. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	9
20	The theoretical basis for electromagnetic induction. , 2012, , 19-49.		9
21	The magnetotelluric response function. , 2012, , 122-164.		26
22	Instrumentation and field procedures. , 2012, , 421-479.		18
23	Case histories and geological applications. , 2012, , 480-544.		4
24	Estimation of the magnetotelluric response function. , 2012, , 165-218.		14
25	A Regional Slocum Glider Network in the Mid-Atlantic Bight Leverages Broad Community Engagement. Marine Technology Society Journal, 2010, 44, 185-195.	0.3	22
26	Upper mantle electrical resistivity structure beneath the central Mariana subduction system. Geochemistry, Geophysics, Geosystems, 2010, 11, .	1.0	65
27	On the electromagnetic fields produced by marine frequency domain controlled sources. Geophysical Journal International, 2009, 179, 1429-1457.	1.0	47
28	Joint inversion of marine magnetotelluric and gravity data incorporating seismic constraintsPreliminary results of sub-basalt imaging off the Faroe Shelf. Earth and Planetary Science Letters, 2009, 282, 47-55.	1.8	111
29	Single pulse laser-induced breakdown spectroscopy of bulk aqueous solutions at oceanic pressures: interrelationship of gate delay and pulse energy. Applied Optics, 2008, 47, G122.	2.1	52
30	Double pulse laser-induced breakdown spectroscopy of bulk aqueous solutions at oceanic pressures: interrelationship of gate delay, pulse energies, interpulse delay, and pressure. Applied Optics, 2008, 47, G131.	2.1	54
31	The Approach to Cyberinfrastructure for the Ocean Observatories Initiative. , 2007, , .		2
32	Source field effects in the auroral zone: Evidence from the Slave craton (NW Canada). Physics of the Earth and Planetary Interiors, 2007, 164, 21-35.	0.7	6
33	Laser-induced breakdown spectroscopy of bulk aqueous solutions at oceanic pressures: evaluation of key measurement parameters. Applied Optics, 2007, 46, 2507.	2.1	117
34	Sequential-Pulse Laser-Induced Breakdown Spectroscopy of High-Pressure Bulk Aqueous Solutions. Applied Spectroscopy, 2007, 61, 171-176.	1.2	91
35	The statistical distribution of magnetotelluric apparent resistivity and phase. Geophysical Journal International, 2007, 171, 127-132.	1.0	12
36	Analysis of laser-induced breakdown spectroscopy spectra: The case for extreme value statistics. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 1370-1378.	1.5	40

#	Article	IF	Citations
37	Mantle dynamics beneath the East Pacific Rise at 17Â°S: Insights from the Mantle Electromagnetic and Tomography (MELT) experiment. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	146
38	Monitoring the integrated deep meridional flow in the tropical North Atlantic: Long-term performance of a geostrophic array. Deep-Sea Research Part I: Oceanographic Research Papers, 2006, 53, 528-546.	0.6	71
39	Laser-Induced Breakdown Spectroscopy of High-Pressure Bulk Aqueous Solutions. Applied Spectroscopy, 2006, 60, 786-790.	1.2	61
40	Electrical structure beneath the northern MELT line on the East Pacific Rise at 15Â°45â€²S. Geophysical Research Letters, 2006, 33, .	1.5	17
41	Correction of shallow-water electromagnetic data for noise induced by instrument motion. Geophysics, 2005, 70, G127-G133.	1.4	13
42	Geophysical evidence from the MELT area for compositional controls on oceanic plates. Nature, 2005, 437, 249-252.	13.7	217
43	Correction of seafloor magnetotelluric data for topographic effects during inversion. Journal of Geophysical Research, 2005, 110, .	3.3	47
44	Seasonal variation of ocean bottom pressure derived from Gravity Recovery and Climate Experiment (GRACE): Local validation and global patterns. Journal of Geophysical Research, 2005, 110, .	3.3	46
45	Bounded influence magnetotelluric response function estimation. Geophysical Journal International, 2004, 157, 988-1006.	1.0	249
46	Correction of Motional Electric Field Measurements for Galvanic Distortion*. Journal of Atmospheric and Oceanic Technology, 2004, 21, 317-330.	0.5	9
47	An Integrated Approach to Ocean Observatory Data Acquisition/Management and Infrastructure Control Using Web Services. Marine Technology Society Journal, 2004, 38, 155-163.	0.3	7
48	Cabled Ocean Observatory Systems. Marine Technology Society Journal, 2004, 38, 30-43.	0.3	108
49	The electrical structure of the Slave craton. Lithos, 2003, 71, 505-527.	0.6	133
50	A bounded influence regression estimator based on the statistics of the hat matrix. Journal of the Royal Statistical Society Series C: Applied Statistics, 2003, 52, 307-322.	0.5	55
51	A semiâ€global reference model for electrical conductivity in the midâ€mantle beneath the north Pacific region. Geophysical Research Letters, 2003, 30, .	1.5	95
52	Mean stream coordinates structure of the Subantarctic Front: Temperature, salinity, and absolute velocity. Journal of Geophysical Research, 2003, 108, .	3.3	18
53	Combining Inverted Echo Sounder and Horizontal Electric Field Recorder Measurements to Obtain Absolute Velocity Profiles. Journal of Atmospheric and Oceanic Technology, 2002, 19, 1653-1664.	0.5	19
54	Ambient light emission from hydrothermal vents on the Mid-Atlantic Ridge. Geophysical Research Letters, 2002, 29, 34-1-34-4.	1.5	19

#	Article	IF	Citations
55	Investigations of ambient light emission at deep-sea hydrothermal vents. Journal of Geophysical Research, 2002, 107, EPM 1-1-EPM 1-13.	3.3	34
56	On the importance of offshore data for magnetotelluric studies of ocean-continent subduction systems. Geophysical Research Letters, 2002, 29, 16-1-16-4.	1.5	13
57	Electric lithosphere of the Slave craton. Geology, 2001, 29, 423.	2.0	124
58	Variations in ambient light emission from black smokers and flange pools on the Juan De Fuca Ridge. Geophysical Research Letters, 2000, 27, 1151-1154.	1.5	18
59	Comparison of continental and oceanic mantle electrical conductivity: Is the Archean lithosphere dry?. Geochemistry, Geophysics, Geosystems, 2000, 1, n/a-n/a.	1.0	124
60	Ocean mixing studied near Hawaiian Ridge. Eos, 2000, 81, 545.	0.1	27
61	Asymmetric Electrical Structure in the Mantle Beneath the East Pacific Rise at 17Â°S. Science, 1999, 286, 752-756.	6.0	118
62	Motional induction effect on the planetary-scale geoelectric potential in the eastern North Pacific. Journal of Geophysical Research, 1999, 104, 1343-1359.	3.3	7
63	Magnetotelluric imaging of the Society Islands hotspot. Journal of Geophysical Research, 1998, 103, 30287-30309.	3.3	94
64	Observations of the Boundary Current System at 26.5Â°N in the Subtropical North Atlantic Ocean*. Journal of Physical Oceanography, 1997, 27, 1827-1848.	0.7	28
65	Electric and Magnetic Field Galvanic Distortion Decomposition of BC87 Data.. Journal of Geomagnetism and Geoelectricity, 1997, 49, 767-789.	0.8	37
66	A Look at Galvanic Distortion in the Tasman Sea and the Juan de Fuca Plate. Journal of Geomagnetism and Geoelectricity, 1997, 49, 1373-1386.	0.8	11
67	Robust Processing of Magnetotelluric Data from the Auroral Zone. Journal of Geomagnetism and Geoelectricity, 1997, 49, 1451-1468.	0.8	30
68	Magnetotelluric Experiment probes deep physical state of southeastern United States. Eos, 1996, 77, 329.	0.1	11
69	Light at deepâ€sea hydrothermal vents. Geophysical Research Letters, 1996, 23, 2049-2052.	1.5	73
70	Northeastern Pacific mantle conductivity profile from long-period magnetotelluric sounding using Hawaii-to-California submarine cable data. Journal of Geophysical Research, 1995, 100, 17837-17854.	3.3	172
71	On electric and magnetic galvanic distortion tensor decompositions. Journal of Geophysical Research, 1994, 99, 4669-4682.	3.3	168
72	Experiment investigates magma in the mantle beneath mid-ocean ridges. Eos, 1994, 75, 537.	0.1	19

#	Article	IF	Citations
73	Comment on â€˜The electrical conductivity of the oceanic upper mantleâ€™ by G. Heinson and S. Constable. Geophysical Journal International, 1993, 114, 711-716.	1.0	21
74	Conductivity discontinuities in the upper mantle beneath a stable craton. Geophysical Research Letters, 1993, 20, 2941-2944.	1.5	162
75	Largeâ€scale electric field measurements on the Earth's surface: A review. Journal of Geophysical Research, 1993, 98, 23525-23534.	3.3	28
76	Electromagnetic induction by a finite electric dipole source over a 2-D earth. Geophysics, 1993, 58, 198-214.	1.4	96
77	Geoelectric field measurements on a planetary scale: Oceanographic and geophysical applications. Geophysical Research Letters, 1992, 19, 1411-1414.	1.5	21
78	The barotropic electromagnetic and pressure experiment: 1. Barotropic current response to atmospheric forcing. Journal of Geophysical Research, 1992, 97, 9565-9593.	3.3	33
79	Coherence of seismic body waves from local events as measured by a smallâ€aperture array. Journal of Geophysical Research, 1991, 96, 11981-11996.	3.3	61
80	Lowâ€frequency, motionally induced electromagnetic fields in the ocean: 2. Electric field and Eulerian current comparison. Journal of Geophysical Research, 1991, 96, 12797-12814.	3.3	36
81	Variability of the wind stress curl over the North Pacific: Implications for the oceanic response. Journal of Geophysical Research, 1991, 96, 18361-18379.	3.3	25
82	Submarine measurement of the Newtonian gravitational constant. Physical Review Letters, 1991, 67, 3051-3054.	2.9	42
83	12. Electrical Exploration Methods for the Seafloor. , 1991, , 931-966.		119
84	Seafloor Electromagnetic Exploration Methods. , 1990, , 191-200.		5
85	Some comments on seabed propagation of ULF/ELF electromagnetic fields. Radio Science, 1990, 25, 825-836.	0.8	36
86	Evidence for local and nonlocal barotropic responses to atmospheric forcing during BEMPEX. Geophysical Research Letters, 1990, 17, 949-952.	1.5	59
87	Lowâ€frequency, motionally induced electromagnetic fields in the ocean: 1. Theory. Journal of Geophysical Research, 1990, 95, 7185-7200.	3.3	98
88	Test of Newtonâ€™s inverse-square law in the Greenland ice cap. Physical Review Letters, 1989, 62, 985-988.	2.9	62
89	Electromagnetic induction by ocean currents: BEMPEX. Physics of the Earth and Planetary Interiors, 1989, 53, 350-359.	0.7	9
90	A moving finite element method for magnetotelluric modeling. Physics of the Earth and Planetary Interiors, 1989, 53, 432-443.	0.7	12

#	Article	IF	Citations
91	Introduction to the special section on the EMSLABâ€Juan de Fuca Experiment. Journal of Geophysical Research, 1989, 94, 14093-14098.	3.3	23
92	Magnetotelluric observations across the Juan de Fuca Subduction System in the EMSLAB Project. Journal of Geophysical Research, 1989, 94, 14111-14125.	3.3	68
93	Resistivity cross section through the Juan de Fuca Subduction System and its tectonic implications. Journal of Geophysical Research, 1989, 94, 14127-14144.	3.3	166
94	Observations of motional electromagnetic fields during EMSLAB. Journal of Geophysical Research, 1989, 94, 14153-14166.	3.3	29
95	A comparison of techniques for magnetotelluric response function estimation. Journal of Geophysical Research, 1989, 94, 14201-14213.	3.3	201
96	Some comments on magnetotelluric response function estimation. Journal of Geophysical Research, 1989, 94, 14215-14225.	3.3	175
97	The Newtonian gravitational constant on the feasibility of an oceanic measurement. Eos, 1988, 69, 769.	0.1	8
98	On the theory of seaâ€floor conductivity mapping using transient electromagnetic systems. Geophysics, 1987, 52, 204-217.	1.4	111
99	BEMPEX: A study of barotropic ocean currents and lithospheric electrical conductivity. Eos, 1987, 68, 618-629.	0.1	24
100	Electromagnetic induction studies. Reviews of Geophysics, 1987, 25, 989-1003.	9.0	27
101	On the robust estimation of power spectra, coherences, and transfer functions. Journal of Geophysical Research, 1987, 92, 633-648.	3.3	306
102	Polar ice test of the scale dependence of G. Nature, 1987, 326, 250-251.	13.7	13
103	Sea floor conductivity mapping using transient EM systems. , 1986, , .		0
104	Offshore electromagnetic surveying techniques. , 1986, , .		37
105	Controlled-source electromagnetic sounding of the oceanic lithosphere. Nature, 1986, 320, 52-54.	13.7	190
106	A transient electric dipoleâ€dipole method for mapping the conductivity of the sea floor. Geophysics, 1986, 51, 984-987.	1.4	89
107	Observation and interpretation of the seafloor vertical electric field in the eastern North Pacific. Geophysical Research Letters, 1985, 12, 793-796.	1.5	27
108	Electromagnetic induction fields in the deep ocean off California: oceanic and ionospheric sources. Geophysical Journal International, 1984, 77, 143-171.	1.0	27

#	Article	IF	Citations
109	On the estimation of magnetotelluric response functions using the singular value decomposition. Geophysical Journal International, 1984, 77, 683-709.	1.0	19
110	Comments on â€œAn inverse approach to signal correlationâ€•by D. G. Martinson, W. Menke, and P. Stoffa. Journal of Geophysical Research, 1984, 89, 2497-2499.	3.3	8
111	The FrÃ©chet Derivatives of electromagnetic induction. Journal of Geophysical Research, 1984, 89, 3373-3380.	3.3	36
112	On the electromagnetic fields induced by oceanic internal waves. Journal of Geophysical Research, 1984, 89, 10519-10528.	3.3	33
113	Reply by the author to W. L. Anderson. Geophysics, 1984, 49, 1813-1813.	1.4	0
114	Numerical integration of related Hankel transforms by quadrature and continued fraction expansion. Geophysics, 1983, 48, 1671-1686.	1.4	170
115	On the theory of electromagnetic induction in the Earth by ocean currents. Journal of Geophysical Research, 1983, 88, 3531-3542.	3.3	47
116	The Walvis Ridge transect, Deep Sea Drilling Project Leg 74: The geologic evolution of an oceanic plateau in the south Atlantic Ocean. Bulletin of the Geological Society of America, 1983, 94, 907.	1.6	23
117	Electromagnetic induction by ocean currents and the conductivity of the oceanic lithosphere.. Journal of Geomagnetism and Geoelectricity, 1983, 35, 491-499.	0.8	10
118	Controlled electromagnetic sources for measuring electrical conductivity beneath the oceans: 1. Forward problem and model study. Journal of Geophysical Research, 1982, 87, 5327-5338.	3.3	262
119	Detrital remanent magnetization: Viscosity theory of the lockâ€in zone. Journal of Geophysical Research, 1982, 87, 7126-7130.	3.3	35
120	Electromagnetic induction fields in the deep ocean north-east of Hawaii: implications for mantle conductivity and source fields. Geophysical Journal International, 1981, 66, 379-406.	1.0	28
121	Lithospheric structure of the Walvis Ridge from Rayleigh wave dispersion. Journal of Geophysical Research, 1979, 84, 6840-6848.	3.3	28