Alexander R Cruden

List of Publications by Year
in descending order

95	4,862	94433 37	98798 67
papers	citations	h-index	g-index

103	103	103	3401
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Granite magma formation, transport and emplacement in the Earth's crust. Nature, 2000, 408, 669-673.	27.8	714
2	Strain and vorticity patterns in ideally ductile transpression zones. Journal of Structural Geology, 1994, 16, 447-466.	2.3	322
3	On the emplacement of tabular granites. Journal of the Geological Society, 1998, 155, 853-862.	2.1	224
4	The mineral system approach applied to magmatic Niâ€“Cuâ€“PGE sulphide deposits. Ore Geology Reviews, 2016, 76, 296-316.	2.7	202
5	Flow and Fabric Development during the Diapiric Rise of Magma. Journal of Geology, 1990, 98, 681-698.	1.4	156
6	Magma Plumbing Systems: A Geophysical Perspective. Journal of Petrology, 2018, 59, 1217-1251.	2.8	134
7	Magmatic fabric acquisition mechanisms in a syenite: Results of a combined anisotropy of magnetic susceptibility and image analysis study. Journal of Geophysical Research, 1998, 103, 5067-5089.	3.3	132
8	Rapid, semi-automatic fracture and contact mapping for point clouds, images and geophysical data. Solid Earth, 2017, 8, 1241-1253.	2.8	129
9	Kinematics of a major fan-like structure in the eastern part of the Sveconorwegian orogen, Baltic Shield, south-central Sweden. Precambrian Research, 1994, 70, 67-91.	2.7	120
10	Mapping folds and fractures in basement and cover rocks using UAV photogrammetry, Cape Liptrap and Cape Paterson, Victoria, Australia. Journal of Structural Geology, 2016, 85, 168-187.	2.3	107
11	Finite deformation in and around a fluid sphere moving through a viscous medium: implications for diapiric ascent. Tectonophysics, 1988, 149, 17-34.	2.2	102
12	Multistage emplacement of the Mount Givens pluton, central Sierra Nevada batholith, California. Bulletin of the Geological Society of America, 2000, 112, 119-135.	3.3	97
13	Deformation around a rising diapir modeled by creeping flow past a sphere. Tectonics, 1988, 7, 1091-1101.	2.8	80
14	Fracture-controlled magma conduits in an obliquely convergent continental magmatic arc. Geology, 1995, 23, 941.	4.4	78
15	Left-lateral transpressive deformation and its tectonic implications, Sveconorwegian orogen, Baltic Shield, southwestern Sweden. Precambrian Research, 1996, 79, 261-279.	2.7	77
16	The mechanics of sill inception, propagation and growth: Experimental evidence for rapid reduction in magmatic overpressure. Earth and Planetary Science Letters, 2015, 421, 117-128.	4.4	74
17	Modeling the growth of laccoliths and large mafic sills: Role of magma body forces. Journal of Geophysical Research, 2011, 116, .	3.3	72
18	Three-dimensional dynamic laboratory models of subduction with an overriding plate and variable interplate rheology. Geophysical Journal International, 2013, 195, 47-66.	2.4	71

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19	Structure, magnetic fabric and emplacement of the Archean Lebel Stock, SW Abitibi Greenstone Belt. Journal of Structural Geology, 1994, 16, 677-691.	2.3	69
20	Magnetic fabric evidence for conduit-fed emplacement of a tabular intrusion: Dinkey Creek Pluton, central Sierra Nevada batholith, California. Journal of Geophysical Research, 1999, 104, 10511-10530.	3.3	65
21	Review of drones, photogrammetry and emerging sensor technology for the study of dykes: Best practises and future potential. Journal of Volcanology and Geothermal Research, 2019, 373, 148-166.	2.1	64
22	Regional dome evolution and its control on ore-grade distribution: Insights from 3D implicit modelling of the Navachab gold deposit, Namibia. Ore Geology Reviews, 2015, 69, 268-284.	2.7	61
23	Analogue benchmarks of shortening and extension experiments. Geological Society Special Publication, 2006, 253, 1-27.	1.3	59
24	Benchmarking analogue models of brittle thrust wedges. Journal of Structural Geology, 2016, 92, 116-139.	2.3	58
25	Coupled crust-mantle dynamics and intraplate tectonics: Two-dimensional numerical and three-dimensional analogue modeling. Geochemistry, Geophysics, Geosystems, 2004, 5, n/a-n/a.	2.5	54
26	Emplacement of rapakivi granite and syenite by floor depression and roof uplift in the Palaeoproterozoic Ketilidian orogen, South Greenland. Journal of the Geological Society, 1999, 156, 15-24.	2.1	52
27	How weak is the subduction zone interface?. Geophysical Research Letters, 2015, 42, 2664-2673.	4.0	52
28	Diapiric basal entrainment of mafic into felsic magma. Earth and Planetary Science Letters, 1995, 131, 321-340.	4.4	49
29	Power-law viscous materials for analogue experiments: New data on the rheology of highly-filled silicone polymers. Journal of Structural Geology, 2008, 30, 341-353.	2.3	48
30	Interactions between propagating rotational rifts and linear rheological heterogeneities: Insights from threeâ€dimensional laboratory experiments. Tectonics, 2017, 36, 420-443.	2.8	48
31	Surface topography and internal strain variation in wide hot orogens from three-dimensional analogue and two-dimensional numerical vice models. Geological Society Special Publication, 2006, 253, 79-104.	1.3	47
32	Fault-assisted vertical pluton growth: Coastal Cordillera, north Chilean Andes. Journal of the Geological Society, 2009, 166, 295-301.	2.1	45
33	Timing and kinematics of post-Timiskaming deformation within the Larder Lake - Cadillac deformation zone, southwest Abitibi greenstone belt, Ontario, Canada. Canadian Journal of Earth Sciences, 1999, 36, 627-647.	1.3	44
34	Impact of regional mantle flow on subducting plate geometry and interplate stress: insights from physical modelling. Geophysical Journal International, 2008, 174, 719-732.	2.4	44
35	The analogue shear zone: From rheology to associated geometry. Journal of Structural Geology, 2008, 30, 177-193.	2.3	40
36	Unzipping continents and the birth of microcontinents. Geology, 2018, 46, 451-454.	4.4	40

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37	Seismic evidence for preservation of the Archean Uchi graniteâ€“greenstone belt by crustal-scale extension. Tectonophysics, 2004, 388, 135-143.	2.2	39
38	Vein development during folding in the upper brittle crust: The case of tourmaline-rich veins of eastern Elba Island, northern Tyrrhenian Sea, Italy. Journal of Structural Geology, 2011, 33, 1509-1522.	2.3	38
39	Slab rollback rate and trench curvature controlled by arc deformation. Geology, 2013, 41, 911-914.	4.4	37
40	Rheology of pig skin gelatine: Defining the elastic domain and its thermal and mechanical properties for geological analogue experiment applications. Tectonophysics, 2016, 683, 86-97.	2.2	37
41	Controls on sill and dyke-sill hybrid geometry and propagation in the crust: The role of fracture toughness. Tectonophysics, 2017, 698, 109-120.	2.2	37
42	Magnetic fabric and microstructural evidence for a tectono-thermal overprint of the early Proterozoic Murray pluton, central Ontario, Canada. Journal of Structural Geology, 1996, 18, 1005-1016.	2.3	36
43	Formation of the Abitibi greenstone belt by arc-trench migration. Geology, 1995, 23, 471.	4.4	35
44	Fracture control of late Archean pluton emplacement in the northern Slave Province, Canada. Journal of Structural Geology, 1998, 20, 1145-1154.	2.3	32
45	Thermalâ€mechanical modeling of saltâ€based mountain belts with preâ€existing basement faults: Application to the Zagros fold and thrust belt, southwest Iran. Tectonics, 2013, 32, 1212-1226.	2.8	32
46	Interactions between propagating rifts and linear weaknesses in the lower crust. , 2019, 15, 1617-1640.		32
47	Rheology of petrolatumâ€“paraffin oil mixtures: Applications to analogue modelling of geological processes. Journal of Structural Geology, 2014, 63, 1-11.	2.3	31
48	The Zuccale Fault, Elba Island, Italy: A new perspective from fault architecture. Tectonics, 2015, 34, 1195-1218.	2.8	31
49	A seismic-reflection-based regional cross section of the southern Abitibi greenstone belt. Canadian Journal of Earth Sciences, 1995, 32, 135-148.	1.3	30
50	Wall-Rock Structural Controls on the Genesis of the Voisey's Bay Intrusion and its Ni-Cu-Co Magmatic Sulfide Mineralization (Labrador, Canada). Economic Geology, 2015, 110, 691-711.	3.8	30
51	Insights from geodynamical modeling on possible fates of continental mantle lithosphere: collision, removal, and overturnThis article is one of a series of papers published in this Special Issue on the theme Lithoprobe â€" parameters, processes, and the evolution of a continent.. Canadian Journal of Earth Sciences, 2010, 47, 541-563.	1.3	29
52	The causes of sinuous crustal-scale deformation patterns in hot orogens: Evidence from scaled analogue experiments and the southern Central Andes. Journal of Structural Geology, 2012, 37, 65-74.	2.3	29
53	Analytical predictions for a natural spacing within dyke swarms. Earth and Planetary Science Letters, 2013, 375, 270-279.	4.4	29
54	Geometric Scaling of Tabular Igneous Intrusions: Implications for Emplacement and Growth. Advances in Volcanology, 2017, , 11-38.	1.1	28

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55	Foreâ€arc deformation at the transition between collision and subduction: Insights from 3â€Ð thermomechanical laboratory experiments. Tectonics, 2012, 31, .	2.8	25
56	Sensitivity analysis of numerical scaled models of fold-and-thrust belts to granular material cohesion variation and comparison with analog experiments. Tectonophysics, 2012, 526-529, 196-206.	2.2	24
57	Slab breakoff: Insights from 3D thermo-mechanical analogue modellingÂexperiments. Tectonophysics, 2017, 694, 197-213.	2.2	23
58	Timing and mechanisms controlling evaporite diapirism on Ellef Ringnes Island, Canadian Arctic Archipelago. Basin Research, 2011, 23, 478-498.	2.7	22
59	Sulfide Liquid Entrainment by Silicate Magma: Implications for the Dynamics and Petrogenesis of Magmatic Sulfide Deposits. Journal of Petrology, 2015, 56, 2473-2490.	2.8	21
60	UÂ–Pb ages constraining structural development of an Archean terrane boundary in the Lake of the Woods area, western Superior Province, Canada. Canadian Journal of Earth Sciences, 2006, 43, 967-993.	1.3	19
61	Extraction of high-resolution structural orientations from digital data: A Bayesian approach. Journal of Structural Geology, 2019, 122, 106-115.	2.3	19
62	Role of kilometer-scale weak circular heterogeneities on upper crustal deformation patterns: Evidence from scaled analogue modeling and the Sudbury Basin, Canada. Earth and Planetary Science Letters, 2010, 297, 587-597.	4.4	17
63	Evidence for dyke-parallel shear during syn-intrusion fracturing. Earth and Planetary Science Letters, 2019, 507, 119-130.	4.4	17
64	Scale matters: The influence of structural inheritance on fracture patterns. Journal of Structural Geology, 2020, 130, 103896.	2.3	16
65	Trench-parallel shortening in the forearc caused by subduction along a seaward-concave plate boundary: Insights from analogue modelling experiments. Tectonophysics, 2014, 611, 192-203.	2.2	14
66	Density and visco-elasticity of Natrosol 250 HH solutions: Determining their suitability for experimental tectonics. Journal of Structural Geology, 2016, 86, 153-165.	2.3	13
67	Ingress of magmatic Ni-Cu sulphide liquid into surrounding brittle rocks: Physical & structural controls. Ore Geology Reviews, 2017, 90, 439-445.	2.7	13
68	The influence of basement faults on local extension directions: Insights from potential field geophysics and field observations. Basin Research, 2019, 31, 782-807.	2.7	13
69	Tiny particles building huge ore deposits â€“ Particle-based crystallisation in banded iron formation-hosted iron ore deposits (Hamersley Province, Australia). Ore Geology Reviews, 2019, 104, 160-174.	2.7	13
70	3â€Ð Analog Modeling Constraints on Rifting in the Afar Region. Tectonics, 2020, 39, e2020TC006339.	2.8	13
71	Inheritance of Penetrative Basement Anisotropies by Extensionâ€Oblique Faults: Insights From Analogue Experiments. Tectonics, 2021, 40, e2020TC006596.	2.8	13
72	The role of deformation in the formation of banded iron formation-hosted high-grade iron ore deposits, Hamersley Province (Australia). Precambrian Research, 2017, 296, 62-77.	2.7	12

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73	Laponite gels - visco-elasto-plastic analogues for geological laboratory modelling. Tectonophysics, 2021, 805, 228773.	2.2	11
74	Topography of the crustÂ–mantle interface under the Western Superior craton from gravity data. Canadian Journal of Earth Sciences, 2003, 40, 1307-1320.	1.3	10
75	Crustal structure and implications for the tectonic evolution of the Archean Western Superior craton from forward and inverse gravity modeling. Tectonics, 2006, 25, n/a-n/a.	2.8	10
76	Compaction control of topography and fault network structure along strike-slip faults in sedimentary basins. Journal of Structural Geology, 2010, 32, 184-191.	2.3	10
77	Dyke apertures record stress accumulation during sustained volcanism. Scientific Reports, 2020, 10, 17335.	3.3	10
78	Structure and geophysics of the GÃ¥sborn granite, central Sweden: an example of fracture-fed asymmetric pluton emplacement. Geological Society Special Publication, 1999, 168, 141-160.	1.3	9
79	Reactivation of Magma Pathways: Insights From Field Observations, Geochronology, Geomechanical Tests, and Numerical Models. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021477.	3.4	8
80	Integrated potential-field and seismic constraints on the structure of the Archean metasedimentary English River belt, Western Superior craton, Canada. Precambrian Research, 2006, 144, 261-277.	2.7	7
81	Structural evolution of auriferous deformation zones at the Campbell mine, Red Lake greenstone belt, Superior Province of Canada. Precambrian Research, 1997, 84, 83-103.	2.7	6
82	Discussion on emplacement of rapakivi granite and syenite by floor depression and roof uplift in the Palaeoproterozoic Ketilidian orogen, South Greenland. Journal of the Geological Society, 2000, 157, 701-704.	2.1	6
83	On the emplacement of the Voisey's Bay intrusion (Labrador, Canada). Bulletin of the Geological Society of America, 0, , B31240.1.	3.3	6
84	Deformation-induced silica redistribution in banded iron formation, Hamersley Province, Australia. Lithos, 2016, 266-267, 87-97.	1.4	6
85	The building blocks of igneous sheet intrusions: Insights from 3-D seismic reflection data. , 2022, 18, 156-182.		6
86	Buckling of orogens: Insights from analogue modelling. Journal of Structural Geology, 2019, 125, 213-217.	2.3	5
87	Structure of the Archean English River subprovince: implications for the tectonic evolution of the western Superior Province, Canada. Canadian Journal of Earth Sciences, 2006, 43, 947-966.	1.3	4
88	Emplacement of a felsic dyke swarm during progressive heterogeneous deformation, Eastern Elba Dyke Complex (Island of Elba, Italy). Journal of Structural Geology, 2022, 159, 104600.	2.3	4
89	Unique occurrence of a folded in-vent dike: New insights on magma-water mixing. Geology, 2018, 46, 379-382.	4.4	3
90	Ore shoots in folded and fractured rocks â€“ Insights from 3D modelling of the Fosterville gold deposit (Victoria, Australia). Ore Geology Reviews, 2020, 118, 103272.	2.7	3

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91	Kinematics of a major fan-like structure in the eastern part of the Sveconorwegian orogen, Baltic Shield, south-central Swedenâ€”reply. Precambrian Research, 1996, 78, 293-295.	2.7	2
92	Interactions between low-angle normal faults and plutonism in the upper crust: Insights from the island of Elba, Italy: Comment. Bulletin of the Geological Society of America, 2012, 124, 1913-1915.	3.3	1
93	Timing and characteristics of fractures along the Eastern Otway coastline, Great Ocean Road, Victoria. Australian Journal of Earth Sciences, 2019, 66, 1007-1025.	1.0	1
94	Geometric Scaling of Tabular Igneous Intrusions: Implications for and. Advances in Volcanology, 2018, , 11-38.	1.1	1
95	Fracture-controlled magma conduits in an obliquely convergent continental magmatic arc: Comment and Reply. Geology, 1996, 24, 669.	4.4	0