Laurent Cormier

List of Publications by Year
in descending order

131	5,984	66343	79698
papers	citations	42 h-index	73 g-index

132	132	132	4154
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Al environment in tectosilicate and peraluminous glasses: A 27Al MQ-MAS NMR, Raman, and XANES investigation. Geochimica Et Cosmochimica Acta, 2004, 68, 5071-5079.	3.9	419
2	Al coordination and speciation in calcium aluminosilicate glasses: Effects of composition determined by 27Al MQ-MAS NMR and Raman spectroscopy. Chemical Geology, 2006, 229, 173-185.	3.3	389
3	The structure of amorphous, crystalline and liquid GeO2. Journal of Physics Condensed Matter, 2006, 18, R753-R784.	1.8	206
4	Amorphous materials: Properties, structure, and durability: Structure of Mg- and Mg/Ca aluminosilicate glasses: 27Al NMR and Raman spectroscopy investigations. American Mineralogist, 2008, 93, 1721-1731.	1.9	187
5	Chemical dependence of network topology of calcium aluminosilicate glasses: a computer simulation study. Journal of Non-Crystalline Solids, 2003, 332, 255-270.	3.1	149
6	Al speciation and Ca environment in calcium aluminosilicate glasses and crystals by Al and Ca K-edge X-ray absorption spectroscopy. Chemical Geology, 2004, 213, 153-163.	3.3	147
7	The structure of GeO2â€“SiO2 glasses and melts: A Raman spectroscopy study. Journal of Non-Crystalline Solids, 2009, 355, 468-474.	3.1	146
8	NMR Heteronuclear Correlation between Quadrupolar Nuclei in Solids. Journal of the American Chemical Society, 2005, 127, 11540-11541.	13.7	143
9	Ca and Na environments in Na2Oâ€“CaOâ€“Al2O3â€“SiO2 glasses: influence of cation mixing and cation-network interactions. Chemical Geology, 2004, 213, 103-113.	3.3	141
10	The ID21 X-ray and infrared microscopy beamline at the ESRF: status and recent applications to artistic materials. Journal of Analytical Atomic Spectrometry, 2017, 32, 477-493.	3.0	140
11	Boroxol Rings in Liquid and Vitreous<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="normal">B</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>from First Principles. Physical Review Letters, 2008, 101, 065504.	7.8	131
12	Development of empirical potentials for sodium borosilicate glass systems. Journal of Non-Crystalline Solids, 2011, 357, 3313-3321.	3.1	125
13	Local Al site distribution in aluminosilicate glasses by 27Al MQMAS NMR. Journal of Non-Crystalline Solids, 2007, 353, 180-184.	3.1	121
14	Structure and properties of low-silica calcium aluminosilicate glasses. Journal of Non-Crystalline Solids, 2000, 274, 110-114.	3.1	119
15	Kinetics and mechanisms of iron redox reactions in silicate melts: The effects of temperature and alkali cations. Geochimica Et Cosmochimica Acta, 2008, 72, 2157-2168.	3.9	105
16	Structureâ€“property relationships in multicomponent oxide glasses. Comptes Rendus Chimie, 2002, 5, 831-843.	0.5	102
17	Environments of Mg and Al in MgOâ€“Al2O3â€“SiO2 glasses: A study coupling neutron and X-ray diffraction and Reverse Monte Carlo modeling. Chemical Geology, 2008, 256, 111-118.	3.3	99
18	Combination of Polymorphisms From Genes Related to Estrogen Metabolism and Risk of Prostate Cancers: The Hidden Face of Estrogens. Journal of Clinical Oncology, 2007, 25, 3596-3602.	1.6	89

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19	Competition for charge compensation in borosilicate glasses: Wide-angle x-ray scattering and molecular dynamics calculations. Physical Review B, 2000, 61, 14495-14499.	3.2	86
20	Environments around Al, Si, and Ca in aluminate and aluminosilicate melts by X-ray absorption spectroscopy at high temperature. American Mineralogist, 2008, 93, 228-234.	1.9	86
21	Temperature-induced boron coordination change in alkali borate glasses and melts. Physical Review B, 2003, 67, .	3.2	85
22	The structure of crystals, glasses, and melts along the CaO-Al2O3 join: Results from Raman, Al L- and K-edge X-ray absorption, and 27Al NMR spectroscopy. American Mineralogist, 2010, 95, 1580-1589.	1.9	75
23	Relationship Between Structure and Glass Transition Temperature in Lowâ€silica Calcium Aluminosilicate Glasses: the Origin of the Anomaly at Low Silica Content. Journal of the American Ceramic Society, 2005, 88, 2292-2299.	3.8	69
24	Kinetics of iron oxidation in silicate melts: a preliminary XANES study. Chemical Geology, 2004, 213, 253-263.	3.3	67
25	Medium-range order around titanium in a silicate glass studied by neutron diffraction with isotopic substitution. Physical Review B, 1998, 58, 11322-11330.	3.2	65
26	Kinetics of iron redox reactions in silicate liquids: A high-temperature X-ray absorption and Raman spectroscopy study. Journal of Nuclear Materials, 2006, 352, 190-195.	2.7	65
27	Temperature-Induced Structural Modifications Between Alkali Borate Glasses and Melts. Journal of the American Ceramic Society, 2006, 89, 13-19.	3.8	63
28	Structure and dynamics of oxide melts and glasses: A view from multinuclear and high temperature NMR. Journal of Non-Crystalline Solids, 2008, 354, 249-254.	3.1	59
29	Nature and distribution of iron sites in a sodium silicate glass investigated by neutron diffraction and EPSR simulation. Journal of Non-Crystalline Solids, 2008, 354, 5378-5385.	3.1	59
30	In Situ study of Nucleation of Zirconia in an MgOâ€“Al₂O₃â€“SiO₂ Glass. Journal of the American Ceramic Society, 2010, 93, 342-344.	3.8	55
31	Mg coordination in a MgSiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>glass using neutron diffraction coupled with isotopic substitution. Physical Review B, 2011, 83, .	3.2	55
32	Multi-scale structuration of glasses: Observations of phase separation and nanoscale heterogeneities in glasses by Z-contrast scanning electron transmission microscopy. Journal of Non-Crystalline Solids, 2012, 358, 1257-1262.	3.1	53
33	Evidence of fivefold-coordinated Ge atoms in amorphous GeO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>under pressure using inelastic x-ray scattering. Physical Review B, 2012, 85, .	3.2	53
34	Investigation of the Role of Nucleating Agents in MgOâ”SiO₂â”Al₂O₃â”SiO₂â”TiO₂ Glasses and Glass-Ceramics: A XANES Study at the Ti K- and L_{2,3}-Edges. Crystal Growth and Design, 2011, 11, 311-319.	3.0	51
35	Structural role of Zr4+ as a nucleating agent in a MgOâ€“Al2O3â€“SiO2 glass-ceramics: A combined XAS and HRTEM approach. Journal of Non-Crystalline Solids, 2010, 356, 2928-2934.	3.1	49
36	Cationic environment in silicate glasses studied by neutron diffraction with isotopic substitution. Chemical Geology, 2001, 174, 349-363.	3.3	47

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37	Structural investigation of glasses along the MgSiO3â€“CaSiO3 join: Diffraction studies. Geochimica Et Cosmochimica Acta, 2013, 122, 498-510.	3.9	47
38	A neutron diffraction study of temperature-induced structural changes in potassium disilicate glass and melt. Chemical Geology, 2004, 213, 89-102.	3.3	46
39	Environment of Ni, Co and Zn in low alkali borate glasses: information from EXAFS and XANES spectra. Journal of Non-Crystalline Solids, 2001, 293-295, 105-111.	3.1	45
40	Na K-edge XANES spectra of minerals and glasses. European Journal of Mineralogy, 2004, 16, 809-816.	1.3	45
41	Intermediate-range order in the silicate network glasses<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>NaFe</mml:mtext></mml:mrow><mml:mi>x</mml:mi></mml:m Physical Review B, 2008, 78, .	3.2	45
42	The crystal and melt structure of spinel and alumina at high temperature: An in-situ XANES study at the Al and Mg K-edge. Geochimica Et Cosmochimica Acta, 2009, 73, 3410-3422.	3.9	45
43	An O K-edge XANES study of glasses and crystals in the CaOâ€“Al2O3â€“SiO2 (CAS) system. Chemical Geology, 2009, 259, 54-62.	3.3	43
44	Structural changes between soda-lime silicate glass and melt. Journal of Non-Crystalline Solids, 2011, 357, 926-931.	3.1	42
45	Zr environment and nucleation role in aluminosilicate glasses. Materials Chemistry and Physics, 2015, 152, 41-47.	4.0	42
46	Evidence for symmetric cationic sites in zirconium-bearing oxide glasses. Physical Review B, 2006, 73, .	3.2	40
47	Mesoscopic scale description of nucleation processes in glasses. Applied Physics Letters, 2011, 99, .	3.3	40
48	The structure of SiO2â€“GeO2 glasses: A spectroscopic study. Journal of Non-Crystalline Solids, 2008, 354, 2004-2009.	3.1	39
49	Mechanisms of boron coordination change between borosilicate glasses and melts. Journal of Non-Crystalline Solids, 2013, 379, 169-176.	3.1	39
50	Investigation of multicomponent silicate glasses by coupling WAXS and molecular dynamics. Journal of Non-Crystalline Solids, 2001, 293-295, 290-296.	3.1	37
51	Structural fluctuations and role of Ti as nucleating agent in an aluminosilicate glass. Journal of Non-Crystalline Solids, 2010, 356, 1368-1373.	3.1	37
52	High-resolution Al L_{2,3}-edge x-ray absorption near edge structure spectra of Al-containing crystals and glasses: coordination number and bonding information from edge components. Journal of Physics Condensed Matter, 2008, 20, 135219.	1.8	36
53	Structure of Î²-irradiated glasses studied by X-ray absorption and Raman spectroscopies. Journal of Non-Crystalline Solids, 2003, 323, 207-213.	3.1	35
54	Nucleation in Glasses â€“ New Experimental Findings and Recent Theories. , 2014, 7, 60-71.		35

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55	Pressure-induced Ge coordination change and polyamorphism in SiO2â€“GeO2 glasses. Journal of Non-Crystalline Solids, 2004, 345-346, 34-38.	3.1	34
56	The Structural Properties of Cations in Nuclear Glasses. , 2014, 7, 23-31.		34
57	Structural study of Na2Oâ€“B2O3â€“SiO2 glasses from molecular simulations using a polarizable force field. Journal of Chemical Physics, 2017, 147, 161711.	3.0	34
58	Different roles of phosphorus in the nucleation of lithium aluminosilicate glasses. Journal of Non-Crystalline Solids, 2018, 493, 48-56.	3.1	34
59	XANES Determination of Chromium Oxidation States in Glasses: Comparison With Optical Absorption Spectroscopy. Journal of the American Ceramic Society, 2007, 90, 3578-3581.	3.8	33
60	Crystal field spectroscopy of Cr3+ in glasses: Compositional dependence and thermal site expansion. Chemical Geology, 2006, 229, 218-226.	3.3	32
61	Cationic ordering in oxide glasses: the example of transition elements. Mineralogical Magazine, 2000, 64, 409-424.	1.4	31
62	Structural study of Caâ€“Mg and Kâ€“Mg mixing in silicate glasses by neutron diffraction. Journal of Non-Crystalline Solids, 2010, 356, 2327-2331.	3.1	31
63	Environment around strontium in silicate and aluminosilicate glasses. Physical Review B, 1999, 59, 13517-13520.	3.2	30
64	Medium range order around cations in silicate glasses. Chemical Geology, 1996, 128, 77-91.	3.3	29
65	Determination of Fe3+ sites in a NaFeSi2O6 glass by neutron diffraction with isotopic substitution coupled with numerical simulation. Applied Physics Letters, 2006, 89, 141911.	3.3	29
66	Lithium borate crystals and glasses: How similar are they? A non-resonant inelastic X-ray scattering study around the B and O K -edges. Journal of Non-Crystalline Solids, 2017, 472, 1-8.	3.1	28
67	Evidence of Ni-containing ordered domains in low-alkali borate glasses. Europhysics Letters, 1999, 45, 572-578.	2.0	26
68	Detecting Non-bridging Oxygens: Non-Resonant Inelastic X-ray Scattering in Crystalline Lithium Borates. Inorganic Chemistry, 2014, 53, 10903-10908.	4.0	26
69	Silica polymorphs, glass and melt: An in situ high temperature XAS study at the Si K-edge. Journal of Non-Crystalline Solids, 2009, 355, 1099-1102.	3.1	25
70	Structural transformations and spectroscopic properties of Ni-doped magnesium aluminosilicate glass-ceramics nucleated by a mixture of TiO2 and ZrO2 for broadband near-IR light emission. Journal of Alloys and Compounds, 2019, 780, 137-146.	5.5	25
71	Environment around Li in theLiAlSiO4ionic conductor glass: A neutron-scattering and reverse Monte Carlo study. Physical Review B, 1998, 57, R8067-R8070.	3.2	23
72	Structural Modifications between Lithium-Diborate Glasses and Melts:Â Implications for Transport Properties and Melt Fragility. Journal of Physical Chemistry B, 2003, 107, 13044-13050.	2.6	23

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73	Exploration of glass domain in the SiO2-B2O3-La2O3 system. Journal of Non-Crystalline Solids, 2017, 476, 158-172.	3.1	23
74	Speciation Change of Uranyl in Lithium Borate Glasses. Inorganic Chemistry, 2019, 58, 6858-6865.	4.0	23
75	Structural evolution of high zirconia aluminosilicate glasses. Journal of Non-Crystalline Solids, 2020, 539, 120050.	3.1	23
76	Environment of titanium and aluminum in a magnesium alumino-silicate glass. Journal of Physics Condensed Matter, 2009, 21, 375107.	1.8	22
77	A high temperature neutron diffraction study of a titanosilicate glass. Journal of Non-Crystalline Solids, 2001, 293-295, 510-516.	3.1	21
78	7C2, the new neutron diffractometer for liquids and disordered materials at LLB. Journal of Physics: Conference Series, 2016, 746, 012020.	0.4	21
79	Comparison of the low-Q features in diffraction data for silicate glasses and crystals containing Sr or Ba. Journal of Non-Crystalline Solids, 1999, 248, 84-91.	3.1	19
80	Polyamorphism in cerium based bulk metallic glasses: Electronic and structural properties under pressure and temperature by x-ray absorption techniques. Applied Physics Letters, 2013, 103, .	3.3	19
81	Structural evolution of Ni environment in lithium, magnesium and zinc aluminosilicate glasses and glass-ceramics. Journal of Non-Crystalline Solids, 2015, 413, 24-33.	3.1	19
82	Crystallization and Glass-Ceramics. Springer Handbooks, 2019, , 113-167.	0.6	19
83	Synthesis, properties and uses of chromium-based pigments from the Manufacture de SÃ¨vres. Journal of Cultural Heritage, 2018, 30, 26-33.	3.3	18
84	Transition metals as optically active dopants in glass-ceramics. Applied Physics Letters, 2020, 116, .	3.3	18
85	Spectroscopic properties of $$hbox {Cr}^{3+}$$ Cr 3 + in the spinel solid solution $$hbox {ZnAl}_{2-x}hbox {Cr}_{x}hbox {O}_4$$ ZnAl 2 - x Cr x O 4. Physics and Chemistry of Minerals, 2016, 43, 33-42.	0.8	16
86	Structural study of Na2O-B2O3-SiO2-La2O3 glasses from molecular simulations using a polarizable force field. Journal of Non-Crystalline Solids, 2018, 499, 371-379.	3.1	16
87	Evolution of the <scp><scp>Ni</scp></scp>²⁺ Environment During the Formation of a <scp><scp>MgO</scp></scp>â€“<scp><scp>Al</scp></scp>₂<scp><scp>O</scp></scp>₃â€“<scp><scp>Si	3.8	15
88	In situ local environment and partitioning of Ni 2+ ions during crystallization of an oxyfluoride glass. Journal of Non-Crystalline Solids, 2015, 408, 7-12.	3.1	15
89	Interaction between Cr-bearing pigments and transparent glaze: A transmission electron microscopy study. Journal of Non-Crystalline Solids, 2017, 459, 184-191.	3.1	15
90	The titanium environment in a potassium silicate glass measured by neutron scattering with isotopic substitution. Physica B: Condensed Matter, 1997, 234-236, 393-395.	2.7	14

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91	Transition Elements and Nucleation in Glasses Using Xâ€ray Absorption Spectroscopy. International Journal of Applied Glass Science, 2014, 5, 126-135.	2.0	14
92	A XANES investigation of the network-modifier cations environment before and after the Na + /K + ion-exchange in silicate glasses. Journal of Non-Crystalline Solids, 2018, 479, 97-104.	3.1	14
93	Structure of single and mixed alkali Liâ€“Rb borate glasses by neutron diffraction. Journal of Non-Crystalline Solids, 2007, 353, 1779-1784.	3.1	13
94	Rearrangement of the structure during nucleation of a cordierite glass doped with TiO₂. Journal of Physics Condensed Matter, 2010, 22, 185401.	1.8	13
95	Structural role of titanium on slag properties. Journal of the American Ceramic Society, 2021, 104, 105-113.	3.8	13
96	Quantitative determination of the phosphorus environment in lithium aluminosilicate glasses using solid-state NMR techniques. Physical Chemistry Chemical Physics, 2019, 21, 18370-18379.	2.8	12
97	Chemical stability of Ni-enriched nanodomains in alkali borate glasses. Journal of Non-Crystalline Solids, 2003, 321, 197-203.	3.1	11
98	Lithium Borates from the Glass to the Melt: A Temperature-Induced Structural Transformation Viewed from the Boron and Oxygen Atoms. Inorganic Chemistry, 2021, 60, 798-806.	4.0	11
99	An O K-edge XANES study of calcium aluminates. Canadian Journal of Chemistry, 2007, 85, 801-805.	1.1	10
100	Spectroscopic Investigation and Crystallization Study of Rare Earth Metaborate Glasses. , 2014, 7, 131-137.		10
101	Vitrification, crystallization behavior and structure of zinc aluminosilicate glasses. Journal of Non-Crystalline Solids, 2021, 555, 120609.	3.1	10
102	Amorphous-amorphous transformation at high pressure in gallo-germanosilicate tetrahedral network glasses. Physical Review B, 2007, 76, .	3.2	9
103	In situ evolution of Ni environment in magnesium aluminosilicate glasses and glassâ€“ceramicsâ€“Influence of ZrO2 and TiO2 nucleating agents. Journal of Physics and Chemistry of Solids, 2015, 78, 137-146.	4.0	9
104	Glasses: Aluminosilicates. , 2021, , 496-518.		9
105	A reverse Monte Carlo study of a titanosilicate glass. Journal of Physics Condensed Matter, 1997, 9, 10129-10136.	1.8	8
106	Vibrational density of states and structural origin of the heat capacity anomalies in Ca3Al2Si3O12 glasses. Physica B: Condensed Matter, 1997, 241-243, 906-908.	2.7	8
107	Short- and medium-range structural order around cations in glasses: aÂmultidisciplinary approach. Comptes Rendus Physique, 2001, 2, 249-262.	0.1	8
108	Medium-range order in alkali metaphosphate glasses and melts investigated by reverse Monte Carlo simulations and diffraction analysis. Physical Review B, 2003, 67, .	3.2	8

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109	Thermodynamic insight into the evolution of medieval glassworking properties. Journal of the American Ceramic Society, 2017, 100, 2363-2367.	3.8	8
110	The stability of gahnite doped with chromium pigments in glazes from the French manufacture of SÃ¨vres. Journal of the American Ceramic Society, 2017, 100, 86-95.	3.8	8
111	Multi-Scale Investigation of Body-Glaze Interface in Ancient Ceramics. Heritage, 2019, 2, 2480-2494.	1.9	7
112	Neutron and X-Ray Diffraction of Glass. Springer Handbooks, 2019, , 1047-1094.	0.6	7
113	The lithium environment in lithium diborate glass studied by neutron diffraction with isotopic substitution of Li. Physica B: Condensed Matter, 2004, 350, 258-261.	2.7	6
114	The art of Bernard Palissy (1510â€“1590): influence of firing conditions on the microstructure of iron-coloured high-lead glazes. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	6
115	Structural evolution at short and medium range distances during crystallization of a P₂O₅â€“Li₂Oâ€“Al₂O₃â€“SiO₂ glass. Journal of the American Ceramic Society, 2020, 103, 4969-4982.	3.8	6
116	Structural analysis of sputtered amorphous silica thin films: A Raman spectroscopy investigation. Thin Solid Films, 2021, 733, 138811.	1.8	6
117	Determination of the thermal expansion of Cr3+ sites in glasses. Applied Physics Letters, 2006, 88, 121918.	3.3	5
118	Short and medium range structures of 80GeSe₂â€“20Ga₂Se₃chalcogenide glasses. Journal of Physics Condensed Matter, 2018, 30, 185403.	1.8	5
119	Structural Evolution of Nuclear Glasses under Forcing Conditions (Irradiation, Alteration). Materials Research Society Symposia Proceedings, 2010, 1265, 1.	0.1	4
120	Real-time observation of the isothermal crystallization kinetics in a deeply supercooled liquid. Scientific Reports, 2017, 7, 43671.	3.3	4
121	Investigation of Aluminate and Al2O3 Crystals and Melts at High Temperature Using XANES Spectroscopy. AIP Conference Proceedings, 2007, , .	0.4	3
122	Reactivity of chromium-based pigments in a porcelain glaze. Comptes Rendus Physique, 2018, 19, 589-598.	0.9	3
123	Structure of Ga-Sb-Se glasses by combination of 77Se NMR and neutron diffraction experiments with molecular dynamics. Journal of Non-Crystalline Solids, 2021, 557, 120574.	3.1	3
124	Molecular structure of amorphous slags: An experimental and numerical approach. Journal of Non-Crystalline Solids, 2021, 556, 120444.	3.1	3
125	Structure from glass to melt: a case study along the MgSiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow /> <mml:mn>3</mml:mn></mml:msub></mml:math>â€“CaSiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow /> <mml:mn>3</mml:mn></mml:msub></mml:math> join using neutron and X-ray diffraction. Comptes Rendus - Geoscience, 2022, 354, 15-34.	1.2	3
126	Influence of zirconium on cation mobilities in Na2O-CaO-Al2O3-SiO2 melts: A multicomponent diffusion and XANES study. Geochimica Et Cosmochimica Acta, 2020, 270, 394-408.	3.9	2

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127	La structure des verres Ã©tudiÃ©e par diffraction des neutrons. European Physical Journal Special Topics, 2003, 111, 187-210.	0.2	1
128	An In Situ High Temperature Investigation of Cation Environments in Aluminate and Silicate Glasses and Liquids at the LUCIA Beamline. AIP Conference Proceedings, 2007, , .	0.4	1
129	Organization Around Cations in Oxide Glasses Using X-Ray Absorption Spectroscopy. AIP Conference Proceedings, 2003, , .	0.4	0
130	The Silicon Environment in Silica Polymorphs, Aluminosilicate Crystals and Melts: An In Situ High Temperature XAS Study. AIP Conference Proceedings, 2007, , .	0.4	0
131	Couleurs et Ã©maux. Des dÃ©cors de la Manufacture de SÃ¨vres Ã la rÃ©activitÃ© des pigments. , 2019, , 26-29.	0.1	0