

Youxue Zhang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

105
papers

5,466
citations

44
h-index

72
g-index

111
ext. papers

5,979
ext. citations

6.6
avg, IF

5.93
L-index

#	Paper	IF	Citations
105	Diffusive Fractionation of K isotopes in molten basalts. <i>Earth and Planetary Science Letters</i> , 2022 , 581, 117405	5.3	0
104	Diffusion in Melts and Magmas. <i>Reviews in Mineralogy and Geochemistry</i> , 2022 , 87, 283-337	7.1	2
103	Rapid reduction of basaltic glasses in piston-cylinder experiments: a XANES study. <i>Contributions To Mineralogy and Petrology</i> , 2021 , 176, 1	3.5	0
102	Multicomponent diffusion in a basaltic melt: Temperature dependence. <i>Chemical Geology</i> , 2020 , 549, 119700	4.2	3
101	Depletion ages and factors of MORB mantle sources. <i>Earth and Planetary Science Letters</i> , 2020 , 530, 115926	3.6	3
100	Magma Pressure-Temperature-Time Paths During Mafic Explosive Eruptions. <i>Frontiers in Earth Science</i> , 2020 , 8,	3.5	6
99	H ₂ O and Other Volatiles in the Moon, 50 Years and on. <i>ACS Earth and Space Chemistry</i> , 2020 , 4, 1480-1499	3.2	2
98	A melt inclusion study on volatile abundances in the lunar mantle. <i>Geochimica Et Cosmochimica Acta</i> , 2019 , 249, 17-41	5.5	23
97	Kinetics of Quartz Dissolution in Natural Silicate Melts and Dependence of SiO ₂ Diffusivity on Melt Composition. <i>ACS Earth and Space Chemistry</i> , 2019 , 3, 599-616	3.2	4
96	Multicomponent diffusion in basaltic melts at 1350 °C. <i>Geochimica Et Cosmochimica Acta</i> , 2018 , 228, 190-204	3.94	17
95	Impact-melt hygrometer for Mars: The case of shergottite Elephant Moraine (EETA) 79001. <i>Earth and Planetary Science Letters</i> , 2018 , 490, 206-215	5.3	14
94	Seconds after impact: Insights into the thermal history of impact ejecta from diffusion between lechatelierite and host glass in tektites and experiments. <i>Geochimica Et Cosmochimica Acta</i> , 2018 , 241, 69-94	5.5	15
93	Cooling rates of lunar orange glass beads. <i>Earth and Planetary Science Letters</i> , 2018 , 503, 88-94	5.3	13
92	A heterogeneous lunar interior for hydrogen isotopes as revealed by the lunar highlands samples. <i>Earth and Planetary Science Letters</i> , 2017 , 473, 14-23	5.3	23
91	Cu and Fe diffusion in rhyolitic melts during chalcocite dissolution—Implications for porphyry ore deposits and tektites. <i>American Mineralogist</i> , 2017 , 102, 1287-1301	2.9	14
90	Volatile loss during homogenization of lunar melt inclusions. <i>Earth and Planetary Science Letters</i> , 2017 , 478, 214-224	5.3	16
89	Cassiterite dissolution and Sn diffusion in silicate melts of variable water content. <i>Chemical Geology</i> , 2016 , 441, 162-176	4.2	8

88	Multicomponent diffusion in silicate melts: SiO ₂ -TiO ₂ -Al ₂ O ₃ -MgO-CaO-Na ₂ O-K ₂ O System. <i>Geochimica Et Cosmochimica Acta</i> , 2016 , 195, 126-141	5.5	21
87	Quantification of CO ₂ concentration in apatite. <i>American Mineralogist</i> , 2016 , 101, 2443-2451	2.9	3
86	Zircon saturation and Zr diffusion in rhyolitic melts, and zircon growth geospeedometer. <i>American Mineralogist</i> , 2016 , 101, 1252-1267	2.9	21
85	Rutile solubility in NaF-NaCl-KCl-bearing aqueous fluids at 0.5-0.79 GPa and 250-500 °C. <i>Geochimica Et Cosmochimica Acta</i> , 2016 , 177, 170-181	5.5	36
84	Kinetics of anorthite dissolution in basaltic melt. <i>Geochimica Et Cosmochimica Acta</i> , 2016 , 179, 257-274	5.5	19
83	Cu diffusion in a basaltic melt. <i>American Mineralogist</i> , 2016 , 101, 1474-1482	2.9	17
82	Toward a quantitative model for the formation of gravitational magmatic sulfide deposits. <i>Chemical Geology</i> , 2015 , 391, 56-73	4.2	19
81	Electron probe microanalysis and microscopy: Principles and applications in characterization of mineral inclusions in chromite from diamond deposit. <i>Ore Geology Reviews</i> , 2015 , 65, 733-748	3.2	13
80	Water, fluorine, and sulfur concentrations in the lunar mantle. <i>Earth and Planetary Science Letters</i> , 2015 , 427, 37-46	5.3	66
79	Chemical zonation in olivine-hosted melt inclusions. <i>Contributions To Mineralogy and Petrology</i> , 2014 , 168, 1	3.5	33
78	Degassing History of Earth 2014 , 37-69		7
77	Quantification of the elemental incompatibility sequence, and composition of the Superchondritic Mantle. <i>Chemical Geology</i> , 2014 , 369, 12-21	4.2	7
76	Kinetics and dynamics of mass-transfer-controlled mineral and bubble dissolution or growth: a review. <i>European Journal of Mineralogy</i> , 2013 , 25, 255-266	2.2	11
75	Water diffusion in potassium-rich phonolitic and trachytic melts. <i>Chemical Geology</i> , 2013 , 346, 149-161	4.2	23
74	Hydroxyl and molecular H ₂ O diffusivity in a haploandesitic melt. <i>Geochimica Et Cosmochimica Acta</i> , 2013 , 103, 36-48	5.5	24
73	Water in lunar anorthosites and evidence for a wet early Moon. <i>Nature Geoscience</i> , 2013 , 6, 177-180	18.3	125
72	Direct measurement of hydroxyl in the lunar regolith and the origin of lunar surface water. <i>Nature Geoscience</i> , 2012 , 5, 779-782	18.3	87
71	Calibration for IR measurements of OH in apatite. <i>American Mineralogist</i> , 2011 , 96, 1392-1397	2.9	11

70	2. Diffusion in Minerals and Melts: Theoretical Background 2010 , 5-60		3
69	8. Diffusion Data in Silicate Melts 2010 , 311-408		11
68	4. Analytical Methods in Diffusion Studies 2010 , 107-170		
67	5. Diffusion of H, C, and O Components in Silicate Melts 2010 , 171-226		8
66	Mechanism of instantaneous coal outbursts. <i>Geology</i> , 2009 , 37, 915-918	5	52
65	H ₂ O diffusion in peralkaline to peraluminous rhyolitic melts. <i>Contributions To Mineralogy and Petrology</i> , 2009 , 157, 765-780	3.5	25
64	Water diffusion in Mount Changbai peralkaline rhyolitic melt. <i>Contributions To Mineralogy and Petrology</i> , 2009 , 158, 471-484	3.5	14
63	Water speciation and diffusion in haploandesitic melts at 743873 K and 100MPa. <i>Geochimica Et Cosmochimica Acta</i> , 2009 , 73, 3630-3641	5.5	28
62	Water diffusion in dacitic melt. <i>Geochimica Et Cosmochimica Acta</i> , 2009 , 73, 3642-3655	5.5	36
61	Pressure dependence of viscosity of rhyolitic melts. <i>Geochimica Et Cosmochimica Acta</i> , 2009 , 73, 3680-3693	5.5	42
60	Determination of diffusion coefficients of hydrogen in fused silica between 296 and 523K by Raman spectroscopy and application of fused silica capillaries in studying redox reactions. <i>Geochimica Et Cosmochimica Acta</i> , 2009 , 73, 5435-5443	5.5	32
59	Clinopyroxene dissolution in basaltic melt. <i>Geochimica Et Cosmochimica Acta</i> , 2009 , 73, 5730-5747	5.5	43
58	Pressure dependence of the speciation of dissolved water in rhyolitic melts. <i>Geochimica Et Cosmochimica Acta</i> , 2008 , 72, 3229-3240	5.5	50
57	Olivine dissolution in basaltic melt. <i>Geochimica Et Cosmochimica Acta</i> , 2008 , 72, 4756-4777	5.5	65
56	H ₂ O diffusion models in rhyolitic melt with new high pressure data. <i>Chemical Geology</i> , 2008 , 250, 68-78	4.2	80
55	Silicate melt properties and volcanic eruptions. <i>Reviews of Geophysics</i> , 2007 , 45,	23.1	128
54	Geochemistry of Cenozoic basalts and mantle xenoliths in Northeast China. <i>Lithos</i> , 2007 , 96, 108-126	2.9	176
53	Toward a general viscosity equation for natural anhydrous and hydrous silicate melts. <i>Geochimica Et Cosmochimica Acta</i> , 2007 , 71, 403-416	5.5	220

52	A long-duration experiment on hydrous species geospeedometer and hydrous melt viscosity. <i>Geochimica Et Cosmochimica Acta</i> , 2007 , 71, 5226-5232	5.5	9
51	DYNAMICS OF LAKE ERUPTIONS AND POSSIBLE OCEAN ERUPTIONS. <i>Annual Review of Earth and Planetary Sciences</i> , 2006 , 34, 293-324	15.3	36
50	Response to Comment on Fate of Rising CO ₂ Droplets in Seawater. <i>Environmental Science & Technology</i> , 2006 , 40, 3655-3656	10.3	
49	Fate of rising CO ₂ droplets in seawater. <i>Environmental Science & Technology</i> , 2005 , 39, 7719-24	10.3	18
48	Fe-Mg order-disorder in orthopyroxenes. <i>Geochimica Et Cosmochimica Acta</i> , 2005 , 69, 5777-5788	5.5	37
47	Global tectonic and climatic control of mean elevation of continents, and Phanerozoic sea level change. <i>Earth and Planetary Science Letters</i> , 2005 , 237, 524-531	5.3	21
46	Solubility of H ₂ O in rhyolitic melts at low pressures and a new empirical model for mixed H ₂ O-CO ₂ solubility in rhyolitic melts. <i>Journal of Volcanology and Geothermal Research</i> , 2005 , 143, 219-235	2.8	200
45	H ₂ O diffusion in dacitic melts. <i>Chemical Geology</i> , 2004 , 209, 327-340	4.2	48
44	H ₂ O diffusion in dacitic and andesitic melts. <i>Geochimica Et Cosmochimica Acta</i> , 2004 , 68, 5139-5150	5.5	74
43	The speciation of dissolved H ₂ O in dacitic melt. <i>American Mineralogist</i> , 2004 , 89, 277-284	2.9	23
42	Viscosity of hydrous rhyolitic melts inferred from kinetic experiments, and a new viscosity model. <i>American Mineralogist</i> , 2003 , 88, 1741-1752	2.9	69
41	Rutile/TiO ₂ phase equilibria. <i>Contributions To Mineralogy and Petrology</i> , 2003 , 145, 199-204	3.5	73
40	Cooling rates of Plinian-fall and pyroclastic-flow deposits in the Bishop Tuff: inferences from water speciation in quartz-hosted glass inclusions. <i>Bulletin of Volcanology</i> , 2003 , 65, 105-123	2.4	47
39	Methane escape from gas hydrate systems in marine environment, and methane-driven oceanic eruptions. <i>Geophysical Research Letters</i> , 2003 , 30,	4.9	31
38	Kinetics of convective crystal dissolution and melting, with applications to methane hydrate dissolution and dissociation in seawater. <i>Earth and Planetary Science Letters</i> , 2003 , 213, 133-148	5.3	61
37	The age and accretion of the earth. <i>Earth-Science Reviews</i> , 2002 , 59, 235-263	10.2	22
36	Quench rates in air, water, and liquid nitrogen, and inference of temperature in volcanic eruption columns. <i>Earth and Planetary Science Letters</i> , 2002 , 200, 315-330	5.3	44
35	Ar diffusion in hydrous silicic melts: implications for volatile diffusion mechanisms and fractionation. <i>Earth and Planetary Science Letters</i> , 2001 , 192, 363-376	5.3	55

34	Carmichaelite, a new hydroxyl-bearing titanate from Garnet Ridge, Arizona. <i>American Mineralogist</i> , 2000 , 85, 792-800	2.9	7
33	Direct observation of immiscibility in pyrope-almandine-grossular garnet. <i>American Mineralogist</i> , 2000 , 85, 41-46	2.9	12
32	H ₂ O diffusion in rhyolitic melts and glasses. <i>Chemical Geology</i> , 2000 , 169, 243-262	4.2	204
31	Variable Ti-content and grain size of titanomagnetite as a function of cooling rate in very young MORB. <i>Earth and Planetary Science Letters</i> , 2000 , 179, 9-20	5.3	77
30	Bubble growth in rhyolitic melt. <i>Earth and Planetary Science Letters</i> , 2000 , 181, 251-264	5.3	64
29	Hydrous species geospeedometer in rhyolite: improved calibration and application. <i>Geochimica Et Cosmochimica Acta</i> , 2000 , 64, 3347-3355	5.5	65
28	A criterion for the fragmentation of bubbly magma based on brittle failure theory. <i>Nature</i> , 1999 , 402, 648-650	50.4	164
27	Mineral inclusions in pyrope crystals from Garnet Ridge, Arizona, USA: implications for processes in the upper mantle. <i>Contributions To Mineralogy and Petrology</i> , 1999 , 135, 164-178	3.5	58
26	Exsolution enthalpy of water from silicate liquids. <i>Journal of Volcanology and Geothermal Research</i> , 1999 , 88, 201-207	2.8	17
25	An oxygen barometer for rutile-ilmenite assemblages: oxidation state of metasomatic agents in the mantle. <i>Earth and Planetary Science Letters</i> , 1999 , 166, 127-137	5.3	49
24	Reconciliation of experimental results on H ₂ O speciation in rhyolitic glass using in-situ and quenching techniques. <i>Earth and Planetary Science Letters</i> , 1999 , 173, 343-349	5.3	47
23	The speciation of dissolved water in rhyolitic melt. <i>Geochimica Et Cosmochimica Acta</i> , 1999 , 63, 3567-3578	5.5	81
22	H ₂ O in rhyolitic glasses and melts: Measurement, speciation, solubility, and diffusion. <i>Reviews of Geophysics</i> , 1999 , 37, 493-516	23.1	179
21	Experimental simulations of gas-driven eruptions: kinetics of bubble growth and effect of geometry. <i>Bulletin of Volcanology</i> , 1998 , 59, 281-290	2.4	26
20	The young age of Earth. <i>Geochimica Et Cosmochimica Acta</i> , 1998 , 62, 3185-3189	5.5	27
19	Mechanical and phase equilibria in inclusion-host systems. <i>Earth and Planetary Science Letters</i> , 1998 , 157, 209-222	5.3	151
18	New calibration of infrared measurement of dissolved water in rhyolitic glasses. <i>Geochimica Et Cosmochimica Acta</i> , 1997 , 61, 3089-3100	5.5	128
17	Dynamics of gas-driven eruptions: Experimental simulations using CO ₂ -H ₂ O-polymer system. <i>Journal of Geophysical Research</i> , 1997 , 102, 3077-3096		47

16	Kinetics of the reaction $\text{H}_2\text{O} + \text{O} \rightarrow 2\text{OH}$ in rhyolitic glasses upon cooling: Geospeedometry and comparison with glass transition. <i>Geochimica Et Cosmochimica Acta</i> , 1997 , 61, 2167-2173	5.5	87
15	Diffusion of the hydrous component in pyrope. <i>American Mineralogist</i> , 1996 , 81, 706-718	2.9	71
14	Dynamics of CO ₂ -driven lake eruptions. <i>Nature</i> , 1996 , 379, 57-59	50.4	50
13	Atomic radii of noble gas elements in condensed phases. <i>American Mineralogist</i> , 1995 , 80, 670-675	2.9	87
12	Kinetics of the reaction $\text{H}_2\text{O} + \text{O} = 2\text{OH}$ in rhyolitic and albitic glasses; preliminary results. <i>American Mineralogist</i> , 1995 , 80, 593-612	2.9	76
11	Reaction kinetics, geospeedometry, and relaxation theory. <i>Earth and Planetary Science Letters</i> , 1994 , 122, 373-391	5.3	43
10	Comparison of element and isotope diffusion of K and Ca in multicomponent silicate melts. <i>Earth and Planetary Science Letters</i> , 1994 , 123, 155-166	5.3	42
9	Distribution and evolution of carbon and nitrogen in Earth. <i>Earth and Planetary Science Letters</i> , 1993 , 117, 331-345	5.3	169
8	A modified effective binary diffusion model. <i>Journal of Geophysical Research</i> , 1993 , 98, 11901-11920		45
7	Experimental dehydration of natural obsidian and estimation of DH ₂ O at low water contents. <i>Geochimica Et Cosmochimica Acta</i> , 1992 , 56, 2931-5	5.5	30
6	Water diffusion in a basaltic melt. <i>Nature</i> , 1991 , 351, 306-9	50.4	152
5	Diffusion of a multi-species component and its role in oxygen and water transport in silicates. <i>Earth and Planetary Science Letters</i> , 1991 , 103, 228-40	5.3	114
4	Diffusion of water in rhyolitic glasses. <i>Geochimica Et Cosmochimica Acta</i> , 1991 , 55, 441-56	5.5	259
3	Diffusive crystal dissolution. <i>Contributions To Mineralogy and Petrology</i> , 1989 , 102, 492-513	3.5	182
2	Noble gas constraints on the evolution of the Earth's atmosphere. <i>Journal of Geophysical Research</i> , 1989 , 94, 13719-13737		61
1	Chemical geodynamics of carbon and nitrogen. <i>Chemical Geology</i> , 1988 , 70, 43	4.2	2