Morten Mattrup SmedskjÃ¦r

List of Publications by Year
in descending order

199 papers	5,977 citations	76294 40 h-index	114418 63 g-index
201 all docs	201 docs citations	201 times ranked	2847 citing authors

#	Article	IF	Citations
1	Topological Principles of Borosilicate Glass Chemistry. Journal of Physical Chemistry B, 2011, 115, 12930-12946.	1.2	289
2	Prediction of Glass Hardness Using Temperature-Dependent Constraint Theory. Physical Review Letters, 2010, 105, 115503.	2.9	225
3	Accelerating the Design of Functional Glasses through Modeling. Chemistry of Materials, 2016, 28, 4267-4277.	3.2	204
4	Quantitative Design of Glassy Materials Using Temperature-Dependent Constraint Theory. Chemistry of Materials, 2010, 22, 5358-5365.	3.2	156
5	Structure and properties of sodium aluminosilicate glasses from molecular dynamics simulations. Journal of Chemical Physics, 2013, 139, 044507.	1.2	127
6	A new transferable interatomic potential for molecular dynamics simulations of borosilicate glasses. Journal of Non-Crystalline Solids, 2018, 498, 294-304.	1.5	121
7	Discovery of Ultra-Crack-Resistant Oxide Glasses with Adaptive Networks. Chemistry of Materials, 2017, 29, 5865-5876.	3.2	113
8	Cooling rate effects in sodium silicate glasses: Bridging the gap between molecular dynamics simulations and experiments. Journal of Chemical Physics, 2017, 147, 074501.	1.2	107
9	Predicting the dissolution kinetics of silicate glasses using machine learning. Journal of Non-Crystalline Solids, 2018, 487, 37-45.	1.5	100
10	Compositionâ€"structureâ€"property relationships in boroaluminosilicate glasses. Journal of Non-Crystalline Solids, 2012, 358, 993-1002.	1.5	98
11	Statistical mechanics of glass. Journal of Non-Crystalline Solids, 2014, 396-397, 41-53.	1.5	96
12	Structure and mechanical properties of compressed sodium aluminosilicate glasses: Role of non-bridging oxygens. Journal of Non-Crystalline Solids, 2016, 441, 49-57.	1.5	89
13	Predicting the Youngâ€™s Modulus of Silicate Glasses using High-Throughput Molecular Dynamics Simulations and Machine Learning. Scientific Reports, 2019, 9, 8739.	1.6	86
14	Mixed alkaline earth effect in sodium aluminosilicate glasses. Journal of Non-Crystalline Solids, 2013, 369, 61-68.	1.5	85
15	Fracture toughness anomalies: Viewpoint of topological constraint theory. Acta Materialia, 2016, 121, 234-239.	3.8	84
16	Fracture toughness of a metalâ€"organic framework glass. Nature Communications, 2020, 11, 2593.	5.8	76
17	Structural origin of high crack resistance in sodium aluminoborate glasses. Journal of Non-Crystalline Solids, 2017, 460, 54-65.	1.5	69
18	Irreversibility of Pressure Induced Boron Speciation Change in Glass. Scientific Reports, 2014, 4, 3770.	1.6	65

#	Article	IF	Citations
19	Structure of boroaluminosilicate glasses: Impact of [Al<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>O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>]/[SiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:	1.1	60
20	Predicting the dissolution kinetics of silicate glasses by topology-informed machine learning. Npj Materials Degradation, 2019, 3, .	2.6	59
21	Pressure-Induced Densification of Oxide Glasses at the Glass Transition. Frontiers in Materials, 2017, 4, .	1.2	56
22	Elastic and micromechanical properties of isostatically compressed sodaâ€“limeâ€“borate glasses. Journal of Non-Crystalline Solids, 2013, 364, 44-52.	1.5	54
23	Indentation deformation mechanism of isostatically compressed mixed alkali aluminosilicate glasses. Journal of Non-Crystalline Solids, 2015, 426, 175-183.	1.5	53
24	Mixed alkaline earth effect in the compressibility of aluminosilicate glasses. Journal of Chemical Physics, 2014, 140, 054511.	1.2	52
25	Correlating the Network Topology of Oxide Glasses with their Chemical Durability. Journal of Physical Chemistry B, 2017, 121, 1139-1147.	1.2	52
26	Effect of thermal history and chemical composition on hardness of silicate glasses. Journal of Non-Crystalline Solids, 2010, 356, 893-897.	1.5	51
27	Unique effects of thermal and pressure histories on glass hardness: Structural and topological origin. Journal of Chemical Physics, 2015, 143, 164505.	1.2	51
28	Advancing the Mechanical Performance of Glasses: Perspectives and Challenges. Advanced Materials, 2022, 34, e2109029.	11.1	50
29	Sodium diffusion in boroaluminosilicate glasses. Journal of Non-Crystalline Solids, 2011, 357, 3744-3750.	1.5	49
30	Topological Model for the Viscosity of Multicomponent Glassâ€Forming Liquids. International Journal of Applied Glass Science, 2013, 4, 408-413.	1.0	48
31	Composition-Structure-Property Relations of Compressed Borosilicate Glasses. Physical Review Applied, 2014, 2, .	1.5	47
32	Structure-topology-property correlations of sodium phosphosilicate glasses. Journal of Chemical Physics, 2015, 143, 064510.	1.2	47
33	Thermometer Effect: Origin of the Mixed Alkali Effect in Glass Relaxation. Physical Review Letters, 2017, 119, 095501.	2.9	47
34	Observation of indentation-induced shear bands in a metalâ"organic framework glass. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10149-10154.	3.3	47
35	Hardness and incipient plasticity in silicate glasses: Origin of the mixed modifier effect. Applied Physics Letters, 2014, 104, .	1.5	46
36	Unified physics of stretched exponential relaxation and Weibull fracture statistics. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 6121-6127.	1.2	44

#	Article	IF	Citations
37	Structure of MgO/CaO sodium aluminosilicate glasses: Raman spectroscopy study. Journal of Non-Crystalline Solids, 2017, 470, 145-151.	1.5	43
38	Topological Model for Boroaluminosilicate Glass Hardness. Frontiers in Materials, 2014, 1, .	1.2	42
39	Indentation deformation in oxide glasses: Quantification, structural changes, and relation to cracking. Journal of Non-Crystalline Solids: X, 2019, 1, 100007.	0.5	42
40	Ionic diffusion and the topological origin of fragility in silicate glasses. Journal of Chemical Physics, 2009, 131, 244514.	1.2	41
41	Near-infrared emission from Euâ€"Yb doped silicate glasses subjected to thermal reduction. Applied Physics Letters, 2011, 98, .	1.5	41
42	Impact of ZnO on the structure and properties of sodium aluminosilicate glasses: Comparison with alkaline earth oxides. Journal of Non-Crystalline Solids, 2013, 381, 58-64.	1.5	41
43	Revealing hidden medium-range order in amorphous materials using topological data analysis. Science Advances, 2020, 6, .	4.7	41
44	Metalâ€"Organic Framework Glasses Possess Higher Thermal Conductivity than Their Crystalline Counterparts. ACS Applied Materials & Interfaces, 2020, 12, 18893-18903.	4.0	41
45	Impact of network topology on cationic diffusion and hardness of borate glass surfaces. Journal of Chemical Physics, 2010, 133, 154509.	1.2	40
46	Effect of Na2CO3 as foaming agent on dynamics and structure of foam glass melts. Journal of Non-Crystalline Solids, 2014, 400, 1-5.	1.5	39
47	Principles of PyrexÂ® glass chemistry: structureâ€"property relationships. Applied Physics A: Materials Science and Processing, 2014, 116, 491-504.	1.1	39
48	On the origin of the mixed alkali effect on indentation in silicate glasses. Journal of Non-Crystalline Solids, 2014, 406, 22-26.	1.5	39
49	Mechanics, Ionics, and Optics of Metalâ€"Organic Framework and Coordination Polymer Glasses. Nano Letters, 2021, 21, 6382-6390.	4.5	39
50	Breaking the Limit of Microâ€Ductility in Oxide Glasses. Advanced Science, 2019, 6, 1901281.	5.6	38
51	Prediction of the Young's modulus of silicate glasses by topological constraint theory. Journal of Non-Crystalline Solids, 2019, 514, 15-19.	1.5	38
52	Microscopic Origins of Compositional Trends in Aluminosilicate Glass Properties. Journal of the American Ceramic Society, 2013, 96, 1436-1443.	1.9	37
53	On the relation between fracture toughness and crack resistance in oxide glasses. Journal of Non-Crystalline Solids, 2020, 534, 119946.	1.5	37
54	Ion exchange strengthening and thermal expansion of glasses: Common origin and critical role of network connectivity. Journal of Non-Crystalline Solids, 2017, 455, 70-74.	1.5	36

#	Article	IF	Citations
55	Statistical Mechanical Modeling of Borate Glass Structure and Topology: Prediction of Superstructural Units and Glass Transition Temperature. Journal of Physical Chemistry B, 2019, 123, 1206-1213.	1.2	36
56	Fragility and configurational heat capacity of calcium aluminosilicate glass-forming liquids. Journal of Non-Crystalline Solids, 2017, 461, 24-34.	1.5	35
57	The hydrophilic-to-hydrophobic transition in glassy silica is driven by the atomic topology of its surface. Journal of Chemical Physics, 2018, 148, 074503.	1.2	35
58	Dissolution Kinetics of Hot Compressed Oxide Glasses. Journal of Physical Chemistry B, 2017, 121, 9063-9072.	1.2	33
59	Network Glasses Under Pressure: Permanent Densification in Modifier-Free <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Al</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></m mathvariant="normal">O</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub><mml:mtext>â^’</m mathvariant="normal">B</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow><. Physical Review Applied, 2017, 7, .	1.5	33
60	Modifier field strength effects on densification behavior and mechanical properties of alkali aluminoborate glasses. Physical Review Materials, 2017, 1, .	0.9	33
61	Universal Preparation of Novel Metal and Semiconductor Nanoparticleâ€“Glass Composites with Excellent Nonlinear Optical Properties. Journal of Physical Chemistry C, 2011, 115, 24598-24604.	1.5	32
62	Structural Compromise between High Hardness and Crack Resistance in Aluminoborate Glasses. Journal of Physical Chemistry B, 2018, 122, 6287-6295.	1.2	32
63	The role of the network-modifier's field-strength in the chemical durability of aluminoborate glasses. Journal of Non-Crystalline Solids, 2019, 505, 279-285.	1.5	32
64	Hardness of silicate glasses: Atomic-scale origin of the mixed modifier effect. Journal of Non-Crystalline Solids, 2018, 489, 16-21.	1.5	31
65	Cooling rate effects on the structure of 45S5 bioglass: Insights from experiments and simulations. Journal of Non-Crystalline Solids, 2020, 534, 119952.	1.5	31
66	Bond Switching in Densified Oxide Glass Enables Record-High Fracture Toughness. ACS Applied Materials & Interfaces, 2021, 13, 17753-17765.	4.0	31
67	Crystallisation behaviour and high-temperature stability of stone wool fibres. Journal of the European Ceramic Society, 2010, 30, 1287-1295.	2.8	30
68	Influence of aluminum speciation on the stability of aluminosilicate glasses against crystallization. Applied Physics Letters, 2012, 101, 041906.	1.5	30
69	Revisiting the Dependence of Poissonâ€™s Ratio on Liquid Fragility and Atomic Packing Density in Oxide Glasses. Materials, 2019, 12, 2439.	1.3	30
70	Composition and pressure effects on the structure, elastic properties and hardness of aluminoborosilicate glass. Journal of Non-Crystalline Solids, 2020, 530, 119797.	1.5	30
71	Structural dependence of chemical durability in modified aluminoborate glasses. Journal of the American Ceramic Society, 2019, 102, 1157-1168.	1.9	29
72	Inward Cationic Diffusion and Formation of Silica-Rich Surface Nanolayer of Glass. Chemistry of Materials, 2009, 21, 1242-1247.	3.2	28

#	Article	IF	Citations
73	Elastic interpretation of the glass transition in aluminosilicate liquids. Physical Review B, 2012, 85, .	1.1	27
74	Elasticity, hardness, and fracture toughness of sodium aluminoborosilicate glasses. Journal of the American Ceramic Society, 2019, 102, 4520-4537.	1.9	27
75	Hardness of Oxynitride Glasses: Topological Origin. Journal of Physical Chemistry B, 2015, 119, 4109-4115.	1.2	26
76	Impact of nitridation of metaphosphate glasses on liquid fragility. Journal of Non-Crystalline Solids, 2016, 441, 22-28.	1.5	26
77	Atomic picture of structural relaxation in silicate glasses. Applied Physics Letters, 2019, 114, .	1.5	26
78	Inward cationic diffusion in glass. Journal of Non-Crystalline Solids, 2009, 355, 908-912.	1.5	25
79	Linking Equilibrium and Nonequilibrium Dynamics in Glass-Forming Systems. Journal of Physical Chemistry B, 2016, 120, 3226-3231.	1.2	25
80	Relaxation kinetics of the mechanical properties of an aluminosilicate glass. Journal of Non-Crystalline Solids, 2013, 362, 40-46.	1.5	24
81	Structure-property relations in calcium aluminate glasses containing different divalent cations and SiO 2. Journal of Non-Crystalline Solids, 2015, 427, 160-165.	1.5	24
82	Universal behavior of changes in elastic moduli of hot compressed oxide glasses. Chemical Physics Letters, 2016, 651, 88-91.	1.2	24
83	Glass-forming ability of soda lime borate liquids. Journal of Non-Crystalline Solids, 2012, 358, 658-665.	1.5	23
84	Temperature-dependent densification of sodium borosilicate glass. RSC Advances, 2015, 5, 78845-78851.	1.7	23
85	Radiation effects on structure and mechanical properties of borosilicate glasses. Journal of Nuclear Materials, 2021, 552, 153025.	1.3	23
86	Sub-critical crack growth in silicate glasses: Role of network topology. Applied Physics Letters, 2015, 107, .	1.5	23
87	Tunable photoluminescence induced by thermal reduction in rare earth doped glasses. Journal of Materials Chemistry, 2011, 21, 6614.	6.7	22
88	Minimalist landscape model of glass relaxation. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 3446-3459.	1.2	22
89	Pressure-Induced Changes in Interdiffusivity and Compressive Stress in Chemically Strengthened Glass. ACS Applied Materials & Interfaces, 2014, 6, 10436-10444.	4.0	22
90	Raman spectroscopy study of pressure-induced structural changes in sodium borate glass. Journal of Non-Crystalline Solids, 2016, 443, 130-135.	1.5	22

#	Article	IF	Citations
91	Modifying glass surfaces via internal diffusion. Journal of Non-Crystalline Solids, 2010, 356, 290-298.	1.5	21
92	Photoelastic response of alkaline earth aluminosilicate glasses. Optics Letters, 2012, 37, 293.	1.7	21
93	Volume and structural relaxation in compressed sodium borate glass. Physical Chemistry Chemical Physics, 2016, 18, 29879-29891.	1.3	21
94	Time and humidity dependence of indentation cracking in aluminosilicate glasses. Journal of Non-Crystalline Solids, 2018, 491, 64-70.	1.5	21
95	Predicting the early-stage creep dynamics of gels from their static structure by machine learning. Acta Materialia, 2021, 210, 116817.	3.8	21
96	Effect of nanoscale phase separation on the fracture behavior of glasses: Toward tough, yet transparent glasses. Physical Review Materials, 2018, 2, .	0.9	21
97	Exploration of glassy state in Prussian blue analogues. Nature Communications, 2022, 13, .	5.8	21
98	Effects of Thermal and Pressure Histories on the Chemical Strengthening of Sodium Aluminosilicate Glass. Frontiers in Materials, 2016, 3, .	1.2	20
99	Crucial effect of angular flexibility on the fracture toughness and nano-ductility of aluminosilicate glasses. Journal of Non-Crystalline Solids, 2016, 454, 46-51.	1.5	20
100	Mechanical property optimization of a zinc borate glass by lanthanum doping. Journal of Non-Crystalline Solids, 2019, 520, 119461.	1.5	20
101	Predicting Fracture Propensity in Amorphous Alumina from Its Static Structure Using Machine Learning. ACS Nano, 2021, 15, 17705-17716.	7.3	20
102	Persistent Near Infrared Phosphorescence from Rare Earth Ions Co-doped Strontium Aluminate Phosphors. Journal of the Electrochemical Society, 2011, 158, K17.	1.3	19
103	Liquidus surface of MgOâ€“CaOâ€“Al2O3â€“SiO2 glass-forming systems. Journal of Non-Crystalline Solids, 2013, 363, 39-45.	1.5	19
104	A medium range order structural connection to the configurational heat capacity of borateâ€“silicate mixed glasses. Physical Chemistry Chemical Physics, 2016, 18, 10887-10895.	1.3	19
105	Topological engineering of glasses using temperature-dependent constraints. MRS Bulletin, 2017, 42, 29-33.	1.7	19
106	Indentation size effect and the plastic compressibility of glass. Applied Physics Letters, 2014, 104, .	1.5	18
107	Cation Diffusivity and the Mixed Network Former Effect in Borosilicate Glasses. Journal of Physical Chemistry B, 2015, 119, 7106-7115.	1.2	18
108	Theoretical Calculation and Measurement of the Hardness of Diopside. Journal of the American Ceramic Society, 2008, 91, 514-518.	1.9	17

#	Article	IF	Citations
109	Surface-luminescence from thermally reduced bismuth-doped sodium aluminosilicate glasses. Journal of Non-Crystalline Solids, 2012, 358, 3193-3199.	1.5	17
110	Topological Origin of the Network Dilation Anomaly in Ion-Exchanged Glasses. Physical Review Applied, 2017, 8, .	1.5	17
111	Predicting Q-Speciation in Binary Phosphate Glasses Using Statistical Mechanics. Journal of Physical Chemistry B, 2018, 122, 7609-7615.	1.2	17
112	Environmental effects on fatigue of alkaline earth aluminosilicate glass with varying fictive temperature. Journal of Non-Crystalline Solids, 2013, 379, 161-168.	1.5	16
113	Modifier clustering and avoidance principle in borosilicate glasses: A molecular dynamics study. Journal of Chemical Physics, 2019, 150, 044502.	1.2	16
114	Indentation cracking and deformation mechanism of sodium aluminoborosilicate glasses. Journal of the American Ceramic Society, 2020, 103, 1656-1665.	1.9	16
115	Predictive model for the composition dependence of glassy dynamics. Journal of the American Ceramic Society, 2018, 101, 1169-1179.	1.9	16
116	Aqueous batch rebinding and selectivity studies on sucrose imprinted polymers. Biosensors and Bioelectronics, 2009, 25, 623-628.	5.3	15
117	Are the dynamics of a glass embedded in its elastic properties?. Journal of Chemical Physics, 2013, 138, 12A501.	1.2	15
118	Mixed alkali silicophosphate oxynitride glasses: Structure-property relations. Journal of Non-Crystalline Solids, 2017, 462, 51-64.	1.5	15
119	Competitive effects of free volume, rigidity, and selfâ€adaptivity on indentation response of silicoaluminoborate glasses. Journal of the American Ceramic Society, 2020, 103, 944-954.	1.9	15
120	New insights into the structure of sodium silicate glasses by force-enhanced atomic refinement. Journal of Non-Crystalline Solids, 2020, 536, 120006.	1.5	15
121	Compositional control of the photoelastic response of silicate glasses. Optical Materials, 2013, 35, 2435-2439.	1.7	14
122	Alkali diffusivity in alkaline earth sodium boroaluminosilicate glasses. Solid State Ionics, 2014, 263, 95-98.	1.3	14
123	Analytical model of the network topology and rigidity of calcium aluminosilicate glasses. Journal of the American Ceramic Society, 2021, 104, 3947-3962.	1.9	14
124	Boron anomaly in the thermal conductivity of lithium borate glasses. Physical Review Materials, 2019, 3, .	0.9	14
125	Beyond the Average: Spatial and Temporal Fluctuations in Oxide Glass-Forming Systems. Chemical Reviews, 2023, 123, 1774-1840.	23.0	14
126	Redox reactions and inward cationic diffusion in glasses caused by CO and H2 gases. Solid State Ionics, 2009, 180, 1121-1124.	1.3	13

#	Article	IF	Citations
127	Aging in chalcohalide glasses: Origin and consequences. Journal of Non-Crystalline Solids, 2012, 358, 129-132.	1.5	13
128	Viscosity and Fragility of Alkalineâ€Earth Sodium Boroaluminosilicate Liquids. Journal of the American Ceramic Society, 2013, 96, 2831-2838.	1.9	13
129	Role of elastic deformation in determining the mixed alkaline earth effect of hardness in silicate glasses. Journal of Applied Physics, 2015, 117, .	1.1	13
130	Thermal history dependence of indentation induced densification in an aluminosilicate glass. Journal of Non-Crystalline Solids, 2016, 445-446, 34-39.	1.5	13
131	Pressure-induced structural changes in titanophosphate glasses studied by neutron and X-ray total scattering analyses. Journal of Non-Crystalline Solids, 2018, 483, 50-59.	1.5	13
132	Atomic structure of hot compressed borosilicate glasses. Journal of the American Ceramic Society, 2020, 103, 6215-6225.	1.9	13
133	Distinguishability of particles in glass-forming systems. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 5392-5403.	1.2	12
134	Pressure-driven structural depolymerization of zinc phosphate glass. Journal of Non-Crystalline Solids, 2017, 469, 31-38.	1.5	12
135	Nano-phase separation and structural ordering in silica-rich mixed network former glasses. Physical Chemistry Chemical Physics, 2018, 20, 15707-15717.	1.3	12
136	Topological model of alkali germanate glasses and exploration of the germanate anomaly. Journal of the American Ceramic Society, 2020, 103, 4224-4233.	1.9	12
137	Hypersensitivity of the Glass Transition to Pressure History in a Metalâ€“Organic Framework Glass. Chemistry of Materials, 2022, 34, 5030-5038.	3.2	12
138	Surface modification of polyvalent element-containing glasses. Applied Surface Science, 2009, 256, 202-207.	3.1	11
139	Correlation between Alkaline Earth Diffusion and Fragility of Silicate Glasses. Journal of Physical Chemistry B, 2009, 113, 11194-11200.	1.2	11
140	Non-conservation of the total alkali concentration in ion-exchanged glass. Journal of Non-Crystalline Solids, 2014, 387, 71-75.	1.5	11
141	Predicting Composition-Structure Relations in Alkali Borosilicate Glasses Using Statistical Mechanics. Frontiers in Materials, 2019, 6, .	1.2	11
142	Bond switching is responsible for nanoductility in zeolitic imidazolate framework glasses. Dalton Transactions, 2021, 50, 6126-6132.	1.6	11
143	Accessing Forbidden Glass Regimes through High-Pressure Sub-Tg Annealing. Scientific Reports, 2017, 7, 46631.	1.6	10
144	Structure, properties, and fabrication of calcium aluminateâ€based glasses. International Journal of Applied Glass Science, 2019, 10, 488-501.	1.0	10

#	ARTICLE	IF	CITATIONS
145	Permanent Densification of Calcium Aluminophosphate Glasses. Frontiers in Materials, 2019, 6, .	1.2	10
146	Modeling the nanoindentation response of silicate glasses by peridynamic simulations. Journal of the American Ceramic Society, 2021, 104, 3531-3544.	1.9	10
147	Deformation and cracking behavior of La2O3-doped oxide glasses with high Poisson's ratio. Journal of Non-Crystalline Solids, 2018, 494, 86-93.	1.5	9
148	Quantifying the internal stress in over-constrained glasses by molecular dynamics simulations. Journal of Non-Crystalline Solids: X, 2019, 1, 100013.	0.5	9
149	Heat conduction in oxide glasses: Balancing diffusons and propagons by network rigidity. Applied Physics Letters, 2020, 117, .	1.5	9
150	Mixed Alkali Effect in Silicate Glass Structure: Viewpoint of ²⁹Si Nuclear Magnetic Resonance and Statistical Mechanics. Journal of Physical Chemistry B, 2020, 124, 10292-10299.	1.2	9
151	Thermal conductivity of densified borosilicate glasses. Journal of Non-Crystalline Solids, 2021, 557, 120644.	1.5	9
152	Achieving ultrahigh crack resistance in glass through humid aging. Physical Review Materials, 2020, 4, .	0.9	9
153	Oxide glasses under pressure: Recent insights from experiments and simulations. Journal of Applied Physics, 2022, 131, .	1.1	9
154	Inward and Outward Diffusion of Modifying Ions and its Impact on the Properties of Glasses and Glassâ€“Ceramics. International Journal of Applied Glass Science, 2011, 2, 117-128.	1.0	8
155	Liquidus Temperature of <scp>S</scp>r<scp>O</scp>â€<scp>A</scp>l₂<scp>O</scp>₃â€<scp>S</scp>i<scp>O</scp><sub>2</su Glassâ€Forming Compositions. International Journal of Applied Glass Science, 2013, 4, 225-230.	1.0	8
156	Effect of divalent cations and SiO2 on the crystallization behavior of calcium aluminate glasses. Journal of Non-Crystalline Solids, 2015, 413, 20-23.	1.5	8
157	Deformation mechanism of a metalâ€“organic framework glass under indentation. Physical Chemistry Chemical Physics, 2021, 23, 16923-16931.	1.3	8
158	Interatomic potential parameterization using particle swarm optimization: Case study of glassy silica. Journal of Chemical Physics, 2021, 154, 134505.	1.2	8
159	Combining high hardness and crack resistance in mixed network glasses through high-temperature densification. Physical Review Materials, 2018, 2, .	0.9	8
160	Mechanical Properties of Oxide Glasses. Reviews in Mineralogy and Geochemistry, 2022, 87, 229-281.	2.2	8
161	Abnormal Luminescence Behavior in Bi-Doped Borosilicate Glasses. Journal of the Electrochemical Society, 2011, 158, G151.	1.3	7
162	Relationship between viscous dynamics and the configurational thermal expansion coefficient of glass-forming liquids. Journal of Non-Crystalline Solids, 2012, 358, 648-651.	1.5	7

#	Article	IF	Citations
163	Pressure-induced structural transformations in phosphorus oxynitride glasses. Journal of Non-Crystalline Solids, 2016, 452, 153-160.	1.5	7
164	On the equivalence of vapor-deposited and melt-quenched glasses. Journal of Chemical Physics, 2020, 152, 164504.	1.2	7
165	Structural densification of lithium phosphoaluminoborate glasses. Journal of the American Ceramic Society, 2021, 104, 1345-1359.	1.9	7
166	Toughening of soda-lime-silica glass by nanoscale phase separation: Molecular dynamics study. Physical Review Materials, 2021, 5, .	0.9	7
167	Revealing the medium-range structure of glassy silica using force-enhanced atomic refinement. Journal of Non-Crystalline Solids, 2021, 573, 121138.	1.5	7
168	Resolving the Conflict between Strength and Toughness in Bioactive Silicaâ€“Polymer Hybrid Materials. ACS Nano, 2022, 16, 9748-9761.	7.3	7
169	Inward Cationic Diffusion and Percolation Transition in Glassâ€“Ceramics. Journal of the American Ceramic Society, 2010, 93, 2161-2163.	1.9	6
170	Structural stability of NaPON glass upon heating in air and nitrogen. Journal of Non-Crystalline Solids, 2018, 482, 137-146.	1.5	6
171	Structural impact of nitrogen incorporation on properties of alkali germanophosphate glasses. Journal of the American Ceramic Society, 2018, 101, 5004-5019.	1.9	6
172	Predicting Cation Interactions in Alkali Aluminoborate Glasses using Statistical Mechanics. Journal of Non-Crystalline Solids, 2020, 544, 120099.	1.5	6
173	Structure Dependence of Poissonâ€™s Ratio in Cesium Silicate and Borate Glasses. Materials, 2020, 13, 2837.	1.3	6
174	Decoupling of indentation modulus and hardness in silicate glasses: Evidence of a shear- to densification-dominated transition. Journal of Non-Crystalline Solids, 2021, 553, 120518.	1.5	6
175	Photoelastic response of permanently densified oxide glasses. Optical Materials, 2017, 67, 155-161.	1.7	5
176	Competitive effects of modifier charge and size on mechanical and chemical resistance of aluminoborate glasses. Journal of Non-Crystalline Solids, 2018, 499, 264-271.	1.5	5
177	Statistical Mechanical Model of Topological Fluctuations and the Intermediate Phase in Binary Phosphate Glasses. Journal of Physical Chemistry B, 2019, 123, 7640-7648.	1.2	5
178	Liquid fragility determination of oxide glassâ€formers using temperatureâ€modulated DSC. International Journal of Applied Glass Science, 2019, 10, 321-329.	1.0	5
179	Relaxation behavior of densified sodium aluminoborate glass. Acta Materialia, 2020, 198, 153-167.	3.8	5
180	Rigidity theory of glass: Determining the onset temperature of topological constraints by molecular dynamics. Journal of Non-Crystalline Solids, 2021, 554, 120614.	1.5	5

#	Article	IF	Citations
181	Flexible inorganicâ€“organic hybrids with dual inorganic components. Materials Today Chemistry, 2021, 22, 100584.	1.7	5
182	Structural control of self-healing silicaâ€“poly(tetrahydropyran)â€“poly(Îµ-caprolactone) hybrids. Journal of Materials Chemistry B, 2021, 9, 4400-4410.	2.9	4
183	A glass act. Nature Chemistry, 2021, 13, 723-724.	6.6	4
184	Statistical mechanical model for the formation of octahedral silicon in phosphosilicate glasses. Journal of the American Ceramic Society, 2022, 105, 1031-1038.	1.9	4
185	StatMechGlass: Python based software for compositionâ€“structure prediction in oxide glasses using statistical mechanics. SoftwareX, 2022, 17, 100913.	1.2	4
186	Confocal depth-resolved micro-X-ray absorption spectroscopy study of chemically strengthened boroaluminosilicate glasses. RSC Advances, 2016, 6, 24060-24065.	1.7	3
187	Parametric study of temperature-modulated differential scanning calorimetry for high-temperature oxide glasses with varying fragility. Journal of Non-Crystalline Solids, 2018, 484, 84-94.	1.5	3
188	Luminescence behaviour of Eu3+ in hot-compressed silicate glasses. Journal of Non-Crystalline Solids: X, 2019, 4, 100041.	0.5	3
189	Mechanical properties of hydrated cesium-lithium aluminoborate glasses. Physical Review Materials, 2021, 5, .	0.9	3
190	Impact of network topology on the thermal and mechanical properties of lithium germanate glasses. Journal of the American Ceramic Society, 2022, 105, 977-989.	1.9	3
191	Vibrational disorder and densification-induced homogenization of local elasticity in silicate glasses. Scientific Reports, 2021, 11, 24454.	1.6	3
192	Fracture energy of high-Poisson's ratio oxide glasses. Journal of Applied Physics, 2022, 131, 245105.	1.1	3
193	Volume relaxation in a borosilicate glass hot compressed by three different methods. Journal of the American Ceramic Society, 2021, 104, 816-823.	1.9	2
194	Irradiation-induced toughening of calcium aluminoborosilicate glasses. Materials Today Communications, 2022, 31, 103649.	0.9	2
195	Correlating structure with mechanical properties in lithium borophosphate glasses. International Journal of Applied Glass Science, 2023, 14, 38-51.	1.0	2
196	Indentation Response of Calcium Aluminoborosilicate Glasses Subjected to Humid Aging and Hot Compression. Materials, 2021, 14, 3450.	1.3	1
197	Bauchy <i>etÂal.</i> Reply:. Physical Review Letters, 2020, 124, 199602.	2.9	0
198	Indentation deformation and cracking behavior of hydrated aluminoborate glasses. Journal of the American Ceramic Society, 2022, 105, 1039-1051.	1.9	0

#	Article	IF	Citations
199	Quantifying the Densification and Shear Flow under Indentation Deformation in Borosilicate Glasses. International Journal of Applied Glass Science, 0, , .	1.0	0