

Max Wilke

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3300753/publications.pdf>

Version: 2024-02-01

82
papers

4,847
citations

136740

32
h-index

91712

69
g-index

86
all docs

86
docs citations

86
times ranked

5324
citing authors

#	ARTICLE	IF	CITATIONS
1	Oxidation state and coordination of Fe in minerals: An Fe K-edge XANES spectroscopic study. <i>American Mineralogist</i> , 2001, 86, 714-730.	0.9	934
2	Sulfur K-edge XANES analysis of natural and synthetic basaltic glasses: Implications for S speciation and S content as function of oxygen fugacity. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 5926-5938.	1.6	386
3	Size-controlled hydroxyapatite nanoparticles as self-organized organic-inorganic composite materials. <i>Biomaterials</i> , 2005, 26, 5414-5426.	5.7	373
4	High gold concentrations in sulphide-bearing magma under oxidizing conditions. <i>Nature Geoscience</i> , 2011, 4, 112-115.	5.4	177
5	The effect of water activity on the oxidation and structural state of Fe in a ferro-basaltic melt. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 5071-5085.	1.6	151
6	The dependence of the partitioning of iron and europium between plagioclase and hydrous tonalitic melt on oxygen fugacity. <i>Contributions To Mineralogy and Petrology</i> , 1999, 137, 102-114.	1.2	131
7	Microscopic structure of water at elevated pressures and temperatures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 6301-6306.	3.3	127
8	Water and the density of silicate glasses. <i>Contributions To Mineralogy and Petrology</i> , 2000, 138, 337-347.	1.2	117
9	Rutile solubility in albite-H ₂ O and Na ₂ Si ₃ O ₇ -H ₂ O at high temperatures and pressures by in-situ synchrotron radiation micro-XRF. <i>Earth and Planetary Science Letters</i> , 2008, 272, 730-737.	1.8	111
10	Zircon solubility and zirconium complexation in H ₂ O+Na ₂ O+SiO ₂ +Al ₂ O ₃ fluids at high pressure and temperature. <i>Earth and Planetary Science Letters</i> , 2012, 349-350, 15-25.	1.8	108
11	The origin of S ⁴⁺ detected in silicate glasses by XANES. <i>American Mineralogist</i> , 2008, 93, 235-240.	0.9	107
12	Speciation of Fe in silicate glasses and melts by in-situ XANES spectroscopy. <i>American Mineralogist</i> , 2007, 92, 44-56.	0.9	105
13	Determination of the iron oxidation state in basaltic glasses using XANES at the K-edge. <i>Chemical Geology</i> , 2004, 213, 71-87.	1.4	100
14	Sulfur degassing at Erta Ale (Ethiopia) and Masaya (Nicaragua) volcanoes: Implications for degassing processes and oxygen fugacities of basaltic systems. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 4076-4108.	1.0	100
15	Determination of the iron oxidation state in Earth materials using XANES pre-edge information. <i>Journal of Synchrotron Radiation</i> , 2001, 8, 952-954.	1.0	94
16	Oxidising agents in sub-arc mantle melts link slab devolatilisation and arc magmas. <i>Nature Communications</i> , 2018, 9, 3500.	5.8	91
17	Micro-XANES determination of ferric iron and its application in thermobarometry. <i>Lithos</i> , 2003, 70, 381-392.	0.6	75
18	The oxidation state of iron in silicic melt at 500 MPa water pressure. <i>Chemical Geology</i> , 2002, 189, 55-67.	1.4	74

#	ARTICLE	IF	CITATIONS
19	Investigation of oxidation and migration processes of inorganic compounds in ink-corroded manuscripts. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2004, 59, 1511-1516.	1.5	63
20	Fragmentation of foamed silicic melts: an experimental study. <i>Earth and Planetary Science Letters</i> , 2000, 178, 47-58.	1.8	62
21	Experimental Crystallization of Undercooled Felsic Liquids: Generation of Pegmatitic Texture. <i>Journal of Petrology</i> , 2017, 58, 539-568.	1.1	60
22	Compressibility Anomalies in Stretched Water and Their Interplay with Density Anomalies. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 5519-5522.	2.1	58
23	High-pressure spectroscopic study of siderite (FeCO ₃) with a focus on spin crossover. <i>American Mineralogist</i> , 2015, 100, 2670-2681.	0.9	57
24	Calibration of zircon as a Raman spectroscopic pressure sensor to high temperatures and application to water-silicate melt systems. <i>American Mineralogist</i> , 2013, 98, 643-650.	0.9	55
25	Structural environment of iron in hydrous aluminosilicate glass and melt-evidence from X-ray absorption spectroscopy. <i>Chemical Geology</i> , 2006, 229, 144-161.	1.4	53
26	Spectroscopic Studies on Sulfur Speciation in Synthetic and Natural Glasses. <i>Reviews in Mineralogy and Geochemistry</i> , 2011, 73, 41-78.	2.2	51
27	The oxidation state of iron determined by Fe K-edge XANES application to iron gall ink in historical manuscripts. <i>Journal of Analytical Atomic Spectrometry</i> , 2009, 24, 1364.	1.6	43
28	Clinopyroxene/Melt Trace Element Partitioning in Sodic Alkaline Magmas. <i>Journal of Petrology</i> , 2019, 60, 1797-1823.	1.1	41
29	Advanced analyses of ⁵⁷ Fe Mössbauer data of alumino-silicate glasses. <i>Physics and Chemistry of Minerals</i> , 2008, 35, 77-93.	0.3	40
30	Partitioning of Ba, La, Yb and Y between haplogranitic melts and aqueous solutions: An experimental study. <i>Chemical Geology</i> , 2010, 276, 225-240.	1.4	40
31	Experimental fragmentation of crystal- and vesicle-bearing silicic melts. <i>Bulletin of Volcanology</i> , 2001, 63, 398-405.	1.1	36
32	A confocal set-up for micro-XRF and XAFS experiments using diamond-anvil cells. <i>Journal of Synchrotron Radiation</i> , 2010, 17, 669-675.	1.0	35
33	Rb and Sr partitioning between haplogranitic melts and aqueous solutions. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 1057-1076.	1.6	33
34	Spectroscopy of low and intermediate Z elements at extreme conditions: in situ studies of Earth materials at pressure and temperature via X-ray Raman scattering. <i>High Pressure Research</i> , 2016, 36, 275-292.	0.4	33
35	Interaction between sulphide and H ₂ O in silicate melts. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 3542-3557.	1.6	32
36	Effect of oxygen fugacity on the coordination and oxidation state of iron in alkali bearing silicate melts. <i>Chemical Geology</i> , 2015, 411, 143-154.	1.4	32

#	ARTICLE	IF	CITATIONS
37	Comment on “Maxima in the thermodynamic response and correlation functions of deeply supercooled water”. <i>Science</i> , 2018, 360, .	6.0	32
38	Confocal XANES and the Attic Black Glaze: The Three-Stage Firing Process through Modern Reproduction. <i>Analytical Chemistry</i> , 2014, 86, 6924-6930.	3.2	30
39	Partitioning and equilibration of Rb and Sr between silicate melts and aqueous fluids. <i>Chemical Geology</i> , 2009, 259, 39-47.	1.4	29
40	Pressure driven spin transition in siderite and magnesiosiderite single crystals. <i>Scientific Reports</i> , 2017, 7, 16526.	1.6	24
41	Chemical U-Th-Pb dating of monazite by 3D-Micro X-ray fluorescence analysis with synchrotron radiation. <i>European Journal of Mineralogy</i> , 2009, 21, 927-945.	0.4	22
42	The influence of composition on the local structure around yttrium in quenched silicate melts “ Insights from EXAFS. <i>Chemical Geology</i> , 2013, 346, 3-13.	1.4	22
43	Exploration of the phase diagram of liquid water in the low-temperature metastable region using synthetic fluid inclusions. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 28227-28241.	1.3	22
44	Molecular dynamics simulations of Y in silicate melts and implications for trace element partitioning. <i>Chemical Geology</i> , 2013, 346, 14-21.	1.4	19
45	Solid solution in the apatite OH-Cl binary system: Compositional dependence of solid-solution mechanisms in calcium phosphate apatites along the Cl-OH binary. <i>American Mineralogist</i> , 2016, 101, 1783-1791.	0.9	19
46	Pressure induced spin transition revealed by iron M _{2,3} -edge spectroscopy. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	18
47	Iron speciation in minerals and glasses probed by $M_{2/3}$ -edge X-ray Raman scattering spectroscopy. <i>Contributions To Mineralogy and Petrology</i> , 2014, 167, 1.	1.2	18
48	Martian regolith in Elephant Moraine 79001 shock melts? Evidence from major element composition and sulfur speciation. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 4829-4843.	1.6	17
49	Combining X-ray $K_{1,3}^{L2}$, valence-to-core, and X-ray Raman spectroscopy for studying Earth materials at high pressure and temperature: the case of siderite. <i>Journal of Analytical Atomic Spectrometry</i> , 2019, 34, 384-393.	1.6	17
50	Complexation of Zr and Hf monomers in supercritical aqueous solutions: Insights from ab initio molecular dynamics simulations. <i>Chemical Geology</i> , 2015, 418, 30-39.	1.4	16
51	Structural and dynamical properties of supercritical H ₂ O “SiO ₂ fluids studied by ab initio molecular dynamics. <i>Chemical Geology</i> , 2016, 426, 85-94.	1.4	16
52	Fluid-mediated polymetamorphism related to Proterozoic collision of Archean Wyoming and Superior provinces in the Black Hills, South Dakota. <i>American Mineralogist</i> , 2006, 91, 1473-1487.	0.9	15
53	Miniature diamond anvils for X-ray Raman scattering spectroscopy experiments at high pressure. <i>Journal of Synchrotron Radiation</i> , 2017, 24, 276-282.	1.0	15
54	X-ray Free Electron Laser-Induced Synthesis of μ -Iron Nitride at High Pressures. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 3246-3252.	2.1	14

#	ARTICLE	IF	CITATIONS
55	A portable on-axis laser-heating system for near-90° X-ray spectroscopy: application to ferroperricite and iron silicide. <i>Journal of Synchrotron Radiation</i> , 2020, 27, 414-424.	1.0	14
56	Amides as thermo-sensitive tracers for investigating the thermal state of geothermal reservoirs. <i>Geothermics</i> , 2016, 64, 180-186.	1.5	13
57	Equation of state and high-pressure phase behaviour of SrCO ₃ . <i>European Journal of Mineralogy</i> , 2020, 32, 575-586.	0.4	12
58	Cation Hydration in Supercritical NaOH and HCl Aqueous Solutions. <i>Journal of Physical Chemistry B</i> , 2017, 121, 11383-11389.	1.2	11
59	Experimental investigation of FeCO ₃ (siderite) stability in Earth's lower mantle using XANES spectroscopy. <i>American Mineralogist</i> , 2019, 104, 1083-1091.	0.9	11
60	Strontium complexation in aqueous solutions and silicate glasses: Insights from high energy-resolution fluorescence detection X-ray spectroscopy and ab - initio modeling. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 142, 535-552.	1.6	10
61	Interpretation of Raman spectra of the zircon-hafnon solid solution. <i>European Journal of Mineralogy</i> , 2016, 28, 721-733.	0.4	9
62	Bulk sensitive determination of the Fe ³⁺ /Fe ^{Tot} -ratio in minerals by Fe L _{2/3} -edge X-ray Raman scattering. <i>Journal of Analytical Atomic Spectrometry</i> , 2016, 31, 815-820.	1.6	9
63	The effect of fluorine on clinopyroxene/melt trace-element partitioning. <i>Contributions To Mineralogy and Petrology</i> , 2020, 175, 1.	1.2	9
64	<i>In situ</i> characterization of liquid network structures at high pressure and temperature using X-ray absorption spectroscopy coupled with the Paris-Edinburgh press. <i>High Pressure Research</i> , 2016, 36, 332-347.	0.4	8
65	Erratum to "Determination of the iron oxidation state in basaltic glasses using XANES at the K-edge" [Chem. Geol. 213 (2004) 71-87]. <i>Chemical Geology</i> , 2005, 220, 141.	1.4	7
66	Ge coordination in NaAlGe ₃ O ₈ glass upon compression to 131 GPa. <i>Physical Review B</i> , 2020, 101, .	1.1	7
67	Evidence for a pressure-induced spin transition in olivine-type LiFePO ₄ triphylite. <i>Physical Review B</i> , 2018, 97, .	1.1	6
68	Structural changes in aluminosilicate glasses up to 164 GPa and the role of alkali, alkaline earth cations and alumina in the densification mechanism. <i>Chemical Geology</i> , 2021, 560, 119980.	1.4	6
69	Structural and electron spin state changes in an x-ray heated iron carbonate system at the Earth's lower mantle pressures. <i>Physical Review Research</i> , 2022, 4, .	1.3	6
70	Reactions of strontium anorthite with H ₂ O+CaCl ₂ fluids at 500 °C and high pressure: Kinetic information from in situ synchrotron-radiation XRF analyses of the fluid. <i>American Mineralogist</i> , 2012, 97, 1700-1707.	0.9	5
71	Ion association in hydrothermal aqueous NaCl solutions: implications for the microscopic structure of supercritical water. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 14845-14856.	1.3	5
72	Redox Reaction in Silicate Melts Monitored by <i>In-Situ</i> Fe K-Edge XANES up to 1180°C. <i>AIP Conference Proceedings</i> , 2007, .	0.3	4

#	ARTICLE	IF	CITATIONS
73	Element signatures of subduction-zone fluids. An experimental study of the element partitioning (Dfluid/rock) of natural partly altered igneous rocks from the ODP drilling site 1,256. International Journal of Earth Sciences, 2014, 103, 1917-1927.	0.9	4
74	$\langle \text{mml:math} \text{xmlns:mml}="http://www.w3.org/1998/Math/MathML"> \langle \text{mml:msup} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{Fe} \langle / \text{mml:mi} \rangle \langle / \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle / \text{mml:mrow} \rangle \langle / \text{mml:math} \rangle$ -hosting carbon phases in the deep Earth. Physical Review B, 2022, 105, .	1.4	4
75	Local Structures around Si, Al and Na in Hydrated Silicate Glasses. AIP Conference Proceedings, 2007, , .	0.3	3
76	Influence of aqueous calcium phytate/calcium hydrogen carbonate treatment on the chemical composition of iron gall inks. Restaurator, 2008, 29, .	0.2	3
77	A new optical cell for in situ Raman spectroscopy, and its application to study sulfur-bearing fluids at elevated pressures and temperatures. American Mineralogist, 2018, 103, 418-429.	0.9	3
78	Corundum-quartz metastability: the influence of a nanometer-sized phase on mineral equilibria in the system $\text{Al}_2\text{O}_3\text{-SiO}_2\text{-H}_2\text{O}$. Contributions To Mineralogy and Petrology, 2021, 176, 1.	1.2	3
79	X-Ray Absorption Spectroscopy Measurements. , 2018, , 155-178.		2
80	Reflective imaging, on-axis laser heating and radiospectrometry of samples in diamond anvil cells with a parabolic mirror. High Pressure Research, 2021, 41, 142-154.	0.4	2
81	Excess heat capacity and entropy of mixing along the hydroxyapatite-chlorapatite and hydroxyapatite-fluorapatite binaries. Physics and Chemistry of Minerals, 2021, 48, 44.	0.3	2
82	Effect of temperature on the densification of silicate melts to lower Earth's mantle conditions. Physics of the Earth and Planetary Interiors, 2022, 323, 106823.	0.7	1