Youxue Zhang

List of Publications by Citations

105	5,466	44	72
papers	citations	h-index	g-index

111	5,979	6.6	5.93
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
105	Diffusion of water in rhyolitic glasses. *Geochimica Et Cosmochimica Acta*, **1991**, 55, 441-56	5.5	259
104	Toward a general viscosity equation for natural anhydrous and hydrous silicate melts. *Geochimica Et Cosmochimica Acta*, **2007**, 71, 403-416	5.5	220
103	H2O diffusion in rhyolitic melts and glasses. *Chemical Geology*, **2000**, 169, 243-262	4.2	204
102	Solubility of H2O in rhyolitic melts at low pressures and a new empirical model for mixed H2O□CO2 solubility in rhyolitic melts. *Journal of Volcanology and Geothermal Research*, **2005**, 143, 219-235	2.8	200
101	Diffusive crystal dissolution. *Contributions To Mineralogy and Petrology*, **1989**, 102, 492-513	3.5	182
100	H2O in rhyolitic glasses and melts: Measurement, speciation, solubility, and diffusion. *Reviews of Geophysics*, **1999**, 37, 493-516	23.1	179
99	Geochemistry of Cenozoic basalts and mantle xenoliths in Northeast China. *Lithos*, **2007**, 96, 108-126	2.9	176
98	Distribution and evolution of carbon and nitrogen in Earth. *Earth and Planetary Science Letters*, **1993**, 117, 331-345	5.3	169
97	A criterion for the fragmentation of bubbly magma based on brittle failure theory. *Nature*, **1999**, 402, 648-650	50.4	164
96	Water diffusion in a basaltic melt. *Nature*, **1991**, 351, 306-9	50.4	152
95	Mechanical and phase equilibria in inclusion□host systems. *Earth and Planetary Science Letters*, **1998**, 157, 209-222	5.3	151
94	New calibration of infrared measurement of dissolved water in rhyolitic glasses. *Geochimica Et Cosmochimica Acta*, **1997**, 61, 3089-3100	5.5	128
93	Silicate melt properties and volcanic eruptions. *Reviews of Geophysics*, **2007**, 45,	23.1	128
92	Water in lunar anorthosites and evidence for a wet early Moon. *Nature Geoscience*, **2013**, 6, 177-180	18.3	125
91	Diffusion of a multi-species component and its role in oxygen and water transport in silicates. *Earth and Planetary Science Letters*, **1991**, 103, 228-40	5.3	114
90	Direct measurement of hydroxyl in the lunar regolith and the origin of lunar surface water. *Nature Geoscience*, **2012**, 5, 779-782	18.3	87
89	Kinetics of the reaction H2O + O -□ 2OH in rhyolitic glasses upon cooling: Geospeedometry and comparison with glass transition. *Geochimica Et Cosmochimica Acta*, **1997**, 61, 2167-2173	5.5	87

88	Atomic radii of noble gas elements in condensed phases. *American Mineralogist*, **1995**, 80, 670-675	2.9	87
87	The speciation of dissolved water in rhyolitic melt. *Geochimica Et Cosmochimica Acta*, **1999**, 63, 3567-3578	3.5	81
86	H2O diffusion models in rhyolitic melt with new high pressure data. *Chemical Geology*, **2008**, 250, 68-78	4.2	80
85	Variable Ti-content and grain size of titanomagnetite as a function of cooling rate in very young MORB. *Earth and Planetary Science Letters*, **2000**, 179, 9-20	5.3	77
84	Kinetics of the reaction H2O+O = 2OH in rhyolitic and albitic glasses; preliminary results. *American Mineralogist*, **1995**, 80, 593-612	2.9	76
83	H2O diffusion in dacitic and andesitic melts. *Geochimica Et Cosmochimica Acta*, **2004**, 68, 5139-5150	5.5	74
82	Rutile/TiO2II phase equilibria. *Contributions To Mineralogy and Petrology*, **2003**, 145, 199-204	3.5	73
81	Diffusion of the hydrous component in pyrope. *American Mineralogist*, **1996**, 81, 706-718	2.9	71
80	Viscosity of hydrous rhyolitic melts inferred from kinetic experiments, and a new viscosity model. *American Mineralogist*, **2003**, 88, 1741-1752	2.9	69
79	Water, fluorine, and sulfur concentrations in the lunar mantle. *Earth and Planetary Science Letters*, **2015**, 427, 37-46	5.3	66
78	Olivine dissolution in basaltic melt. *Geochimica Et Cosmochimica Acta*, **2008**, 72, 4756-4777	5.5	65
77	Hydrous species geospeedometer in rhyolite: improved calibration and application. *Geochimica Et Cosmochimica Acta*, **2000**, 64, 3347-3355	5.5	65
76	Bubble growth in rhyolitic melt. *Earth and Planetary Science Letters*, **2000**, 181, 251-264	5.3	64
75	Kinetics of convective crystal dissolution and melting, with applications to methane hydrate dissolution and dissociation in seawater. *Earth and Planetary Science Letters*, **2003**, 213, 133-148	5.3	61
74	Noble gas constraints on the evolution of the Earth's atmosphere. *Journal of Geophysical Research*, **1989**, 94, 13719-13737		61
73	Mineral inclusions in pyrope crystals from Garnet Ridge, Arizona, USA: implications for processes in the upper mantle. *Contributions To Mineralogy and Petrology*, **1999**, 135, 164-178	3.5	58
72	Ar diffusion in hydrous silicic melts: implications for volatile diffusion mechanisms and fractionation. *Earth and Planetary Science Letters*, **2001**, 192, 363-376	5.3	55
71	Mechanism of instantaneous coal outbursts. *Geology*, **2009**, 37, 915-918	5	52

70	Pressure dependence of the speciation of dissolved water in rhyolitic melts. *Geochimica Et Cosmochimica Acta*, **2008**, 72, 3229-3240	5.5	50
69	Dynamics of CO2-driven lake eruptions. *Nature*, **1996**, 379, 57-59	50.4	50
68	An oxygen barometer for rutile-ilmenite assemblages: oxidation state of metasomatic agents in the mantle. *Earth and Planetary Science Letters*, **1999**, 166, 127-137	5.3	49
67	H2O diffusion in dacitic melts. *Chemical Geology*, **2004**, 209, 327-340	4.2	48
66	Dynamics of gas-driven eruptions: Experimental simulations using CO2-H2O-polymer system. *Journal of Geophysical Research*, **1997**, 102, 3077-3096		47
65	Cooling rates of Plinian-fall and pyroclastic-flow deposits in the Bishop Tuff: inferences from water speciation in quartz-hosted glass inclusions. *Bulletin of Volcanology*, **2003**, 65, 105-123	2.4	47
64	Reconciliation of experimental results on H2O speciation in rhyolitic glass using in-situ and quenching techniques. *Earth and Planetary Science Letters*, **1999**, 173, 343-349	5.3	47
63	A modified effective binary diffusion model. *Journal of Geophysical Research*, **1993**, 98, 11901-11920		45
62	Quench rates in air, water, and liquid nitrogen, and inference of temperature in volcanic eruption columns. *Earth and Planetary Science Letters*, **2002**, 200, 315-330	5.3	44
61	Clinopyroxene dissolution in basaltic melt. *Geochimica Et Cosmochimica Acta*, **2009**, 73, 5730-5747	5.5	43
60	Reaction kinetics, geospeedometry, and relaxation theory. *Earth and Planetary Science Letters*, **1994**, 122, 373-391	5.3	43
59	Pressure dependence of viscosity of rhyolitic melts. *Geochimica Et Cosmochimica Acta*, **2009**, 73, 3680-3693	5.5	42
58	Comparison of element and isotope diffusion of K and Ca in multicomponent silicate melts. *Earth and Planetary Science Letters*, **1994**, 123, 155-166	5.3	42
57	Fe-Mg order-disorder in orthopyroxenes. *Geochimica Et Cosmochimica Acta*, **2005**, 69, 5777-5788	5.5	37
56	Rutile solubility in NaF-NaCl-KCl-bearing aqueous fluids at 0.5-2.79 GPa and 250-850 °C. *Geochimica Et Cosmochimica Acta*, **2016**, 177, 170-181	5.5	36
55	Water diffusion in dacitic melt. *Geochimica Et Cosmochimica Acta*, **2009**, 73, 3642-3655	5.5	36
54	DYNAMICS OF LAKE ERUPTIONS AND POSSIBLE OCEAN ERUPTIONS. *Annual Review of Earth and Planetary Sciences*, **2006**, 34, 293-324	15.3	36
53	Chemical zonation in olivine-hosted melt inclusions. *Contributions To Mineralogy and Petrology*, **2014**, 168, 1	3.5	33

52	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. *Geochimica Et Cosmochimica Acta*, **2009**, 73, 5435-5443	5.5	32
51	Methane escape from gas hydrate systems in marine environment, and methane-driven oceanic eruptions. *Geophysical Research Letters*, **2003**, 30,	4.9	31
50	Experimental dehydration of natural obsidian and estimation of DH2O at low water contents. *Geochimica Et Cosmochimica Acta*, **1992**, 56, 2931-5	5.5	30
49	Water speciation and diffusion in haploandesitic melts at 743873 K and 100MPa. *Geochimica Et Cosmochimica Acta*, **2009**, 73, 3630-3641	5.5	28
48	The young age of Earth. *Geochimica Et Cosmochimica Acta*, **1998**, 62, 3185-3189	5.5	27
47	Experimental simulations of gas-driven eruptions: kinetics of bubble growth and effect of geometry. *Bulletin of Volcanology*, **1998**, 59, 281-290	2.4	26
46	H2O diffusion in peralkaline to peraluminous rhyolitic melts. *Contributions To Mineralogy and Petrology*, **2009**, 157, 765-780	3.5	25
45	Hydroxyl and molecular H2O diffusivity in a haploandesitic melt. *Geochimica Et Cosmochimica Acta*, **2013**, 103, 36-48	5.5	24
44	A heterogeneous lunar interior for hydrogen isotopes as revealed by the lunar highlands samples. *Earth and Planetary Science Letters*, **2017**, 473, 14-23	5.3	23
43	A melt inclusion study on volatile abundances in the lunar mantle. *Geochimica Et Cosmochimica Acta* , **2019**, 249, 17-41	5.5	23
42	Water diffusion in potassium-rich phonolitic and trachytic melts. *Chemical Geology*, **2013**, 346, 149-161	4.2	23
41	The speciation of dissolved H2O in dacitic melt. *American Mineralogist*, **2004**, 89, 277-284	2.9	23
40	The age and accretion of the earth. *Earth-Science Reviews*, **2002**, 59, 235-263	10.2	22
39	Multicomponent diffusion in silicate melts: SiO2TiO2Al2O3MgOCaONa2OK2O System. *Geochimica Et Cosmochimica Acta*, **2016**, 195, 126-141	5.5	21
38	Zircon saturation and Zr diffusion in rhyolitic melts, and zircon growth geospeedometer. *American Mineralogist*, **2016**, 101, 1252-1267	2.9	21
37	Global tectonic and climatic control of mean elevation of continents, and Phanerozoic sea level change. *Earth and Planetary Science Letters*, **2005**, 237, 524-531	5.3	21
36	Toward a quantitative model for the formation of gravitational magmatic sulfide deposits. *Chemical Geology*, **2015**, 391, 56-73	4.2	19
35	Kinetics of anorthite dissolution in basaltic melt. *Geochimica Et Cosmochimica Acta*, **2016**, 179, 257-274	5.5	19

34	Fate of rising CO2 droplets in seawater. *Environmental Science & Technology*, **2005**, 39, 7719-24	10.3	18
33	Multicomponent diffusion in basaltic melts at 1350 °C. *Geochimica Et Cosmochimica Acta*, **2018**, 228, 190-204	5.5	17
32	Exsolution enthalpy of water from silicate liquids. *Journal of Volcanology and Geothermal Research*, **1999**, 88, 201-207	2.8	17
31	Cu diffusion in a basaltic melt. *American Mineralogist*, **2016**, 101, 1474-1482	2.9	17
30	Volatile loss during homogenization of lunar melt inclusions. *Earth and Planetary Science Letters*, **2017**, 478, 214-224	5.3	16
29	Seconds after impact: Insights into the thermal history of impact ejecta from diffusion between lechatelierite and host glass in tektites and experiments. *Geochimica Et Cosmochimica Acta*, **2018**, 241, 69-94	5.5	15
28	Cu and Fe diffusion in rhyolitic melts during chalcocite dissolution: Implications for porphyry ore deposits and tektites. *American Mineralogist*, **2017**, 102, 1287-1301	2.9	14
27	Impact-melt hygrometer for Mars: The case of shergottite Elephant Moraine (EETA) 79001. *Earth and Planetary Science Letters*, **2018**, 490, 206-215	5.3	14
26	Water diffusion in Mount Changbai peralkaline rhyolitic melt. *Contributions To Mineralogy and Petrology*, **2009**, 158, 471-484	3.5	14
25	Electron probe microanalysis and microscopy: Principles and applications in characterization of mineral inclusions in chromite from diamond deposit. *Ore Geology Reviews*, **2015**, 65, 733-748	3.2	13
24	Cooling rates of lunar orange glass beads. *Earth and Planetary Science Letters*, **2018**, 503, 88-94	5.3	13
23	Direct observation of immiscibility in pyrope-almandine-grossular garnet. *American Mineralogist*, **2000**, 85, 41-46	2.9	12
22	Kinetics and dynamics of mass-transfer-controlled mineral and bubble dissolution or growth: a review. *European Journal of Mineralogy*, **2013**, 25, 255-266	2.2	11
21	8. Diffusion Data in Silicate Melts **2010**, 311-408		11
20	Calibration for IR measurements of OH in apatite. *American Mineralogist*, **2011**, 96, 1392-1397	2.9	11
19	A long-duration experiment on hydrous species geospeedometer and hydrous melt viscosity. *Geochimica Et Cosmochimica Acta*, **2007**, 71, 5226-5232	5.5	9
18	Cassiterite dissolution and Sn diffusion in silicate melts of variable water content. *Chemical Geology* , **2016**, 441, 162-176	4.2	8
17	5. Diffusion of H, C, and O Components in Silicate Melts **2010**, 171-226		8

16	Degassing History of Earth **2014**, 37-69		7
15	Quantification of the elemental incompatibility sequence, and composition of the superchondritic mantle. *Chemical Geology*, **2014**, 369, 12-21	4.2	7
14	Carmichaelite, a new hydroxyl-bearing titanate from Garnet Ridge, Arizona. *American Mineralogist*, **2000**, 85, 792-800	2.9	7
13	Magma Pressure-Temperature-Time Paths During Mafic Explosive Eruptions. *Frontiers in Earth Science*, **2020**, 8,	3.5	6
12	Kinetics of Quartz Dissolution in Natural Silicate Melts and Dependence of SiO2 Diffusivity on Melt Composition. *ACS Earth and Space Chemistry*, **2019**, 3, 599-616	3.2	4
11	Multicomponent diffusion in a basaltic melt: Temperature dependence. *Chemical Geology*, **2020**, 549, 119700	4.2	3
10	Quantification of CO2 concentration in apatite. *American Mineralogist*, **2016**, 101, 2443-2451	2.9	3
9	2. Diffusion in Minerals and Melts: Theoretical Background **2010**, 5-60		3
8	Depletion ages and factors of MORB mantle sources. *Earth and Planetary Science Letters*, **2020**, 530, 115926	5.3	3
7	Chemical geodynamics of carbon and nitrogen. *Chemical Geology*, **1988**, 70, 43	4.2	2
6	H2O and Other Volatiles in the Moon, 50 Years and on. *ACS Earth and Space Chemistry*, **2020**, 4, 1480-1499	3.2	2
5	Diffusion in Melts and Magmas. *Reviews in Mineralogy and Geochemistry*, **2022**, 87, 283-337	7.1	2
4	Rapid reduction of basaltic glasses in piston-cylinder experiments: a XANES study. *Contributions To Mineralogy and Petrology*, **2021**, 176, 1	3.5	0
3	Diffusive fractionation of K isotopes in molten basalts. *Earth and Planetary Science Letters*, **2022**, 581, 117405	5.3	0
2	4. Analytical Methods in Diffusion Studies **2010**, 107-170		
1	Response to Comment on Rate of Rising CO2 Droplets in Seawater *Environmental Science & Technology*, **2006**, 40, 3655-3656	10.3	