Martin C Wilding

List of Publications by Year in Descending Order

82 papers	2,648 citations	29 h-index	50 g-index
89 ext. papers	2,877 ext. citations	5.9 avg, IF	4.72 L-index

#	Paper	IF	Citations
82	Probing the Structure of Melts, Glasses, and Amorphous Materials. *Elements*, **2021**, 17, 175-180	3.8	3
81	A novel fuel cell design forenergy-dispersive x-ray absorption measurements. *Journal of Physics Condensed Matter*, **2021**, 33,	1.8	3
80	Pressure-Induced Amorphization **2021**, 371-377		
79	Aquaporin-like water transport in nanoporous crystalline layered carbon nitride. *Science Advances*, **2020**, 6,	14.3	7
78	In situ formation of coestite under hydrothermal conditions. *High Pressure Research*, **2020**, 40, 478-487	1.6	
77	The structure and thermochemistry of K2CO3MgCO3 glass. *Journal of Materials Research*, **2019**, 34, 3377-3388	2.5	1
76	Formation of an ion-free crystalline carbon nitride and its reversible intercalation with ionic species and molecular water. *Chemical Science*, **2019**, 10, 2519-2528	9.4	18
75	In Vivo Water Dynamics in Shewanella oneidensis Bacteria at High Pressure. *Scientific Reports*, **2019**, 9, 8716	4.9	7
74	Exploring the structure of glass-forming liquids using high energy X-ray diffraction, containerless methodology and molecular dynamics simulation. *Journal of Non-Crystalline Solids: X*, **2019**, 3, 100027	2.5	1
73	CO network formation in ultra-high pressure carbonate liquids. *Scientific Reports*, **2019**, 9, 15416	4.9	5
72	Structure and Liquid Fragility in Sodium Carbonate. *Journal of Physical Chemistry A*, **2018**, 122, 1071-1076	2.8	6
71	Molecular Dynamics Modeling of the Structure and Na-Ion Transport in NaS + SiS Glassy Electrolytes. *Journal of Physical Chemistry B*, **2018**, 122, 7597-7608	3.4	7
70	Local structural variation with oxygen fugacity in Fe2SiO4+ fayalitic iron silicate melts. *Geochimica Et Cosmochimica Acta*, **2017**, 203, 15-36	5.5	21
69	Iron K-edge X-ray absorption near-edge structure spectroscopy of aerodynamically levitated silicate melts and glasses. *Chemical Geology*, **2017**, 453, 169-185	4.2	31
68	The structure of liquid alkali nitrates and nitrites. *Physical Chemistry Chemical Physics*, **2017**, 19, 21625-21638	3.6	8
67	Structural studies of Bi2O3-Nb2O5-TeO2 glasses. *Journal of Non-Crystalline Solids*, **2016**, 451, 68-76	3.9	15
66	Low-Dimensional Network Formation in Molten Sodium Carbonate. *Scientific Reports*, **2016**, 6, 24415	4.9	13

65	Structural properties of Y2O3–Al2O3 liquids and glasses: An overview. *Journal of Non-Crystalline Solids*, **2015**, 407, 228-234	3.9	7
64	Exploring the Structure of High Temperature, Iron-bearing Liquids. *Materials Today: Proceedings*, **2015**, 2, S358-S363	1.4	1
63	Pressure-induced amorphization and polyamorphism: Inorganic and biochemical systems. *Progress in Materials Science*, **2014**, 61, 216-282	42.2	95
62	Low frequency vibrational dynamics and polyamorphism in Y□□–Al□□ glasses. *Physical Chemistry Chemical Physics*, **2014**, 16, 22083-96	3.6	8
61	High-pressure transformation of SiO□ glass from a tetrahedral to an octahedral network: a joint approach using neutron diffraction and molecular dynamics. *Physical Review Letters*, **2014**, 113, 135501	7.4	85
60	Density-driven structural transformations in B2O3 glass. *Physical Review B*, **2014**, 90,	3.3	42
59	A time resolved high energy X-ray diffraction study of cooling liquid SiO2. *Physical Chemistry Chemical Physics*, **2013**, 15, 8566-72	3.6	22
58	Joint diffraction and modeling approach to the structure of liquid alumina. *Physical Review B*, **2013**, 87,	3.3	70
57	Structural changes in supercooled Al2O3-Y2O3 liquids. *Physical Chemistry Chemical Physics*, **2013**, 15, 8589-605	3.6	18
56	Polyamorphism and Liquid□liquid Phase Transitions in Amorphous Silicon and Supercooled Al2O3–Y2O3 Liquids. *Advances in Chemical Physics*, **2013**, 309-353		9
55	Liquids and Amorphous Materials. *Scottish Graduate Series*, **2012**, 265-300		
54	Density-driven structural transformations in network forming glasses: a high-pressure neutron diffraction study of GeO2 glass up to 17.5 GPa. *Journal of Physics Condensed Matter*, **2012**, 24, 415102	1.8	39
53	The structure of MgO-SiO2 glasses at elevated pressure. *Journal of Physics Condensed Matter*, **2012**, 24, 225403	1.8	8
52	Composition and polyamorphism in supercooled yttria–alumina melts. *Journal of Non-Crystalline Solids*, **2011**, 357, 435-441	3.9	19
51	High pressure x-ray diffraction measurements on Mg2SiO4 glass. *Journal of Non-Crystalline Solids*, **2011**, 357, 2632-2636	3.9	20
50	Comment on "liquid-liquid phase transition in supercooled yttria-alumina". *Physical Review Letters*, **2011**, 106, 119601; author reply 119602	7.4	8
49	Instrumentation for structure measurements on highly non-equilibrium materials. *Diamond Light Source Proceedings*, **2011**, 1,		1
48	Relationship between topological order and glass forming ability in densely packed enstatite and forsterite composition glasses. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 14780-5	11.5	81

47	Temperature-dependent structural heterogeneity in calcium silicate liquids. *Physical Review B*, **2010**, 82,	3.3	43
46	High-energy X-ray diffraction from aluminosilicate liquids. *Journal of Physical Chemistry B*, **2010**, 114, 5742-6	3.4	24
45	Changes in the local environment surrounding magnesium ions in fragile MgO-SiO 2 liquids. *Europhysics Letters*, **2010**, 89, 26005	1.6	25
44	The scientific rationale for the C1XS X-ray spectrometer on India's Chandrayaan-1 mission to the moon. *Planetary and Space Science*, **2009**, 57, 725-734	2	24
43	The C1XS X-ray Spectrometer on Chandrayaan-1. *Planetary and Space Science*, **2009**, 57, 717-724	2	41
42	Liquid–liquid transitions, crystallization and long range fluctuations in supercooled yttrium oxide–aluminium oxide melts. *Journal of Non-Crystalline Solids*, **2009**, 355, 715-721	3.9	15
41	High pressure effects on liquid viscosity and glass transition behaviour, polyamorphic phase transitions and structural properties of glasses and liquids. *Journal of Non-Crystalline Solids*, **2009**, 355, 722-732	3.9	34
40	Aluminates **2008**, 49-70		5
39	Direct density determination of low- and high-density glassy polyamorphs following a liquid–liquid phase transition in Y2O3–Al2O3 supercooled liquids. *Journal of Non-Crystalline Solids*, **2008**, 354, 1015-1025	3.9	15
38	High temperature calorimetric studies of heat of solution of NiO, CuO, La2O3, TiO2, HfO2 in sodium silicate liquids. *Geochimica Et Cosmochimica Acta*, **2008**, 72, 590-601	5.5	7
37	Detection of first-order liquid/liquid phase transitions in yttrium oxide-aluminum oxide melts. *Science*, **2008**, 322, 566-70	33.3	155
36	Feasibility ofin situneutron diffraction studies of non-crystalline silicates up to pressures of 25 GPa. *Journal of Physics Condensed Matter*, **2008**, 20, 244122	1.8	18
35	Diffraction study of calcium aluminate glasses and melts: I. High energy x-ray and neutron diffraction on glasses around the eutectic composition. *Journal of Physics Condensed Matter*, **2008**, 20, 245106	1.8	15
34	Diffraction study of calcium aluminate glasses and melts: II. High energy x-ray diffraction on melts. *Journal of Physics Condensed Matter*, **2008**, 20, 245107	1.8	19
33	IN SITU STRUCTURAL STUDIES OF ALUMINA DURING MELTING AND FREEZING. *Advances in Synchrotron Radiation*, **2008**, 01, 135-149		2
32	In situ diffraction studies of magnesium silicate liquids. *Journal of Materials Science*, **2008**, 43, 4707-4713	4.3	35
31	Polyamorphism and liquid-liquid phase transitions: challenges for experiment and theory. *Journal of Physics Condensed Matter*, **2007**, 19, 415101	1.8	105
30	Structure of molten yttrium aluminates: a neutron diffraction study. *Journal of Physics Condensed Matter*, **2007**, 19, 415105	1.8	3

29	High-pressure x-ray scattering and computer simulation studies of density-induced polyamorphism in silicon. *Physical Review B*, **2007**, 75,	3.3	79
28	The local environment of trivalent lanthanide ions in sodium silicate glasses: A neutron diffraction study using isotopic substitution. *Journal of Non-Crystalline Solids*, **2007**, 353, 4792-4800	3.9	24
27	Structure of Glasses and Melts. *Reviews in Mineralogy and Geochemistry*, **2006**, 63, 275-311	7.1	17
26	Structural studies and polymorphism in amorphous solids and liquids at high pressure. *Chemical Society Reviews*, **2006**, 35, 964-86	58.5	110
25	12. Structure of Glasses and Melts **2006**, 275-312		1
24	X-ray and neutron diffraction studies and MD simulation of atomic configurations in polyamorphic Y2O3-Al2O3 systems. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2005**, 363, 589-607	3	23
23	Applications of neutron computed tomography in the geosciences. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2005**, 542, 290-295	1.2	15
22	Coordination changes in magnesium silicate glasses. *Europhysics Letters*, **2004**, 67, 212-218	1.6	60
21	Direct Measurement of Relative Partial Molar Enthalpy of SiO2 in SiO2□M2O (M=Li, Na, K, Cs) Binary and SiO2□CaO□Al2O3 Ternary Melts. *Journal of the American Ceramic Society*, **2004**, 87, 1550-1555	3.8	23
20	Cooling process recorded in subglacially erupted rhyolite glasses: Rapid quenching, thermal buffering, and the formation of meltwater. *Journal of Geophysical Research*, **2004**, 109,		7
19	Evidence of different structures in magnesium silicate liquids: coordination changes in forsterite- to enstatite-composition glasses. *Chemical Geology*, **2004**, 213, 281-291	4.2	71
18	Polyamorphism in aluminate liquids. *Journal of Physics Condensed Matter*, **2003**, 15, 6105-6121	1.8	28
17	Thermodynamic and structural aspects of the polyamorphic transition in yttrium and other rare-earth aluminate liquids. *Physica A: Statistical Mechanics and Its Applications*, **2002**, 314, 379-390	3.3	39
16	A neutron diffraction study of yttrium- and lanthanum-aluminate glasses. *Journal of Non-Crystalline Solids*, **2002**, 297, 143-155	3.9	53
15	Liquid Polymorphism in Yttrium-Aluminate Liquids **2002**, 56-73		2
14	Pressure-induced amorphization and an amorphous-amorphous transition in densified porous silicon. *Nature*, **2001**, 414, 528-30	50.4	324
13	Enthalpies of formation of lanthanide oxyapatite phases. *Journal of Materials Research*, **2001**, 16, 2780-2783	2.5	47
12	Polyamorphic transitions in yttria□alumina liquids. *Journal of Non-Crystalline Solids*, **2001**, 293-295, 357-365	3.9	53

11	Cooling rates of hyaloclastites: applications of relaxation geospeedometry to undersea volcanic deposits. *Bulletin of Volcanology*, **2000**, 61, 527-536	2.4	40
10	High temperature calorimetric studies of the heat of solution of La2O3 in silicate liquids. *Journal of Non-Crystalline Solids*, **2000**, 265, 238-251	3.9	40
9	Cation clustering and formation of free oxide ions in sodium and potassium lanthanum silicate glasses: nuclear magnetic resonance and Raman spectroscopic findings. *Journal of Non-Crystalline Solids*, **1999**, 243, 146-157	3.9	90
8	The Dissolution of Silica and Alumina in Silicate Melts: in situ High Temperature Calorimetric Studies. *Neues Jahrbuch Fur Mineralogie, Abhandlungen*, **1998**, 172, 177-201	1	10
7	Melt Energetics at High Temperature and Pressure. *Materials Research Society Symposia Proceedings*, **1997**, 499, 185		
6	Tektite cooling rates: Calorimetric relaxation geospeedometry applied to a natural glass. *Geochimica Et Cosmochimica Acta*, **1996**, 60, 1099-1103	5.5	29
5	Rhyolite magma degassing: an experimental study of melt vesiculation. *Bulletin of Volcanology*, **1996**, 57, 587-601	2.4	40
4	Ti4+ in silicate melts: Energetics from high-temperature calorimetric studies and implications for melt structure. *Geochimica Et Cosmochimica Acta*, **1996**, 60, 4123-4131	5.5	27
3	Cooling rate variation in natural volcanic glasses from Tenerife, Canary Islands. *Contributions To Mineralogy and Petrology*, **1996**, 125, 151-160	3.5	31
2	Evaluation of a relaxation geospeedometer for volcanic glasses. *Chemical Geology*, **1995**, 125, 137-148	4.2	68
1	Volatile characteristics of peralkaline rhyolites from Kenya: an ion microprobe, infrared spectroscopic and hydrogen isotope study. *Contributions To Mineralogy and Petrology*, **1993**, 114, 264-275	3.5	27