Morten Mattrup Smedskjr

List of Publications by Year in Descending Order

193 papers	4,202 citations	35 h-index	53 g-index
201 ext. papers	5,095 ext. citations	5 avg, IF	6.02 L-index

#	Paper	IF	Citations
193	StatMechGlass: Python based software for composition–structure prediction in oxide glasses using statistical mechanics. *SoftwareX*, **2022**, 17, 100913	2.7	0
192	Statistical mechanical model for the formation of octahedral silicon in phosphosilicate glasses. *Journal of the American Ceramic Society*, **2022**, 105, 1031	3.8	0
191	Indentation deformation and cracking behavior of hydrated aluminoborate glasses. *Journal of the American Ceramic Society*, **2022**, 105, 1039	3.8	
190	Impact of network topology on the thermal and mechanical properties of lithium germanate glasses. *Journal of the American Ceramic Society*, **2022**, 105, 977	3.8	0
189	Topological Constraint Theory of Glass: Counting Constraints by Molecular Dynamics Simulations **2022**, 123-148		
188	Oxide glasses under pressure: Recent insights from experiments and simulations. *Journal of Applied Physics*, **2022**, 131, 170901	2.5	0
187	Mechanical Properties of Oxide Glasses. *Reviews in Mineralogy and Geochemistry*, **2022**, 87, 229-281	7.1	1
186	Irradiation-induced toughening of calcium aluminoborosilicate glasses. *Materials Today Communications*, **2022**, 31, 103649	2.5	0
185	Advancing the Mechanical Performance of Glasses: Perspectives and Challenges. *Advanced Materials*, **2021**, e2109029	24	8
184	Flexible inorganic–organic hybrids with dual inorganic components. *Materials Today Chemistry*, **2021**, 22, 100584	6.2	2
183	Predicting Fracture Propensity in Amorphous Alumina from Its Static Structure Using Machine Learning. *ACS Nano*, **2021**,	16.7	5
182	Modeling the nanoindentation response of silicate glasses by peridynamic simulations. *Journal of the American Ceramic Society*, **2021**, 104, 3531-3544	3.8	2
181	Bond Switching in Densified Oxide Glass Enables Record-High Fracture Toughness. *ACS Applied Materials & Interfaces*, **2021**, 13, 17753-17765	9.5	9
180	Thermal conductivity of densified borosilicate glasses. *Journal of Non-Crystalline Solids*, **2021**, 557, 120644	3.9	3
179	Interatomic potential parameterization using particle swarm optimization: Case study of glassy silica. *Journal of Chemical Physics*, **2021**, 154, 134505	3.9	1
178	Analytical model of the network topology and rigidity of calcium aluminosilicate glasses. *Journal of the American Ceramic Society*, **2021**, 104, 3947-3962	3.8	4
177	Predicting the early-stage creep dynamics of gels from their static structure by machine learning. *Acta Materialia*, **2021**, 210, 116817	8.4	8

176	Indentation Response of Calcium Aluminoborosilicate Glasses Subjected to Humid Aging and Hot Compression. *Materials*, **2021**, 14,	3.5	1
175	Mechanics, Ionics, and Optics of Metal-Organic Framework and Coordination Polymer Glasses. *Nano Letters*, **2021**, 21, 6382-6390	11.5	6
174	Volume relaxation in a borosilicate glass hot compressed by three different methods. *Journal of the American Ceramic Society*, **2021**, 104, 816-823	3.8	1
173	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	3.9	1
172	Structural densification of lithium phosphoaluminoborate glasses. *Journal of the American Ceramic Society*, **2021**, 104, 1345-1359	3.8	0
171	Bond switching is responsible for nanoductility in zeolitic imidazolate framework glasses. *Dalton Transactions*, **2021**, 50, 6126-6132	4.3	7
170	Deformation mechanism of a metal-organic framework glass under indentation. *Physical Chemistry Chemical Physics*, **2021**, 23, 16923-16931	3.6	1
169	Structural control of self-healing silica-poly(tetrahydropyran)-poly(□caprolactone) hybrids. *Journal of Materials Chemistry B*, **2021**, 9, 4400-4410	7.3	2
168	Rigidity theory of glass: Determining the onset temperature of topological constraints by molecular dynamics. *Journal of Non-Crystalline Solids*, **2021**, 554, 120614	3.9	3
167	A glass act. *Nature Chemistry*, **2021**, 13, 723-724	17.6	2
166	Mechanical properties of hydrated cesium-lithium aluminoborate glasses. *Physical Review Materials*, **2021**, 5,	3.2	1
165	Radiation effects on structure and mechanical properties of borosilicate glasses. *Journal of Nuclear Materials*, **2021**, 552, 153025	3.3	3
164	Toughening of soda-lime-silica glass by nanoscale phase separation: Molecular dynamics study. *Physical Review Materials*, **2021**, 5,	3.2	1
163	Revealing the medium-range structure of glassy silica using force-enhanced atomic refinement. *Journal of Non-Crystalline Solids*, **2021**, 573, 121138	3.9	1
162	Vibrational disorder and densification-induced homogenization of local elasticity in silicate glasses.. *Scientific Reports*, **2021**, 11, 24454	4.9	
161	Mixed Alkali Effect in Silicate Glass Structure: Viewpoint of Si Nuclear Magnetic Resonance and Statistical Mechanics. *Journal of Physical Chemistry B*, **2020**, 124, 10292-10299	3.4	6
160	Bauchy et□al. Reply. *Physical Review Letters*, **2020**, 124, 199602	7.4	
159	Topological model of alkali germanate glasses and exploration of the germanate anomaly. *Journal of the American Ceramic Society*, **2020**, 103, 4224-4233	3.8	4

158	New insights into the structure of sodium silicate glasses by force-enhanced atomic refinement. *Journal of Non-Crystalline Solids*, **2020**, 536, 120006	3.9	10
157	Metal-Organic Framework Glasses Possess Higher Thermal Conductivity than Their Crystalline Counterparts. *ACS Applied Materials & Interfaces*, **2020**, 12, 18893-18903	9.5	21
156	Structure Dependence of Poisson's Ratio in Cesium Silicate and Borate Glasses. *Materials*, **2020**, 13,	3.5	1
155	On the relation between fracture toughness and crack resistance in oxide glasses. *Journal of Non-Crystalline Solids*, **2020**, 534, 119946	3.9	14
154	Cooling rate effects on the structure of 45S5 bioglass: Insights from experiments and simulations. *Journal of Non-Crystalline Solids*, **2020**, 534, 119952	3.9	15
153	Observation of indentation-induced shear bands in a metal-organic framework glass. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 10149-10154	11.5	17
152	On the equivalence of vapor-deposited and melt-quenched glasses. *Journal of Chemical Physics*, **2020**, 152, 164504	3.9	5
151	Achieving ultrahigh crack resistance in glass through humid aging. *Physical Review Materials*, **2020**, 4,	3.2	4
150	Fracture toughness of a metal-organic framework glass. *Nature Communications*, **2020**, 11, 2593	17.4	31
149	Indentation cracking and deformation mechanism of sodium aluminoborosilicate glasses. *Journal of the American Ceramic Society*, **2020**, 103, 1656-1665	3.8	6
148	Composition and pressure effects on the structure, elastic properties and hardness of aluminoborosilicate glass. *Journal of Non-Crystalline Solids*, **2020**, 530, 119797	3.9	15
147	Heat conduction in oxide glasses: Balancing diffusons and propagons by network rigidity. *Applied Physics Letters*, **2020**, 117, 031901	3.4	7
146	Predicting Cation Interactions in Alkali Aluminoborate Glasses using Statistical Mechanics. *Journal of Non-Crystalline Solids*, **2020**, 544, 120099	3.9	3
145	Relaxation behavior of densified sodium aluminoborate glass. *Acta Materialia*, **2020**, 198, 153-167	8.4	1
144	Atomic structure of hot compressed borosilicate glasses. *Journal of the American Ceramic Society*, **2020**, 103, 6215-6225	3.8	5
143	Revealing hidden medium-range order in amorphous materials using topological data analysis. *Science Advances*, **2020**, 6,	14.3	14
142	Competitive effects of free volume, rigidity, and self-adaptivity on indentation response of silicoaluminoborate glasses. *Journal of the American Ceramic Society*, **2020**, 103, 944-954	3.8	4
141	Predicting the dissolution kinetics of silicate glasses by topology-informed machine learning. *Npj Materials Degradation*, **2019**, 3,	5.7	32

140	Modifier clustering and avoidance principle in borosilicate glasses: A molecular dynamics study. *Journal of Chemical Physics*, **2019**, 150, 044502	3.9	11
139	Structure, properties, and fabrication of calcium aluminate-based glasses. *International Journal of Applied Glass Science*, **2019**, 10, 488-501	1.8	4
138	Predicting the YoungS Modulus of Silicate Glasses using High-Throughput Molecular Dynamics Simulations and Machine Learning. *Scientific Reports*, **2019**, 9, 8739	4.9	49
137	Mechanical property optimization of a zinc borate glass by lanthanum doping. *Journal of Non-Crystalline Solids*, **2019**, 520, 119461	3.9	8
136	Atomic picture of structural relaxation in silicate glasses. *Applied Physics Letters*, **2019**, 114, 233703	3.4	16
135	Quantifying the internal stress in over-constrained glasses by molecular dynamics simulations. *Journal of Non-Crystalline Solids: X*, **2019**, 1, 100013	2.5	8
134	Permanent Densification of Calcium Aluminophosphate Glasses. *Frontiers in Materials*, **2019**, 6,	4	5
133	Prediction of the YoungS modulus of silicate glasses by topological constraint theory. *Journal of Non-Crystalline Solids*, **2019**, 514, 15-19	3.9	23
132	Structural dependence of chemical durability in modified aluminoborate glasses. *Journal of the American Ceramic Society*, **2019**, 102, 1157-1168	3.8	17
131	Breaking the Limit of Micro-Ductility in Oxide Glasses. *Advanced Science*, **2019**, 6, 1901281	13.6	24
130	Statistical Mechanical Model of Topological Fluctuations and the Intermediate Phase in Binary Phosphate Glasses. *Journal of Physical Chemistry B*, **2019**, 123, 7640-7648	3.4	3
129	Revisiting the Dependence of PoissonS Ratio on Liquid Fragility and Atomic Packing Density in Oxide Glasses. *Materials*, **2019**, 12,	3.5	17
128	Predicting Composition-Structure Relations in Alkali Borosilicate Glasses Using Statistical Mechanics. *Frontiers in Materials*, **2019**, 6,	4	8
127	Boron anomaly in the thermal conductivity of lithium borate glasses. *Physical Review Materials*, **2019**, 3,	3.2	7
126	Liquid fragility determination of oxide glass-formers using temperature-modulated DSC. *International Journal of Applied Glass Science*, **2019**, 10, 321-329	1.8	4
125	Luminescence behaviour of Eu3+ in hot-compressed silicate glasses. *Journal of Non-Crystalline Solids: X*, **2019**, 4, 100041	2.5	2
124	The role of the network-modifierS field-strength in the chemical durability of aluminoborate glasses. *Journal of Non-Crystalline Solids*, **2019**, 505, 279-285	3.9	17
123	Elasticity, hardness, and fracture toughness of sodium aluminoborosilicate glasses. *Journal of the American Ceramic Society*, **2019**, 102, 4520-4537	3.8	13

122	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	3.4	22
121	Indentation deformation in oxide glasses: Quantification, structural changes, and relation to cracking. *Journal of Non-Crystalline Solids: X*, **2019**, 1, 100007	2.5	34
120	Predicting the dissolution kinetics of silicate glasses using machine learning. *Journal of Non-Crystalline Solids*, **2018**, 487, 37-45	3.9	63
119	The hydrophilic-to-hydrophobic transition in glassy silica is driven by the atomic topology of its surface. *Journal of Chemical Physics*, **2018**, 148, 074503	3.9	26
118	Time and humidity dependence of indentation cracking in aluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2018**, 491, 64-70	3.9	14
117	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	3.9	3
116	Structural stability of NaPON glass upon heating in air and nitrogen. *Journal of Non-Crystalline Solids*, **2018**, 482, 137-146	3.9	5
115	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	3.9	10
114	A new transferable interatomic potential for molecular dynamics simulations of borosilicate glasses. *Journal of Non-Crystalline Solids*, **2018**, 498, 294-304	3.9	76
113	Hardness of silicate glasses: Atomic-scale origin of the mixed modifier effect. *Journal of Non-Crystalline Solids*, **2018**, 489, 16-21	3.9	25
112	Competitive effects of modifier charge and size on mechanical and chemical resistance of aluminoborate glasses. *Journal of Non-Crystalline Solids*, **2018**, 499, 264-271	3.9	5
111	Predicting Q-Speciation in Binary Phosphate Glasses Using Statistical Mechanics. *Journal of Physical Chemistry B*, **2018**, 122, 7609-7615	3.4	11
110	Structural impact of nitrogen incorporation on properties of alkali germanophosphate glasses. *Journal of the American Ceramic Society*, **2018**, 101, 5004-5019	3.8	4
109	Combining high hardness and crack resistance in mixed network glasses through high-temperature densification. *Physical Review Materials*, **2018**, 2,	3.2	7
108	Effect of nanoscale phase separation on the fracture behavior of glasses: Toward tough, yet transparent glasses. *Physical Review Materials*, **2018**, 2,	3.2	11
107	Predictive model for the composition dependence of glassy dynamics. *Journal of the American Ceramic Society*, **2018**, 101, 1169-1179	3.8	13
106	Nano-phase separation and structural ordering in silica-rich mixed network former glasses. *Physical Chemistry Chemical Physics*, **2018**, 20, 15707-15717	3.6	9
105	Deformation and cracking behavior of La2O3-doped oxide glasses with high Poissons ratio. *Journal of Non-Crystalline Solids*, **2018**, 494, 86-93	3.9	7

104	Structural Compromise between High Hardness and Crack Resistance in Aluminoborate Glasses. *Journal of Physical Chemistry B*, **2018**, 122, 6287-6295	3.4	17
103	Structural origin of high crack resistance in sodium aluminoborate glasses. *Journal of Non-Crystalline Solids*, **2017**, 460, 54-65	3.9	53
102	Correlating the Network Topology of Oxide Glasses with their Chemical Durability. *Journal of Physical Chemistry B*, **2017**, 121, 1139-1147	3.4	41
101	Fragility and configurational heat capacity of calcium aluminosilicate glass-forming liquids. *Journal of Non-Crystalline Solids*, **2017**, 461, 24-34	3.9	17
100	Topological engineering of glasses using temperature-dependent constraints. *MRS Bulletin*, **2017**, 42, 29-33	3.2	17
99	Mixed alkali silicophosphate oxynitride glasses: Structure-property relations. *Journal of Non-Crystalline Solids*, **2017**, 462, 51-64	3.9	12
98	Photoelastic response of permanently densified oxide glasses. *Optical Materials*, **2017**, 67, 155-161	3.3	4
97	Pressure-driven structural depolymerization of zinc phosphate glass. *Journal of Non-Crystalline Solids*, **2017**, 469, 31-38	3.9	10
96	Structure of MgO/CaO sodium aluminosilicate glasses: Raman spectroscopy study. *Journal of Non-Crystalline Solids*, **2017**, 470, 145-151	3.9	24
95	Discovery of Ultra-Crack-Resistant Oxide Glasses with Adaptive Networks. *Chemistry of Materials*, **2017**, 29, 5865-5876	9.6	77
94	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	3.9	25
93	Cooling rate effects in sodium silicate glasses: Bridging the gap between molecular dynamics simulations and experiments. *Journal of Chemical Physics*, **2017**, 147, 074501	3.9	83
92	Thermometer Effect: Origin of the Mixed Alkali Effect in Glass Relaxation. *Physical Review Letters*, **2017**, 119, 095501	7.4	41
91	Dissolution Kinetics of Hot Compressed Oxide Glasses. *Journal of Physical Chemistry B*, **2017**, 121, 9063-9072	3.4	24
90	Accessing Forbidden Glass Regimes through High-Pressure Sub-T Annealing. *Scientific Reports*, **2017**, 7, 46631	4.9	6
89	Topological Origin of the Network Dilation Anomaly in Ion-Exchanged Glasses. *Physical Review Applied*, **2017**, 8,	4.3	13
88	Network Glasses Under Pressure: Permanent Densification in Modifier-Free Al2O3B2O3P2O5SiO2 Systems. *Physical Review Applied*, **2017**, 7,	4.3	21
87	Pressure-Induced Densification of Oxide Glasses at the Glass Transition. *Frontiers in Materials*, **2017**, 4,	4	45

86	Modifier field strength effects on densification behavior and mechanical properties of alkali aluminoborate glasses. *Physical Review Materials*, **2017**, 1,	3.2	22
85	Fracture toughness anomalies: Viewpoint of topological constraint theory. *Acta Materialia*, **2016**, 121, 234-239	8.4	62
84	Crucial effect of angular flexibility on the fracture toughness and nano-ductility of aluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2016**, 454, 46-51	3.9	18
83	Accelerating the Design of Functional Glasses through Modeling. *Chemistry of Materials*, **2016**, 28, 4267-4277	9.7	136
82	Thermal history dependence of indentation induced densification in an aluminosilicate glass. *Journal of Non-Crystalline Solids*, **2016**, 445-446, 34-39	3.9	11
81	Linking Equilibrium and Nonequilibrium Dynamics in Glass-Forming Systems. *Journal of Physical Chemistry B*, **2016**, 120, 3226-31	3.4	21
80	Universal behavior of changes in elastic moduli of hot compressed oxide glasses. *Chemical Physics Letters*, **2016**, 651, 88-91	2.5	21
79	Effects of Thermal and Pressure Histories on the Chemical Strengthening of Sodium Aluminosilicate Glass. *Frontiers in Materials*, **2016**, 3,	4	11
78	Impact of nitridation of metaphosphate glasses on liquid fragility. *Journal of Non-Crystalline Solids*, **2016**, 441, 22-28	3.9	20
77	A medium range order structural connection to the configurational heat capacity of borate-silicate mixed glasses. *Physical Chemistry Chemical Physics*, **2016**, 18, 10887-95	3.6	14
76	Structure and mechanical properties of compressed sodium aluminosilicate glasses: Role of non-bridging oxygens. *Journal of Non-Crystalline Solids*, **2016**, 441, 49-57	3.9	71
75	Raman spectroscopy study of pressure-induced structural changes in sodium borate glass. *Journal of Non-Crystalline Solids*, **2016**, 443, 130-135	3.9	12
74	Pressure-induced structural transformations in phosphorus oxynitride glasses. *Journal of Non-Crystalline Solids*, **2016**, 452, 153-160	3.9	6
73	Volume and structural relaxation in compressed sodium borate glass. *Physical Chemistry Chemical Physics*, **2016**, 18, 29879-29891	3.6	19
72	Confocal depth-resolved micro-X-ray absorption spectroscopy study of chemically strengthened boroaluminosilicate glasses. *RSC Advances*, **2016**, 6, 24060-24065	3.7	3
71	Structure-property relations in calcium aluminate glasses containing different divalent cations and SiO 2. *Journal of Non-Crystalline Solids*, **2015**, 427, 160-165	3.9	18
70	Role of elastic deformation in determining the mixed alkaline earth effect of hardness in silicate glasses. *Journal of Applied Physics*, **2015**, 117, 034903	2.5	8
69	Hardness of oxynitride glasses: topological origin. *Journal of Physical Chemistry B*, **2015**, 119, 4109-15	3.4	22

68	Structure-topology-property correlations of sodium phosphosilicate glasses. *Journal of Chemical Physics*, **2015**, 143, 064510	3.9	35
67	Indentation deformation mechanism of isostatically compressed mixed alkali aluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2015**, 426, 175-183	3.9	42
66	Temperature-dependent densification of sodium borosilicate glass. *RSC Advances*, **2015**, 5, 78845-78851	3.7	22
65	Unique effects of thermal and pressure histories on glass hardness: Structural and topological origin. *Journal of Chemical Physics*, **2015**, 143, 164505	3.9	43
64	Cation Diffusivity and the Mixed Network Former Effect in Borosilicate Glasses. *Journal of Physical Chemistry B*, **2015**, 119, 7106-15	3.4	14
63	Effect of divalent cations and SiO2 on the crystallization behavior of calcium aluminate glasses. *Journal of Non-Crystalline Solids*, **2015**, 413, 20-23	3.9	6
62	Sub-critical crack growth in silicate glasses: Role of network topology. *Applied Physics Letters*, **2015**, 107, 141901	3.4	19
61	Mixed alkaline earth effect in the compressibility of aluminosilicate glasses. *Journal of Chemical Physics*, **2014**, 140, 054511	3.9	42
60	Composition-Structure-Property Relations of Compressed Borosilicate Glasses. *Physical Review Applied*, **2014**, 2,	4.3	38
59	Principles of Pyrex® glass chemistry: structure–property relationships. *Applied Physics A: Materials Science and Processing*, **2014**, 116, 491-504	2.6	32
58	On the origin of the mixed alkali effect on indentation in silicate glasses. *Journal of Non-Crystalline Solids*, **2014**, 406, 22-26	3.9	28
57	Pressure-induced changes in interdiffusivity and compressive stress in chemically strengthened glass. *ACS Applied Materials & Interfaces*, **2014**, 6, 10436-44	9.5	19
56	Alkali diffusivity in alkaline earth sodium boroaluminosilicate glasses. *Solid State Ionics*, **2014**, 263, 95-98	3.3	9
55	Statistical mechanics of glass. *Journal of Non-Crystalline Solids*, **2014**, 396-397, 41-53	3.9	72
54	Irreversibility of pressure induced boron speciation change in glass. *Scientific Reports*, **2014**, 4, 3770	4.9	46
53	Topological Model for Boroaluminosilicate Glass Hardness. *Frontiers in Materials*, **2014**, 1,	4	36
52	Indentation size effect and the plastic compressibility of glass. *Applied Physics Letters*, **2014**, 104, 251906	3.4	16
51	Hardness and incipient plasticity in silicate glasses: Origin of the mixed modifier effect. *Applied Physics Letters*, **2014**, 104, 051913	3.4	41

50	Effect of Na2CO3 as foaming agent on dynamics and structure of foam glass melts. *Journal of Non-Crystalline Solids*, **2014**, 400, 1-5	3.9	32
49	Non-conservation of the total alkali concentration in ion-exchanged glass. *Journal of Non-Crystalline Solids*, **2014**, 387, 71-75	3.9	7
48	Structure and properties of sodium aluminosilicate glasses from molecular dynamics simulations. *Journal of Chemical Physics*, **2013**, 139, 044507	3.9	96
47	Compositional control of the photoelastic response of silicate glasses. *Optical Materials*, **2013**, 35, 2435-2439	3.9	12
46	Relaxation kinetics of the mechanical properties of an aluminosilicate glass. *Journal of Non-Crystalline Solids*, **2013**, 362, 40-46	3.9	19
45	Viscosity and Fragility of Alkaline-Earth Sodium Boroaluminosilicate Liquids. *Journal of the American Ceramic Society*, **2013**, 96, 2831-2838	3.8	10
44	Liquidus surface of MgO□aO□Al2O3□SiO2 glass-forming systems. *Journal of Non-Crystalline Solids*, **2013**, 363, 39-45	3.9	16
43	Are the dynamics of a glass embedded in its elastic properties?. *Journal of Chemical Physics*, **2013**, 138, 12A501	3.9	14
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	3.9	23
41	Mixed alkaline earth effect in sodium aluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2013**, 369, 61-68	3.9	62
40	Elastic and micromechanical properties of isostatically compressed soda□me□borate glasses. *Journal of Non-Crystalline Solids*, **2013**, 364, 44-52	3.9	50
39	Microscopic Origins of Compositional Trends in Aluminosilicate Glass Properties. *Journal of the American Ceramic Society*, **2013**, 96, 1436-1443	3.8	29
38	Environmental effects on fatigue of alkaline earth aluminosilicate glass with varying fictive temperature. *Journal of Non-Crystalline Solids*, **2013**, 379, 161-168	3.9	15
37	Liquidus Temperature of SrO-Al2O3-SiO2 Glass-Forming Compositions. *International Journal of Applied Glass Science*, **2013**, 4, 225-230	1.8	6
36	Topological Model for the Viscosity of Multicomponent Glass-Forming Liquids. *International Journal of Applied Glass Science*, **2013**, 4, 408-413	1.8	42
35	Minimalist landscape model of glass relaxation. *Physica A: Statistical Mechanics and Its Applications*, **2012**, 391, 3446-3459	3.3	17
34	Influence of aluminum speciation on the stability of aluminosilicate glasses against crystallization. *Applied Physics Letters*, **2012**, 101, 041906	3.4	28
33	Aging in chalcohalide glasses: Origin and consequences. *Journal of Non-Crystalline Solids*, **2012**, 358, 129-132	3.9	11

32	Glass-forming ability of soda lime borate liquids. *Journal of Non-Crystalline Solids*, **2012**, 358, 658-665	3.9	19
31	Relationship between viscous dynamics and the configurational thermal expansion coefficient of glass-forming liquids. *Journal of Non-Crystalline Solids*, **2012**, 358, 648-651	3.9	4
30	Composition□Structure□Property relationships in boroaluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2012**, 358, 993-1002	3.9	76
29	Surface-luminescence from thermally reduced bismuth-doped sodium aluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2012**, 358, 3193-3199	3.9	13
28	Distinguishability of particles in glass-forming systems. *Physica A: Statistical Mechanics and Its Applications*, **2012**, 391, 5392-5403	3.3	11
27	Unified physics of stretched exponential relaxation and Weibull fracture statistics. *Physica A: Statistical Mechanics and Its Applications*, **2012**, 391, 6121-6127	3.3	38
26	Photoelastic response of alkaline earth aluminosilicate glasses. *Optics Letters*, **2012**, 37, 293-5	3	20
25	Structure of boroaluminosilicate glasses: Impact of [Al2O3]/[SiO2] ratio on the structural role of sodium. *Physical Review B*, **2012**, 86,	3.3	51
24	Elastic interpretation of the glass transition in aluminosilicate liquids. *Physical Review B*, **2012**, 85,	3.3	27
23	Tunable photoluminescence induced by thermal reduction in rare earth doped glasses. *Journal of Materials Chemistry*, **2011**, 21, 6614		22
22	Universal Preparation of Novel Metal and Semiconductor Nanoparticle□Glass Composites with Excellent Nonlinear Optical Properties. *Journal of Physical Chemistry C*, **2011**, 115, 24598-24604	3.8	26
21	Near-infrared emission from Eu□Yb doped silicate glasses subjected to thermal reduction. *Applied Physics Letters*, **2011**, 98, 071911	3.4	39
20	Sodium diffusion in boroaluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2011**, 357, 3744-3750	3.9	43
19	Inward and Outward Diffusion of Modifying Ions and its Impact on the Properties of Glasses and Glass□Ceramics. *International Journal of Applied Glass Science*, **2011**, 2, 117-128	1.8	6
18	Topological principles of borosilicate glass chemistry. *Journal of Physical Chemistry B*, **2011**, 115, 12930-46	3.4	234
17	Persistent Near Infrared Phosphorescence from Rare Earth Ions Co-doped Strontium Aluminate Phosphors. *Journal of the Electrochemical Society*, **2011**, 158, K17	3.9	18
16	Abnormal Luminescence Behavior in Bi-Doped Borosilicate Glasses. *Journal of the Electrochemical Society*, **2011**, 158, G151	3.9	7
15	Inward Cationic Diffusion and Percolation Transition in Glass□Ceramics. *Journal of the American Ceramic Society*, **2010**, 93, 2161-2163	3.8	6

14	Impact of network topology on cationic diffusion and hardness of borate glass surfaces. *Journal of Chemical Physics*, **2010**, 133, 154509	3.9	37
13	Prediction of glass hardness using temperature-dependent constraint theory. *Physical Review Letters*, **2010**, 105, 115503	7.4	195
12	Modifying glass surfaces via internal diffusion. *Journal of Non-Crystalline Solids*, **2010**, 356, 290-298	3.9	17
11	Effect of thermal history and chemical composition on hardness of silicate glasses. *Journal of Non-Crystalline Solids*, **2010**, 356, 893-897	3.9	40
10	Quantitative Design of Glassy Materials Using Temperature-Dependent Constraint Theory. *Chemistry of Materials*, **2010**, 22, 5358-5365	9.6	139
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8	Surface modification of polyvalent element-containing glasses. *Applied Surface Science*, **2009**, 256, 202-207	6.7	10
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