Lukas P Baumgartner

List of Publications by Year
in descending order

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77 papers	2,909 citations	218592 26 h-index	175177 52 g-index
79 all docs	79 docs citations	79 times ranked	2254 citing authors

#	Article	IF	Citations
1	Burial rates during prograde metamorphism of an ultra-high-pressure terrane: an example from Lago di Cignana, western Alps, Italy. Earth and Planetary Science Letters, 2003, 215, 57-72.	1.8	291
2	Rapid exhumation of the Zermatt-Saas ophiolite deduced from high-precision SmNd and RbSr geochronology. Earth and Planetary Science Letters, 1999, 171, 425-438.	1.8	199
3	Diffusion-limited REE uptake by eclogite garnets and its consequences for Luâ€“Hf and Smâ€“Nd geochronology. Contributions To Mineralogy and Petrology, 2006, 152, 703-720.	1.2	194
4	Intercrystalline stable isotope diffusion: a fast grain boundary model. Contributions To Mineralogy and Petrology, 1992, 112, 543-557.	1.2	183
5	A model for coupled fluid-flow and mixed-volatile mineral reactions with applications to regional metamorphism. Contributions To Mineralogy and Petrology, 1991, 106, 273-285.	1.2	143
6	A new look at stable isotope thermometry. Geochimica Et Cosmochimica Acta, 1993, 57, 2571-2583.	1.6	133
7	Time resolved construction of a bimodal laccolith (Torres del Paine, Patagonia). Earth and Planetary Science Letters, 2012, 325-326, 85-92.	1.8	116
8	A least-squares approach to mass transport calculations using the isocon method. Economic Geology, 1995, 90, 1261-1270.	1.8	96
9	Partial Melting and Assimilation of Dolomitic Xenoliths by Mafic Magma: the Ioko-Dovyren Intrusion (North Baikal Region, Russia). Journal of Petrology, 2002, 43, 2049-2074.	1.1	90
10	7. Stable Isotope Transport and Contact Metamorphic Fluid Flow. , 2001, , 415-468.		81
11	Two-Stage, Extreme Albitization of A-type Granites from Rajasthan, NW India. Journal of Petrology, 2012, 53, 919-948.	1.1	81
12	Coupling of oceanic and continental crust during Eocene eclogite-facies metamorphism: evidence from the Monte Rosa nappe, western Alps. Contributions To Mineralogy and Petrology, 2006, 153, 139-157.	1.2	70
13	The duration of prograde garnet crystallization in the UHP eclogites at Lago di Cignana, Italy. Earth and Planetary Science Letters, 2009, 287, 402-411.	1.8	51
14	One- and two-dimensional models of fluid flow and stable isotope exchange at an outcrop in the Adamello contact aureole, Southern Alps, Italy. American Mineralogist, 1995, 80, 1004-1019.	0.9	51
15	Experimental determination of melt interconnectivity and electrical conductivity in the upper mantle. Earth and Planetary Science Letters, 2017, 463, 286-297.	1.8	44
16	Metastable prograde mineral reactions in contact aureoles. Geology, 2004, 32, 821.	2.0	40
17	Rbâ€“Sr ages from phengite inclusions in garnets from high pressure rocks of the Swiss Western Alps. Earth and Planetary Science Letters, 2014, 395, 205-216.	1.8	39
18	Petrologic and stable isotopic studies of a fossil hydrothermal system in ultramafic environment (Chenaillet ophicalcites, Western Alps, France): Processes of carbonate cementation. Lithos, 2017, 294-295, 319-338.	0.6	39

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19	Heterogeneous melt and hypersaline liquid inclusions in shallow porphyry type mineralization as markers of the magmatic-hydrothermal transition (Cerro de Pasco district, Peru). Chemical Geology, 2016, 447, 93-116.	1.4	38
20	Evidence for cavity-dwelling microbial life in 3.22 Ga tidal deposits. Geology, 2016, 44, 51-54.	2.0	38
21	Convective fluid flow through heterogeneous country rocks during contact metamorphism. Journal of Geophysical Research, 1998, 103, 23983-24003.	3.3	35
22	Stochastic permeability models of fluid flow during contact metamorphism. Geology, 1995, 23, 945.	2.0	31
23	High-resolution 3D analyses of the shape and internal constituents of small volcanic ash particles: The contribution of SEM micro-computed tomography (SEM micro-CT). Journal of Volcanology and Geothermal Research, 2015, 293, 1-12.	0.8	31
24	Quartz Reference Materials for Oxygen Isotope Analysis by <scp>SIMS</scp>. Geostandards and Geoanalytical Research, 2017, 41, 69-75.	1.7	30
25	Estimation of a maximum Lu diffusion rate in a natural eclogite garnet. Swiss Journal of Geosciences, 2008, 101, 637-650.	0.5	28
26	Nucleation-dominated crystallization of forsterite in the Ubehebe Peak contact aureole, California. Geology, 1997, 25, 823.	2.0	27
27	Low melting temperature for calcite at 1000 bars on the join CaCO₃â€H₂O â€“ some geological implications. Terra Nova, 2015, 27, 364-369.	0.9	27
28	Mineralized breccia clasts: a window into hidden porphyry-type mineralization underlying the epithermal polymetallic deposit of Cerro de Pasco (Peru). Mineralium Deposita, 2018, 53, 919-946.	1.7	26
29	SIMS chlorine isotope analyses in melt inclusions from arc settings. Chemical Geology, 2017, 449, 112-122.	1.4	25
30	Weekly to monthly time scale of melt inclusion entrapment prior to eruption recorded by phosphorus distribution in olivine from mid-ocean ridges. Geology, 2017, 45, 1059-1062.	2.0	25
31	The oxygen isotope anatomy of a slowly cooled metamorphic rock. American Mineralogist, 1995, 80, 757-764.	0.9	23
32	Solubility of the assemblage albite+K-feldspar+andalusite+quartz in supercritical aqueous chloride solutions at 650 Â°C and 2 kbar. Chemical Geology, 2003, 200, 377-393.	1.4	23
33	Short magmatic residence times of quartz phenocrysts in Patagonian rhyolites associated with Gondwana breakup. Geology, 2016, 44, 67-70.	2.0	23
34	Measurement of Volume Change and Mass Transfer During Serpentinization: Insights From the Oman Drilling Project. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB018877.	1.4	23
35	Fluid mixing as primary trigger for cassiterite deposition: Evidence from in situ Î´18O-Î´11B analysis of tourmaline from the world-class San Rafael tin (-copper) deposit, Peru. Earth and Planetary Science Letters, 2021, 563, 116889.	1.8	23
36	Experimental study on the solubility of the â€œmodelâ€•pelite mineral assemblage albite + K-feldspar + andalusite + quartz in supercritical chloride-rich aqueous solutions at 0.2 GPa and 600Â°C. Geochimica Et Cosmochimica Acta, 2001, 65, 4493-4507.	1.6	22

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37	Source and fractionation controls on subduction-related plutons and dike swarms in southern Patagonia (Torres del Paine area) and the low Nb/Ta of upper crustal igneous rocks. Contributions To Mineralogy and Petrology, 2018, 173, 38.	1.2	22
38	The role of the antigoriteâ€‰+â€‰brucite to olivine reaction in subducted serpentinites (Zermatt,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.5	22
39	Provenance of Jurassic Tethyan sediments in the HP/UHP Zermatt-Saas ophiolite, western Alps. Bulletin of the Geological Society of America, 2005, 117, 530.	1.6	21
40	Experimental determination of anorthite solubility and calcium speciation in supercritical chloride solutions at 2 kb from 400 to 600Â°C. Geochimica Et Cosmochimica Acta, 1995, 59, 1539-1549.	1.6	20
41	Modelling mid-crustal migmatite terrains as feeder zones for granite plutons: the competing dynamics of melt transfer by bulk versus porous flow. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2004, 95, 49-58.	0.3	20
42	An observational and thermodynamic investigation of carbonate partial melting. Earth and Planetary Science Letters, 2015, 409, 147-156.	1.8	20
43	Forward modeling of the effects of mixed volatile reaction, volume diffusion, and formation of submicroscopic exsolution lamellae on calcite-dolomite thermometry. American Mineralogist, 2008, 93, 1245-1259.	0.9	16
44	Oxygen isotope speedometry in granulite facies garnet recording fluid/meltâ€“rock interaction (SÃ¸r) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.6	16
45	Stacking fault-enhanced argon diffusion in naturally deformed muscovite. Geological Society Special Publication, 2003, 220, 249-260.	0.8	15
46	Growth mechanism of snowball garnets from the Lukmanier Pass area (Central Alps, Switzerland): a combined ?CT/EPMA/EBSD study. Terra Nova, 2007, 19, 240-244.	0.9	15
47	Constraining magmatic fluxes through thermal modelling of contact metamorphism. Geological Society Special Publication, 2015, 422, 41-56.	0.8	15
48	Cosmicâ€ray exposure ages of chondrules. Meteoritics and Planetary Science, 2016, 51, 1256-1267.	0.7	14
49	Evaluation of potential monazite reference materials for oxygen isotope analyses by SIMS and laser assisted fluorination. Chemical Geology, 2017, 450, 199-209.	1.4	13
50	Multi fluid-flow record during episodic mode I opening: A microstructural and SIMS study (Cotiella) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.8	13
51	Origin of Monte Rosa whiteschist from in-situ tourmaline and quartz oxygen isotope analysis by SIMS using new tourmaline reference materials. American Mineralogist, 2019, 104, 1503-1520.	0.9	13
52	Tracing of Cl input into the sub-arc mantle through the combined analysis of B, O and Cl isotopes in melt inclusions. Earth and Planetary Science Letters, 2019, 507, 30-39.	1.8	13
53	A Method for Secondary Ion Mass Spectrometry Measurement of Lithium Isotopes in Garnet: The Utility of Glass Reference Materials. Geostandards and Geoanalytical Research, 2021, 45, 477-499.	1.7	13
54	Timing and thermal evolution of fold-and-thrust belt formation in the Ultima Esperanza District, 51Â°S Chile: Constraints from K-Ar dating and illite characterization. Bulletin of the Geological Society of America, 2018, 130, 975-998.	1.6	12

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55	Reactive fluid infiltration along fractures: Textural observations coupled to in-situ isotopic analyses. Earth and Planetary Science Letters, 2019, 519, 264-273.	1.8	11
56	Porosity and Permeability of Carbonate Rocks During Contact Metamorphism. , 1997, , 83-98.		11
57	Oxygen isotope disequilibrium during serpentinite dehydration. Terra Nova, 2019, 31, 94-101.	0.9	10
58	New U-Pb zircon data and constraints on the age and mode of migmatization in the Aar massif, Central Alps. European Journal of Mineralogy, 2000, 12, 1245-1260.	0.4	10
59	Metamorphic transformation rate over large spatial and temporal scales constrained by geophysical data and coupled modelling. Journal of Metamorphic Geology, 2021, 39, 1131-1143.	1.6	9
60	Fast and pervasive diagenetic isotope exchange in foraminifera tests is species-dependent. Nature Communications, 2022, 13, 113.	5.8	9
61	Silica-undersaturated reaction zones at a crustâ€“mantle interface in the Highland Complex, Sri Lanka: Mass transfer and melt infiltration during high-temperature metasomatism. Lithos, 2017, 284-285, 237-256.	0.6	8
62	Development and Reâ€Evaluation of Tourmaline Reference Materials for In Situ Measurement of Boron Î´ Values by Secondary Ion Mass Spectrometry. Geostandards and Geoanalytical Research, 2020, 44, 593-615.	1.7	8
63	Tracking fluid mixing in epithermal deposits â€“ Insights from in-situ Î´18O and trace element composition of hydrothermal quartz from the giant Cerro de Pasco polymetallic deposit, Peru. Chemical Geology, 2021, 576, 120277.	1.4	8
64	Whiteschist genesis through metasomatism and metamorphism in the Monte Rosa nappe (Western) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.2	7
65	Peak Alpine metamorphic conditions from staurolite‐bearing metapelites in the Monte Rosa nappe (Central European Alps) and geodynamic implications. Journal of Metamorphic Geology, 2021, 39, 897-917.	1.6	7
66	Modelling changes in stable isotope compositions of minerals during net transfer reactions in a contact aureole: Wollastonite growth at the northern Hunter Mountain Batholith (Death Valley) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	1.4	6
67	Protracted storage of <scp>CR</scp> chondrules in a region of the disk transparent to galactic cosmic rays. Meteoritics and Planetary Science, 2017, 52, 2166-2177.	0.7	5
68	The zircon Hf isotope archive of rapidly changing mantle sources in the south Patagonian retro-arc. Bulletin of the Geological Society of America, 2019, 131, 587-608.	1.6	5
69	Carbonatitic dykes during Pangaea transtension (Pelagonian Zone, Greece). Lithos, 2018, 302-303, 329-340.	0.6	4
70	Accurate Measurements of H₂O, F and Cl Contents in Biotite Using Secondary Ion Mass Spectrometry. Geostandards and Geoanalytical Research, 2018, 42, 523-537.	1.7	4
71	Grain scale processes recorded by oxygen isotopes in olivine-hosted melt inclusions from two MORB samples. Chemical Geology, 2019, 511, 11-20.	1.4	4
72	Mineral Dissolution and Precipitation Under Stress: Model Formulation and Application to Metamorphic Reactions. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009633.	1.0	4

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73	Alpine peak pressure and tectono-metamorphic history of the Monte Rosa nappe: evidence from the cirque du VÃ©raz, upper Ayas valley, Italy. Swiss Journal of Geosciences, 2021, 114, 20.	0.5	2
74	Modelling mid-crustal migmatite terrains as feeder zones for granite plutons: the competing dynamics of melt transfer by bulk versus porous flow. , 2004, , .		1
75	Interplay between fluid circulation and Alpine metamorphism in the Monte Rosa whiteschist from white mica and quartz in situ oxygen isotope analysis by SIMS. American Mineralogist, 2022, 107, 860-872.	0.9	1
76	Limited channelized fluid infiltration in the Torres del Paine contact aureole. American Mineralogist, 2021, 106, 1453-1469.	0.9	1
77	Reply to: Comment on â€œSolubility of the Assemblage Albite+K-Feldspar+Andalusite+Quartz in Supercritical Aqueous Chloride Solutions at 650 Â°C and 2 ƙbarâ€•by D.J. Wesolowski. Chemical Geology, 2004, 211, 179-180.	1.4	0