

# Dominique de Ligny

## List of Publications by Year in descending order

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114  
papers

3,210  
citations

186265

28  
h-index

175258

52  
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119  
all docs

119  
docs citations

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times ranked

3519  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nucleation mechanisms in a SiO <sub>2</sub> -Li <sub>2</sub> O-P <sub>2</sub> O <sub>5</sub> -ZrO <sub>2</sub> biomedical glass-ceramic: Insights on crystallisation, residual glasses and Zr <sup>4+</sup> structural environment. Journal of the European Ceramic Society, 2022, 42, 1762-1775.	5.7	16
2	In situ combined stress- and temperature-dependent Raman spectroscopy of Li-doped (Na,K)NbO <sub>3</sub> . Journal of the American Ceramic Society, 2022, 105, 2735-2743.	3.8	8
3	Glass formation, physical and structural investigation studies of the (90-x) Sb <sub>2</sub> O <sub>3</sub> -10WO <sub>3</sub> -xNaPO <sub>3</sub> glasses. Materials Today Communications, 2022, 30, 103226.	1.9	0
4	Ultra-Short-Pulse Laser Filaments for Float Glass Cutting: Influence of Laser Parameters on Micro Cracks Formation. Frontiers in Physics, 2022, 10, .	2.1	4
5	Eu <sup>3+</sup> -doped lithium tellurite glasses prepared under vacuum condition: Spectroscopic investigation and energy transfer mechanism. Journal of Luminescence, 2022, 246, 118812.	3.1	3
6	Room temperature deposition of freestanding BaTiO <sub>3</sub> films: temperature-induced irreversible structural and chemical relaxation. Journal of Materials Science, 2022, 57, 13264-13286.	3.7	2
7	Melting Curves of Triolein Polymorphs. JAOCS, Journal of the American Oil Chemists' Society, 2021, 98, 211-219.	1.9	0
8	Thermal Evolutions to Glass-Ceramics Bearing Calcium Tungstate Crystals in Borate Glasses Doped with Photoluminescent Eu <sup>3+</sup> Ions. Materials, 2021, 14, 952.	2.9	7
9	Utilizing Rare-Earth-Elements Luminescence and Vibrational-Spectroscopies to Follow High Pressure Densification of Soda-Lime Glass. Materials, 2021, 14, 1831.	2.9	2
10	Impact of magnesium on the structure of aluminoborosilicate glasses: A solid-state NMR and Raman spectroscopy study. Journal of the American Ceramic Society, 2021, 104, 4518-4536.	3.8	26
11	Enhanced Electromechanical Response and Thermal Stability of 0.93(Na <sub>1/2</sub> Bi <sub>1/2</sub> )TiO <sub>3</sub> ·0.07BaTiO <sub>3</sub> Through Aerosol Deposition of Base Metal Electrodes. Advanced Materials Interfaces, 2021, 8, 2100309.	3.7	7
12	Coupling Raman, Brillouin and Nd <sup>3+</sup> Photo Luminescence Spectroscopy to Distinguish the Effect of Uniaxial Stress from Cooling Rate on Soda-Lime Silicate Glass. Materials, 2021, 14, 3584.	2.9	4
13	Cerium speciation in silicate glasses: Structure-property relationships. Journal of Non-Crystalline Solids, 2021, 563, 120785.	3.1	13
14	Correlation between mechanical and structural properties as a function of temperature within the TeO <sub>2</sub> -TiO <sub>2</sub> -ZnO ternary system. Journal of Non-Crystalline Solids, 2020, 528, 119716.	3.1	5
15	Development of magnesium-aluminum-silicate glass-ceramics nucleated with Nb <sub>2</sub> O <sub>5</sub> . International Journal of Applied Glass Science, 2020, 11, 155-169.	2.0	9
16	Determining the local pressure during aerosol deposition using glass memory. Journal of the American Ceramic Society, 2020, 103, 2443-2452.	3.8	11
17	Shape-anisotropic cobalt-germanium-borate glass flakes as novel Li-ion battery anodes. Powder Technology, 2020, 363, 218-231.	4.2	14
18	Cooling rate calibration and mapping of ultra-short pulsed laser modifications in fused silica by Raman and Brillouin spectroscopy. International Journal of Extreme Manufacturing, 2020, 2, 035001.	12.7	16

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19	Influence of Al <sub>2</sub> O <sub>3</sub> Addition on Structure and Mechanical Properties of Borosilicate Glasses. <i>Frontiers in Materials</i> , 2020, 7, .	2.4	14
20	Surface Probing of Ultra-Short-Pulse Laser Filament Cut Window Glass and the Impact on the Separation Behavior. <i>Advanced Engineering Materials</i> , 2020, 22, 2000471.	3.5	4
21	Relaxation behavior of densified sodium aluminoborate glass. <i>Acta Materialia</i> , 2020, 198, 153-167.	7.9	5
22	Strain-activated light-induced halide segregation in mixed-halide perovskite solids. <i>Nature Communications</i> , 2020, 11, 6328.	12.8	86
23	Modeling the effect of the addition of alumina on structural characteristics and tensile deformation response of aluminosilicate glasses. <i>Ceramics International</i> , 2020, 46, 21657-21666.	4.8	3
24	Low-temperature degradation increases the cyclic fatigue resistance of 3Y-TZP in bending. <i>Dental Materials</i> , 2020, 36, 1086-1095.	3.5	15
25	Effects of Medium pH and Preconditioning Treatment on Protein Adsorption on 45S5 Bioactive Glass Surfaces. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000420.	3.7	12
26	Tailoring the Mechanical Properties of Metaluminous Aluminosilicate Glasses by Phosphate Incorporation. <i>Frontiers in Materials</i> , 2020, 7, .	2.4	11
27	The influence of codoping on optical properties and glass connectivity of silica fiber preforms. <i>Ceramics International</i> , 2020, 46, 26251-26259.	4.8	5
28	Influence of Vanadium on Optical and Mechanical Properties of Aluminosilicate Glasses. <i>Frontiers in Materials</i> , 2020, 7, .	2.4	17
29	Thermal and optical properties of binary magnesium tellurite glasses and their link to the glass structure. <i>Journal of Alloys and Compounds</i> , 2020, 823, 153781.	5.5	24
30	Spectroscopic study of the role of alkaline earth oxides in mixed borate glasses - site basicity, polarizability and glass structure. <i>Journal of Non-Crystalline Solids</i> , 2020, 533, 119892.	3.1	27
31	Indentation densification of fused silica assessed by raman spectroscopy and constitutive finite element analysis. <i>Journal of the American Ceramic Society</i> , 2020, 103, 3076-3088.	3.8	27
32	Structure-longitudinal sound velocity relationships in glassy anorthite (CaAl <sub>2</sub> Si <sub>2</sub> O <sub>8</sub> ) up to 20 GPa: An in situ Raman and Brillouin spectroscopy study. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 261, 132-144.	3.9	9
33	Wet-chemical porosification of LTCC substrates: Dissolution mechanism and mechanical properties. <i>Microporous and Mesoporous Materials</i> , 2019, 288, 109593.	4.4	7
34	Evidence of polyamorphic transitions during densified SiO <sub>2</sub> glass annealing. <i>Journal of Chemical Physics</i> , 2019, 151, 164502.	3.0	14
35	Bioactive glass coating using aerosol deposition. <i>Ceramics International</i> , 2019, 45, 14728-14732.	4.8	10
36	Structural and optical characterization of crystals obtained via solid state reactions in the In <sub>2</sub> O <sub>3</sub> -TiO <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> pseudoternary system. <i>SN Applied Sciences</i> , 2019, 1, 1.	2.9	1



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55	On the induction of homogeneous bulk crystallization in Eu-doped calcium aluminosilicate glass by applying simultaneous high pressure and temperature. <i>Journal of Applied Physics</i> , 2016, 119, 245901.	2.5	3
56	Ca neighbors from XANES spectroscopy: A tool to investigate structure, redox, and nucleation processes in silicate glasses, melts, and crystals. <i>American Mineralogist</i> , 2016, 101, 1232-1235.	1.9	18
57	<i>In situ</i> structural analysis of calcium aluminosilicate glasses under high pressure. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 315402.	1.8	15
58	Synthesis and luminescent properties of Eu <sup>3+</sup> /Eu <sup>2+</sup> co-doped calcium aluminosilicate glass-ceramics. <i>Journal of Luminescence</i> , 2016, 169, 528-533.	3.1	29
59	The structure of haplobasaltic glasses investigated using X-ray absorption near edge structure (XANES) spectroscopy at the Si, Al, Mg, and O K-edges and Ca, Si, and Al L <sub>2,3</sub> -edges. <i>Chemical Geology</i> , 2016, 420, 213-230.	3.3	18
60	In situ structural changes of amorphous diopside (CaMgSi <sub>2</sub> O <sub>6</sub> ) up to 20 GPa: A Raman and O K-edge X-ray Raman spectroscopic study. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 178, 41-61.	3.9	26
61	Development and characterization of lithium-releasing silicate bioactive glasses and their scaffolds for bone repair. <i>Journal of Non-Crystalline Solids</i> , 2016, 432, 65-72.	3.1	63
62	Local densification of a single micron sized silica sphere by uniaxial compression. <i>Scripta Materialia</i> , 2015, 108, 84-87.	5.2	28
63	Emission tunability and local environment in europium-doped OH <sup>-</sup> -free calcium aluminosilicate glasses for artificial lighting applications. <i>Materials Chemistry and Physics</i> , 2015, 156, 214-219.	4.0	25
64	19. In situ High-Temperature Experiments. , 2014, , 779-802.		0
65	13. Advances in Raman Spectroscopy Applied to Earth and Material Sciences. , 2014, , 509-542.		2
66	Pressure-independent Brillouin Fiber Optic Sensors for temperature measurements. <i>Journal of Non-Crystalline Solids</i> , 2014, 401, 36-39.	3.1	5
67	Phase Transformation in Laser-Induced Micro-Explosion in Olivine (Fe,Mg) <sub>2</sub> SiO <sub>4</sub> . <i>Advanced Engineering Materials</i> , 2014, 16, 767-773.	3.5	16
68	Advances in Raman Spectroscopy Applied to Earth and Material Sciences. <i>Reviews in Mineralogy and Geochemistry</i> , 2014, 78, 509-541.	4.8	135
69	Irradiated rare-earth-doped powellite single crystal probed by confocal Raman mapping and transmission electron microscopy. <i>Journal of Raman Spectroscopy</i> , 2014, 45, 383-391.	2.5	15
70	Progress and challenges in advanced ground-based gravitational-wave detectors. <i>General Relativity and Gravitation</i> , 2014, 46, 1.	2.0	2
71	In situ High-Temperature Experiments. <i>Reviews in Mineralogy and Geochemistry</i> , 2014, 78, 779-800.	4.8	27
72	Polyamorphic transitions in silica glass. <i>Journal of Non-Crystalline Solids</i> , 2013, 382, 133-136.	3.1	32

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73	Photoreduction of iron by a synchrotron X-ray beam in low iron content soda-lime silicate glasses. <i>Chemical Geology</i> , 2013, 346, 106-112.	3.3	26
74	Raman Spectroscopy of Adsorbed Water in Clays: First Attempt at Band Assignment. <i>Procedia Earth and Planetary Science</i> , 2013, 7, 203-206.	0.6	13
75	Mapping of rare earth elements in nuclear waste glassâ€‘ceramic using micro laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2013, 87, 139-146.	2.9	55
76	Dynamics of iron-bearing borosilicate melts: Effects of melt structure and composition on viscosity, electrical conductivity and kinetics of redox reactions. <i>Journal of Non-Crystalline Solids</i> , 2013, 373-374, 18-27.	3.1	15
77	Permanent densification of compressed silica glass: a Raman-density calibration curve. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 025402.	1.8	70
78	Chemical Durability of Lanthanumâ€‘Enriched Borosilicate Glass. <i>International Journal of Applied Glass Science</i> , 2013, 4, 383-394.	2.0	23
79	<i>In situ</i> Brillouin study of sodium alumino silicate glasses under pressure. <i>Journal of Chemical Physics</i> , 2013, 139, 074501.	3.0	26
80	Experimental study of dissolution rates of hedenbergitic clinopyroxene at high temperatures: dissolution in water from 25 Å°C to 374 Å°C. <i>European Journal of Mineralogy</i> , 2013, 25, 353-372.	1.3	16
81	Low-frequency Raman scattering under high pressure in diamond anvil cell: Experimental protocol and application to GeO <sub>2</sub> and SiO <sub>2</sub> boson peaks. <i>Journal of Non-Crystalline Solids</i> , 2012, 358, 3156-3160.	3.1	10
82	Progressive transformations of silica glass upon densification. <i>Journal of Chemical Physics</i> , 2012, 137, 124505.	3.0	51
83	Effect of temperature and thermal history on borosilicate glass structure. <i>Physical Review B</i> , 2012, 85, .	3.2	117
84	Correlation between boson peak and anomalous elastic behavior in GeO <sub>2</sub> glass: An <i>in situ</i> Raman scattering study under high-pressure. <i>Journal of Chemical Physics</i> , 2011, 134, 234503.	3.0	24
85	Femtosecond laser induced density changes in GeO <sub>2</sub> and SiO <sub>2</sub> glasses: fictive temperature effect [Invited]. <i>Optical Materials Express</i> , 2011, 1, 605.	3.0	53
86	Observation of O <sub>2</sub> inside voids formed in GeO <sub>2</sub> glass by tightly-focused fs-laser pulses. <i>Optical Materials Express</i> , 2011, 1, 1150.	3.0	39
87	Laser-induced structural changes in pure GeO <sub>2</sub> glasses. <i>Journal of Non-Crystalline Solids</i> , 2011, 357, 2637-2640.	3.1	10
88	Behaviour of the Eu <sup>3+</sup> 5D <sub>0</sub> â†’7F <sub>0</sub> transition in CaMoO <sub>4</sub> powellite type ceramics under Ar and Pb ions implantation. <i>Optical Materials</i> , 2011, 34, 386-390.	3.6	21
89	Structural heterogeneity and pressure-relaxation in compressed borosilicate glasses by <i>in situ</i> small angle X-ray scattering. <i>Journal of Chemical Physics</i> , 2011, 134, 204502.	3.0	32
90	Luminescent centres in pezzottaite, CsBe <sub>2</sub> LiAl <sub>2</sub> Si <sub>6</sub> O <sub>18</sub> . <i>European Journal of Mineralogy</i> , 2010, 22, 605-612.	1.3	7

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91	Boron Speciation in Soda-Lime Borosilicate Glasses Containing Zirconium. Journal of the American Ceramic Society, 2010, 93, 2693-2704.	3.8	111
92	Permanent Ge Coordination Change Induced by Pressure in $\text{La}_2\text{O}_3\text{-B}_2\text{O}_3\text{-GeO}_2$ Glass. Journal of the American Ceramic Society, 2010, 93, 2726-2730.	3.8	2
93	Effect of chemical composition on borosilicate glass behavior under irradiation. Journal of Non-Crystalline Solids, 2010, 356, 388-393.	3.1	117
94	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
95	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
96	Elastic anomalous behavior of silica glass under high-pressure: In-situ Raman study. Journal of Non-Crystalline Solids, 2009, 355, 1095-1098.	3.1	38
97	Silica under hydrostatic pressure: A non continuous medium behavior. Journal of Non-Crystalline Solids, 2009, 355, 2422-2424.	3.1	34
98	Structure of spinel at high temperature using in-situ XANES study at the Al and Mg K-edge. Journal of Physics: Conference Series, 2009, 190, 012178.	0.4	2
99	Kinetics of iron redox reaction in silicate melts: A high temperature Xanes study on an alkali basalt. Journal of Physics: Conference Series, 2009, 190, 012182.	0.4	10
100	Contribution of neodymium optical spectroscopy to the crystal growth study of a silicate apatite in a glassy matrix. Optical Materials, 2008, 30, 1694-1698.	3.6	8
101	Simulation of $\text{Eu}^{3+}$ luminescence spectra of borosilicate glasses by molecular dynamics calculations. Optical Materials, 2008, 30, 1689-1693.	3.6	5
102	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
103	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
104	Iron Redox Reactions in Model Nuclear Waste Glasses and Melts. Materials Research Society Symposia Proceedings, 2008, 1124, 1.	0.1	2
105	The Silicon Environment in Silica Polymorphs, Aluminosilicate Crystals and Melts: An In Situ High Temperature XAS Study. AIP Conference Proceedings, 2007, , .	0.4	0
106	Investigation of Aluminate and $\text{Al}_2\text{O}_3$ Crystals and Melts at High Temperature Using XANES Spectroscopy. AIP Conference Proceedings, 2007, , .	0.4	3
107	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
108	Behaviour of simplified nuclear waste glasses under gold ions implantation: A microluminescence study. Journal of Nuclear Materials, 2007, 362, 480-484.	2.7	15

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109	Low-temperature heat capacity of GeO <sub>2</sub> and B <sub>2</sub> O <sub>3</sub> glasses: thermophysical and structural implications. <i>Journal of Non-Crystalline Solids</i> , 2003, 315, 20-30.	3.1	32
110	Heat capacity and entropy of rutile (TiO <sub>2</sub> ) and nepheline (NaAlSi <sub>3</sub> O <sub>8</sub> ). <i>Physics and Chemistry of Minerals</i> , 2002, 29, 267-272.	0.8	40
111	Energetics of kaolin polymorphs. <i>American Mineralogist</i> , 1999, 84, 506-516.	1.9	43
112	Entropy of calcium and magnesium aluminosilicate glasses. <i>Chemical Geology</i> , 1996, 128, 113-128.	3.3	24
113	High-temperature heat capacity and thermal expansion of SrTiO <sub>3</sub> and SrZrO <sub>3</sub> perovskites. <i>Physical Review B</i> , 1996, 53, 3013-3022.	3.2	301
114	Raman and fluorescence. , 0, , 61-82.		9