

Basil Tikoff

List of Publications by Year in descending order

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118
papers

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citations

66343

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119
docs citations

119
times ranked

3599
citing authors

#	ARTICLE	IF	CITATIONS
1	Deformation in Western Guatemala Associated With the NAFCAs (North America–Central American) Tectonics, 2022, 41, .	2.8	3
2	Explicit Instruction of Scientific Uncertainty in an Undergraduate Geoscience Field-Based Course. Science and Education, 2022, 31, 1541-1566.	2.7	1
3	Multiple, Coeval Silicic Magma Storage Domains Beneath the Laguna Del Maule Volcanic Field Inferred From Gravity Investigations. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020850.	3.4	8
4	Internal structure of the Paleoproterozoic Mt Edgar dome, Pilbara Craton, Western Australia. Precambrian Research, 2021, 358, 106163.	2.7	8
5	Transpressional deformation in the lithospheric mantle beneath the North Anatolian Fault Zone. Tectonophysics, 2021, 815, 228989.	2.2	3
6	Bringing sedimentology and stratigraphy into the StraboSpot data management system. , 2021, 17, 1914-1927.		2
7	An integrated structural and GPS study of the Jalpatagua fault, southeastern Guatemala. , 2021, 17, 201-225.		3
8	Strain Localization at Constant Strain Rate and Changing Stress Conditions: Implications for Plate Boundary Processes in the Upper Mantle. Minerals (Basel, Switzerland), 2021, 11, 1351.	2.0	4
9	Magnetic Cr-rich Spinel in Serpentinized Ultramafic Complexes. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020443.	3.4	5
10	Active Normal Faulting, Diking, and Doming Above the Rapidly Inflating Laguna del Maule Volcanic Field, Chile, Imaged With CHIRP, Magnetic, and Focal Mechanism Data. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB019329.	3.4	12
11	Stress variations in space and time within the mantle section of an oceanic transform zone: Evidence for the seismic cycle. Geology, 2020, 48, 569-573.	4.4	10
12	The utility of statistical analysis in structural geology. Journal of Structural Geology, 2019, 125, 64-73.	2.3	11
13	Collaboration, cyberinfrastructure, and cognitive science: The role of databases and dataguides in 21st century structural geology. Journal of Structural Geology, 2019, 125, 48-54.	2.3	9
14	StraboSpot data system for structural geology. , 2019, 15, 533-547.		21
15	GPS constraints on deformation in northern Central America from 1999 to 2017, Part 2: Block rotations and fault slip rates, fault locking and distributed deformation. Geophysical Journal International, 2019, 218, 729-754.	2.4	18
16	Big data in microstructure analysis: Building a universal orientation system for thin sections. Journal of Structural Geology, 2019, 125, 226-234.	2.3	5
17	Interpreting Granitic Fabrics in Terms of Rhyolitic Melt Segregation, Accumulation, and Escape Via Tectonic Filter Pressing in the Huemul Pluton, Chile. Journal of Geophysical Research: Solid Earth, 2018, 123, 8548-8567.	3.4	18
18	Geomorphic expression of rapid Holocene silicic magma reservoir growth beneath Laguna del Maule, Chile. Science Advances, 2018, 4, eaat1513.	10.3	38

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19	Introduction: EarthScope IDOR project (deformation and magmatic modification of a steep) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tj	1.4	11
20	Cooling and exhumation of the southern Idaho batholith. <i>Lithosphere</i> , 2017, 9, 299-314.	1.4	16
21	Tectonic evolution of the Syringa embayment in the central North American Cordilleran accretionary boundary. <i>Lithosphere</i> , 2017, 9, 184-204.	1.4	20
22	Timing and deformation conditions of the western Idaho shear zone, West Mountain, west-central Idaho. <i>Lithosphere</i> , 2017, 9, 157-183.	1.4	32
23	Kinematic and vorticity analyses of the western Idaho shear zone, USA. <i>Lithosphere</i> , 2017, 9, 223-234.	1.4	30
24	The Role of Geoscience Education Research in the Consilience between Science of the Mind and Science of the Natural World. <i>Journal of Geoscience Education</i> , 2017, 65, 393-398.	1.4	7
25	Promoting Sketching in Introductory Geoscience Courses: CogSketch Geoscience Worksheets. <i>Topics in Cognitive Science</i> , 2017, 9, 943-969.	1.9	7
26	The Spatial Thinking Workbook: A Research-Validated Spatial Skills Curriculum for Geology Majors. <i>Journal of Geoscience Education</i> , 2017, 65, 423-434.	1.4	30
27	Constraints on the rheology of the lower crust in a strike-slip plate boundary: evidence from the San Quint�n xenoliths, Baja California, Mexico. <i>Solid Earth</i> , 2017, 8, 1211-1239.	2.8	14
28	The Petrological and Geochemical Evolution of Early Forearc Mantle Lithosphere: an Example from the Red Hills Ultramafic Massif, New Zealand. <i>Journal of Petrology</i> , 2016, 57, 751-776.	2.8	19
29	Neotectonic deformation within an extensional stepover in El Salvador magmatic arc, Central America: Implication for the interaction of arc magmatism and deformation. <i>Tectonophysics</i> , 2016, 693, 327-339.	2.2	21
30	The Future of Field Geology, Open Data Sharing and CyberTechnology in Earth Science. <i>The Sedimentary Record</i> , 2016, 14, 4-10.	0.6	9
31	Determining vorticity axes from grain-scale dispersion of crystallographic orientations. <i>Geology</i> , 2015, 43, 803-806.	4.4	41
32	Mantle strength of the San Andreas fault system and the role of mantle-crust feedbacks. <i>Geology</i> , 2015, 43, 891-894.	4.4	18
33	We need to talk: Facilitating communication between field-based geoscience and cyberinfrastructure communities. <i>GSA Today</i> , 2015, , 34-35.	2.0	8
34	Evaluating Geoscience Students' Spatial Thinking Skills in a Multi-Institutional Classroom Study. <i>Journal of Geoscience Education</i> , 2014, 62, 146-154.	1.4	79
35	Hells Canyon to the Bitterroot front: A transect from the accretionary margin eastward across the Idaho batholith. , 2014, , 1-50.		3
36	Drawing on Experience: How Domain Knowledge Is Reflected in Sketches of Scientific Structures and Processes. <i>Research in Science Education</i> , 2014, 44, 859-883.	2.3	42

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37	Preexisting fractures and the formation of an iconic American landscape: Tuolumne Meadows, Yosemite National Park, USA. <i>GSA Today</i> , 2014, 24, 4-10.	2.0	13
38	Dynamics of a large, restless, rhyolitic magma system at Laguna del Maule, southern Andes, Chile. <i>GSA Today</i> , 2014, , 4-10.	2.0	63
39	Structural geology practice and learning, from the perspective of cognitive science. <i>Journal of Structural Geology</i> , 2013, 54, 72-84.	2.3	63
40	Twisting space: are rigid and non-rigid mental transformations separate spatial skills?. <i>Cognitive Processing</i> , 2013, 14, 163-173.	1.4	68
41	Strain localization associated with channelized melt migration in upper mantle lithosphere: Insights from the Twin Sisters ultramafic complex, Washington, USA. <i>Journal of Structural Geology</i> , 2013, 50, 133-147.	2.3	20
42	Probing for Proterozoic and Archean crust in the northern U.S. Cordillera with inherited zircon from the Idaho batholith. <i>Bulletin of the Geological Society of America</i> , 2013, 125, 73-88.	3.3	62
43	A perspective on the emergence of modern structural geology: Celebrating the feedbacks between historical-based and process-based approaches. , 2013, , .		10
44	The evolving nature of collaboration in the geological sciences. , 2013, , .		3
45	Geometric scale invariance, genesis, and self-organization of polygonal fracture networks in granitic rocks. <i>Journal of Structural Geology</i> , 2012, 42, 34-48.	2.3	13
46	Anatomy of a 10 km scale sheath fold, Mount Hay ridge, Arunta Region, central Australia: The structural record of deep crustal flow. <i>Tectonics</i> , 2011, 30, .	2.8	16
47	Structural geology of the subprovince boundaries in the Archean Superior Province of northern Minnesota and adjacent Ontario. , 2011, , 203-241.		3
48	Multiscale magmatic cyclicality, duration of pluton construction, and the paradoxical relationship between tectonism and plutonism in continental arcs. <i>Tectonophysics</i> , 2011, 500, 20-33.	2.2	203
49	Fabric development in the mantle section of a paleotransform fault and its effect on ophiolite obduction, New Caledonia. <i>Lithosphere</i> , 2011, 3, 221-244.	1.4	26
50	Isotopic Evolution of the Idaho Batholith and Challis Intrusive Province, Northern US Cordillera. <i>Journal of Petrology</i> , 2011, 52, 2397-2429.	2.8	133
51	Commentary: Analogical Thinking in Geoscience Education. <i>Journal of Geoscience Education</i> , 2010, 58, 2-13.	1.4	57
52	The Role of Pyroxenites in Formation of Shear Instabilities in the Mantle: Evidence from an Ultramafic Ultramylonite, Twin Sisters Massif, Washington. <i>Journal of Petrology</i> , 2010, 51, 55-80.	2.8	54
53	Fabric development in cm-scale shear zones in ultramafic rocks, Red Hills, New Zealand. <i>Tectonophysics</i> , 2010, 489, 55-75.	2.2	24
54	Emplacement and assembly of shallow intrusions from multiple magma pulses, Henry Mountains, Utah. , 2010, , .		9

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55	Field-based constraints on finite strain and rheology of the lithospheric mantle, Twin Sisters, Washington. <i>Lithosphere</i> , 2010, 2, 418-422.	1.4	15
56	Strain analysis and rheology contrasts in polymictic conglomerates: An example from the Seine metaconglomerates, Superior Province, Canada. <i>Journal of Structural Geology</i> , 2009, 31, 1365-1376.	2.3	17
57	Emplacement and assembly of shallow intrusions from multiple magma pulses, Henry Mountains, Utah. <i>Earth and Environmental Science Transactions of the Royal Society of Edinburgh</i> , 2009, 100, 117-132.	0.3	57
58	A granulite-facies normal shear zone exposed in the Arunta inlier of central Australia: Implications for deep-crustal deformation during oblique divergence. , 2009, , .		3
59	A tectonic transect through the Salmon River suture zone along the Salmon River Canyon in the Riggins region of west-central Idaho. , 2009, , .		6
60	Emplacement of multiple magma sheets and wall rock deformation: Trachyte Mesa intrusion, Henry Mountains, Utah. <i>Journal of Structural Geology</i> , 2008, 30, 491-512.	2.3	113
61	Fabric superposition in upper mantle peridotite, Red Hills, New Zealand. <i>Journal of Structural Geology</i> , 2008, 30, 1412-1428.	2.3	27
62	Continuation of the San Andreas fault system into the upper mantle: Evidence from spinel peridotite xenoliths in the Coyote Lake basalt, central California. <i>Tectonophysics</i> , 2007, 429, 1-20.	2.2	41
63	Constraints on deformation path from finite strain gradients. <i>Journal of Structural Geology</i> , 2007, 29, 256-272.	2.3	16
64	A kinematic model for the Rinconada fault system in central California based on structural analysis of en echelon folds and paleomagnetism. <i>Journal of Structural Geology</i> , 2007, 29, 961-982.	2.3	48
65	Field Forum Report - Tectonic Significance of Vertical Boundaries in the Cordillera. <i>GSA Today</i> , 2007, 17, 27.	2.0	8
66	An integrated geologic framework for EarthScope's US array. <i>Eos</i> , 2006, 87, 221.	0.1	2
67	Mechanisms and duration of non-tectonically assisted magma emplacement in the upper crust: The Black Mesa pluton, Henry Mountains, Utah. <i>Tectonophysics</i> , 2006, 428, 1-31.	2.2	159
68	Thirty-Five-Year Creep Rates for the Creeping Segment of the San Andreas Fault and the Effects of the 2004 Parkfield Earthquake: Constraints from Alignment Arrays, Continuous Global Positioning System, and Creepmeters. <i>Bulletin of the Seismological Society of America</i> , 2006, 96, S250-S268.	2.3	128
69	Tectonic significance of vertical boundaries in the Cordillera. <i>GSA Today</i> , 2006, 16, 18.	2.0	1
70	Sheet-like emplacement of satellite laccoliths, sills, and bysmaliths of the Henry Mountains, Southern Utah. , 2005, , 283-309.		10
71	Quantifying simultaneous discrete and distributed deformation. <i>Journal of Structural Geology</i> , 2005, 27, 1168-1189.	2.3	13
72	Emplacement-related fabric and multiple sheets in the Maiden Creek sill, Henry Mountains, Utah, USA. <i>Journal of Structural Geology</i> , 2005, 27, 1426-1444.	2.3	69

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73	New slip rate estimates for the creeping segment of the San Andreas fault, California. <i>Geology</i> , 2005, 33, 205.	4.4	56
74	Missing Idaho arc: Transpressional modification of the $^{87}\text{Sr}/^{86}\text{Sr}$ transition on the western edge of the Idaho batholith. <i>Geology</i> , 2005, 33, 469.	4.4	66
75	Geologic and geophysical investigation of two fine-grained granites, Sierra Nevada Batholith, California: Evidence for structural controls on emplacement and volcanism. <i>Bulletin of the Geological Society of America</i> , 2005, 117, 1256.	3.3	36
76	Fabric studies within the Cascade Lake shear zone, Sierra Nevada, California. <i>Tectonophysics</i> , 2005, 400, 209-226.	2.2	31
77	Mantle-driven deformation of orogenic zones and clutch tectonics. <i>Geological Society Special Publication</i> , 2004, 227, 41-64.	1.3	18
78	Vertical coupling and decoupling in the lithosphere. <i>Geological Society Special Publication</i> , 2004, 227, 1-7.	1.3	12
79	Constraints on kinematics and strain from feldspar porphyroclast populations. <i>Geological Society Special Publication</i> , 2004, 224, 265-285.	1.3	13
80	Vertical-axis rotation of rigid crustal blocks driven by mantle flow. <i>Geological Society Special Publication</i> , 2004, 227, 83-100.	1.3	4
81	Geometry of the folded Otago penplain surface beneath Ida valley, Central Otago, New Zealand, from gravity observations. <i>New Zealand Journal of Geology, and Geophysics</i> , 2003, 46, 449-456.	1.8	1
82	Ductile Instabilities and Structural Heterogeneity in the Lower Continental Crust. , 2003, , 1-36.		3
83	Physical models of transtensional folding. <i>Geology</i> , 2002, 30, 523.	4.4	35
84	Soft Plate and Impact Tectonics. <i>Eos</i> , 2002, 83, 595.	0.1	0
85	Matchsticks on parade: Vertical axis rotation in oblique divergence. <i>Journal of Geophysical Research</i> , 2002, 107, ETC 9-1-ETC 9-11.	3.3	5
86	Competency contrast, kinematics, and the development of foliations and lineations in the crust. <i>Journal of Structural Geology</i> , 2002, 24, 1065-1085.	2.3	128
87	Relationship between crustal finite strain and seismic anisotropy in the mantle, Pacific-Australia plate boundary zone, South Island, New Zealand. <i>Geophysical Journal International</i> , 2002, 151, 106-116.	2.4	48
88	A new method for the separation of paramagnetic and ferromagnetic susceptibility anisotropy using low field and high field methods. <i>Geophysical Journal International</i> , 2002, 151, 345-359.	2.4	44
89	The 3-D geometry of the Linglong granitic complex from 2-D gravity forward modeling, Shandong Province, east China. <i>Geophysics</i> , 2000, 65, 421-425.	2.6	7
90	Displacement control of geologic structures. <i>Journal of Structural Geology</i> , 1999, 21, 959-967.	2.3	61

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91	Translation and the resolution of the pluton space problem. <i>Journal of Structural Geology</i> , 1999, 21, 1109-1117.	2.3	49
92	Fabric stability in oblique convergence and divergence. <i>Journal of Structural Geology</i> , 1999, 21, 969-974.	2.3	85
93	Three-dimensional reference deformations and strain facies. <i>Journal of Structural Geology</i> , 1999, 21, 1497-1512.	2.3	111
94	Upper mantle tectonics: three-dimensional deformation, olivine crystallographic fabrics and seismic properties. <i>Earth and Planetary Science Letters</i> , 1999, 168, 173-186.	4.4	210
95	Modification of the regional stress field by magma intrusion and formation of tabular granitic plutons. <i>Tectonophysics</i> , 1999, 302, 203-224.	2.2	135
96	Strain partitioning during partial melting and crystallizing felsic magmas. <i>Tectonophysics</i> , 1999, 312, 117-132.	2.2	149
97	Physical experiments of transpressional folding. <i>Journal of Structural Geology</i> , 1998, 20, 661-672.	2.3	89
98	Forward modeling of non-steady-state deformations and the $\hat{\epsilon}$ -minimum strain path TM : Reply. <i>Journal of Structural Geology</i> , 1998, 20, 979-981.	2.3	17
99	Strike-slip partitioned transpression of the San Andreas fault system: a lithospheric-scale approach. <i>Geological Society Special Publication</i> , 1998, 135, 143-158.	1.3	73
100	Transpressional kinematics and magmatic arcs. <i>Geological Society Special Publication</i> , 1998, 135, 327-340.	1.3	81
101	Extended models of transpression and transtension, and application to tectonic settings. <i>Geological Society Special Publication</i> , 1998, 135, 15-33.	1.3	154
102	Transpressional shearing and strike-slip partitioning in the Late Cretaceous Sierra Nevada magmatic arc, California. <i>Tectonics</i> , 1997, 16, 442-459.	2.8	140
103	Development of Magmatic to Solid-State Fabrics during Syntectonic Emplacement of the Mono Creek Granite, Sierra Nevada Batholith. <i>Petrology and Structural Geology</i> , 1997, , 231-252.	0.5	43
104	Stretching lineations in transpressional shear zones: an example from the Sierra Nevada Batholith, California. <i>Journal of Structural Geology</i> , 1997, 19, 29-39.	2.3	294
105	Forward modeling of non-steady-state deformations and the $\hat{\epsilon}$ -minimum strain path TM . <i>Journal of Structural Geology</i> , 1997, 19, 987-996.	2.3	74
106	Hit-and-run collision model for the Laramide orogeny, western United States. <i>Geology</i> , 1996, 24, 968.	4.4	65
107	Visualization of deformation: computer applications for teaching. <i>Computer Methods in the Geosciences</i> , 1996, 15, 75-96.	0.0	2
108	The limitations of three-dimensional kinematic vorticity analysis. <i>Journal of Structural Geology</i> , 1995, 17, 1771-1784.	2.3	187

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109	Oblique plate motion and continental tectonics. <i>Geology</i> , 1995, 23, 447.	4.4	306
110	Strain modeling of displacement-field partitioning in transpressional orogens. <i>Journal of Structural Geology</i> , 1994, 16, 1575-1588.	2.3	488
111	Strain and fabric analyses based on porphyroclast interaction. <i>Journal of Structural Geology</i> , 1994, 16, 477-491.	2.3	81
112	The deformation matrix for simultaneous simple shearing, pure shearing and volume change, and its application to transpression-transension tectonics. <i>Journal of Structural Geology</i> , 1993, 15, 413-422.	2.3	424
113	Simultaneous pure and simple shear: the unifying deformation matrix. <i>Tectonophysics</i> , 1993, 217, 267-283.	2.2	199
114	Crustal-scale, en echelon "P-shear" tensional bridges: A possible solution to the batholithic room problem. <i>Geology</i> , 1992, 20, 927.	4.4	212
115	Training Spatial Skills in Geosciences. , 0, , 7-23.		10
116	Linking Cognitive Science and Disciplinary Geoscience Practice. , 0, , 219-237.		10
117	Greenstoneâ€š shear sense at the margin of the Mt Edgar dome, East Pilbara Terrane: Implications for dome and keel formation in the early Earth. <i>Tectonics</i> , 0, , .	2.8	0
118	Scaffolding geology content and spatial skills with playdough modeling in the field and classroom. <i>Journal of Geoscience Education</i> , 0, , 1-15.	1.4	1