John C Mauro

List of Publications by Year in Descending Order

319 papers	8,668 citations	45 h-index	80 g-index
331 ext. papers	10,135 ext. citations	4.6 avg, IF	6.71 L-index

#	Paper	IF	Citations
319	StatMechGlass: Python based software for composition-structure prediction in oxide glasses using statistical mechanics. *SoftwareX*, **2022**, 17, 100913	2.7	0
318	Statistical mechanical model for the formation of octahedral silicon in phosphosilicate glasses. *Journal of the American Ceramic Society*, **2022**, 105, 1031	3.8	0
317	Examining the phase evolution of lithium disilicate glass-ceramics with lithium tantalate as a secondary phase. *Journal of the American Ceramic Society*, **2022**, 105, 268	3.8	1
316	Mixed metal node effect in zeolitic imidazolate frameworks.. *RSC Advances*, **2022**, 12, 10815-10824	3.7	0
315	Experimental analysis and modeling of the Knoop hardness of lithium disilicate glass-ceramics containing lithium tantalate as a secondary phase. *Journal of Non-Crystalline Solids*, **2022**, 585, 121540	3.9	1
314	Lateral-pushing induced surface lift-up during nanoindentation of silicate glass. *Journal of the American Ceramic Society*, **2022**, 105, 2625-2633	3.8	0
313	Examining the role of nucleating agents within glass-ceramic systems. *Journal of Non-Crystalline Solids*, **2022**, 591, 121714	3.9	5
312	Advancing the Mechanical Performance of Glasses: Perspectives and Challenges. *Advanced Materials*, **2021**, e2109029	24	8
311	Hybrid machine learning/physics-based approach for predicting oxide glass-forming ability. *Acta Materialia*, **2021**, 222, 117432	8.4	2
310	Thermal conductivity of densified borosilicate glasses. *Journal of Non-Crystalline Solids*, **2021**, 557, 120644	3.9	3
309	Chemical durability of borosilicate pharmaceutical glasses: Mixed alkaline earth effect with varying [MgO]/[CaO] ratio. *Journal of the American Ceramic Society*, **2021**, 104, 3973-3981	3.8	0
308	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
307	Geometric analysis of the calorimetric glass transition and fragility using constant cooling rate cycles. *International Journal of Applied Glass Science*, **2021**, 12, 348-357	1.8	4
306	Effects of acid leaching treatment of soda-lime silicate glass on crack initiation and fracture. *Journal of the American Ceramic Society*, **2021**, 104, 4550-4558	3.8	2
305	Fragility and temperature dependence of stretched exponential relaxation in glass-forming systems. *Journal of the American Ceramic Society*, **2021**, 104, 4559-4567	3.8	1
304	Theory of structural relaxation in glass from the thermodynamics of irreversible processes. *Physical Review E*, **2021**, 103, 062606	2.4	0
303	Explorer.py: Mapping the energy landscapes of complex materials. *SoftwareX*, **2021**, 14, 100683	2.7	3

302	Coupling of diffusion and chemical stress: The case of ion exchange in glass. *Journal of the American Ceramic Society*, **2021**, 104, 5599-5613	3.8	0
301	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
300	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
299	Atomistic Mechanisms of Thermal Transformation in a Zr-Metal Organic Framework, MIL-140C. *Journal of Physical Chemistry Letters*, **2021**, 12, 177-184	6.4	3
298	Aluminosilicate glasses for zinc selenide tunable fiber laser cladding. *Journal of the American Ceramic Society*, **2021**, 104, 691-696	3.8	2
297	Understanding thermal expansion of pressurized silica glass using topological pruning of ring structures. *Journal of the American Ceramic Society*, **2021**, 104, 114-127	3.8	3
296	Diffusion in Polymers and Glasses **2021**, 199-215		
295	Monte Carlo Techniques **2021**, 443-466		
294	Thermodynamics vs. Kinetics **2021**, 1-17		0
293	Relaxation of Glasses and Polymers **2021**, 389-418		
292	Viscosity of Liquids **2021**, 269-294		
291	Nonequilibrium Viscosity and the Glass Transition **2021**, 295-314		0
290	Master Equations **2021**, 363-387		
289	Energy Landscapes **2021**, 315-340		
288	Pressure effects on shear deformation of borosilicate glasses. *Journal of the American Ceramic Society*, **2021**, 104, 3073-3086	3.8	1
287	Atomic-scale mechanisms of densification in cold-compressed borosilicate glasses. *Journal of the American Ceramic Society*, **2021**, 104, 2506-2520	3.8	3
286	Piezoelectric glass-ceramics: Crystal chemistry, orientation mechanisms, and emerging applications. *Journal of the American Ceramic Society*, **2021**, 104, 1915-1944	3.8	2
285	Topological hardening through oxygen triclusters in calcium aluminosilicate glasses. *Journal of the American Ceramic Society*, **2021**, 104, 6183	3.8	1

284	Energy landscape modeling of crystal nucleation. *Acta Materialia*, **2021**, 217, 117163	8.4	5
283	Atomic-scale modeling of crack branching in oxide glass. *Acta Materialia*, **2021**, 216, 117098	8.4	1
282	Broken Ergodicity **2021**, 341-362		
281	Fluctuations in Condensed Matter **2021**, 467-486		
280	Molecular Dynamics **2021**, 419-442		
279	Tailoring Cluster Configurations Enables Tunable Broad-Band Luminescence in Glass. *Chemistry of Materials*, **2020**, 32, 8653-8661	9.6	3
278	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
277	Bauchy et al. Reply. *Physical Review Letters*, **2020**, 124, 199602	7.4	
276	Thermal expansion of silicate glass-forming systems at high temperatures from topological pruning of ring structures. *Journal of the American Ceramic Society*, **2020**, 103, 4256-4265	3.8	6
275	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
274	Dilatometric fragility and prediction of the viscosity curve of glass-forming liquids. *Journal of the American Ceramic Society*, **2020**, 103, 4248-4255	3.8	3
273	Predicting Ionic Diffusion in Glass from Its Relaxation Behavior. *Journal of Physical Chemistry B*, **2020**, 124, 1099-1103	3.4	4
272	Maxwell relaxation time for nonexponential relaxation phenomena in glassy systems. *Journal of the American Ceramic Society*, **2020**, 103, 3590-3599	3.8	13
271	Plasticity of borosilicate glasses under uniaxial tension. *Journal of the American Ceramic Society*, **2020**, 103, 4295-4303	3.8	9
270	Understanding cracking behavior of glass from its response to hydrostatic compression. *Physical Review Materials*, **2020**, 4,	3.2	2
269	Modeling of Glasses: An Overview **2020**, 1977-1995		1
268	Mechanical and Compositional Design of High-Strength Corning Gorilla Glass **2020**, 1997-2019		1
267	Influence of acid leaching surface treatment on indentation cracking of soda lime silicate glass. *Journal of Non-Crystalline Solids*, **2020**, 543, 120144	3.9	7

266	Ultra-thin glass as a substrate for flexible photonics. *Optical Materials*, **2020**, 106, 109994	3.3	11
265	Evaluation of classical interatomic potentials for molecular dynamics simulations of borosilicate glasses. *Journal of Non-Crystalline Solids*, **2020**, 528, 119736	3.9	13
264	Relating structural disorder and melting in complex mixed ligand zeolitic imidazolate framework glasses. *Dalton Transactions*, **2020**, 49, 850-857	4.3	17
263	Topological understanding of the mixed alkaline earth effect in glass. *Journal of Non-Crystalline Solids*, **2020**, 527, 119696	3.9	10
262	KineticPy: A tool to calculate long-time kinetics in energy landscapes with broken ergodicity. *SoftwareX*, **2020**, 11, 100393	2.7	4
261	Comment on "The fragility of alkali silicate glass melts: Part of a universal topological pattern" by D.L. Sidebottom. *Journal of Non-Crystalline Solids*, **2020**, 529, 119799	3.9	
260	Glass-activated regeneration of volumetric muscle loss. *Acta Biomaterialia*, **2020**, 103, 306-317	10.8	11
259	Model-driven design of bioactive glasses: from molecular dynamics through machine learning. *International Materials Reviews*, **2020**, 65, 297-321	16.1	10
258	Determining the liquidus viscosity of glass-forming liquids through differential scanning calorimetry. *Journal of the American Ceramic Society*, **2020**, 103, 6070-6074	3.8	4
257	Predicting Cation Interactions in Alkali Aluminoborate Glasses using Statistical Mechanics. *Journal of Non-Crystalline Solids*, **2020**, 544, 120099	3.9	3
256	Atomic structure of hot compressed borosilicate glasses. *Journal of the American Ceramic Society*, **2020**, 103, 6215-6225	3.8	5
255	Statistical description of the thermodynamics of glass-forming liquids. *Physica A: Statistical Mechanics and Its Applications*, **2020**, 559, 125059	3.3	1
254	Topological pruning enables ultra-low Rayleigh scattering in pressure-quenched silica glass. *Npj Computational Materials*, **2020**, 6,	10.9	9
253	Emerging Role of Non-crystalline Electrolytes in Solid-State Battery Research. *Frontiers in Energy Research*, **2020**, 8,	3.8	18
252	Signatures of criticality in mining accidents and recurrent neural network forecasting model. *Physica A: Statistical Mechanics and Its Applications*, **2020**, 537, 122656	3.3	2
251	Why does BO suppress nepheline (NaAlSiO) crystallization in sodium aluminosilicate glasses?. *Physical Chemistry Chemical Physics*, **2020**, 22, 8679-8698	3.6	15
250	Crack initiation in an indented metallic glass with embedded nanoparticle. *Journal of Applied Physics*, **2019**, 125, 025106	2.5	4
249	Modifier clustering and avoidance principle in borosilicate glasses: A molecular dynamics study. *Journal of Chemical Physics*, **2019**, 150, 044502	3.9	11

248	Structure, properties, and fabrication of calcium aluminate-based glasses. *International Journal of Applied Glass Science*, **2019**, 10, 488-501	1.8	4
247	Topological constraint model of high lithium content borate glasses. *Journal of Non-Crystalline Solids: X*, **2019**, 3, 100028	2.5	3
246	Topological Control of Water Reactivity on Glass Surfaces: Evidence of a Chemically Stable Intermediate Phase. *Journal of Physical Chemistry Letters*, **2019**, 10, 3955-3960	6.4	3
245	Atomic picture of structural relaxation in silicate glasses. *Applied Physics Letters*, **2019**, 114, 233703	3.4	16
244	Understanding Glass through Differential Scanning Calorimetry. *Chemical Reviews*, **2019**, 119, 7848-7939	68.1	124
243	Glass transition range behavior **2019**, 293-382		1
242	Thermal expansion of glass **2019**, 253-271		
241	Statistical Mechanical Model of the Self-Organized Intermediate Phase in Glass-Forming Systems With Adaptable Network Topologies. *Frontiers in Materials*, **2019**, 6,	4	5
240	Glass compositions and structures **2019**, 101-164		1
239	Permeation, diffusion, and ionic conduction in glass **2019**, 383-424		
238	Fundamentals of the glassy state **2019**, 19-35		1
237	Composition-structure-property relationship principles **2019**, 165-172		
236	Density and molar volume **2019**, 173-186		
235	Elastic properties and hardness of glass **2019**, 187-214		
234	The viscosity of glass **2019**, 215-251		
233	Strength and toughness **2019**, 487-535		1
232	Glass surfaces **2019**, 595-606		1
231	Modeling of glass **2019**, 607-630		

230	Emerging applications of glass **2019**, 687-701		0
229	Perspectives on the scientific career and impact of Prabhat K. Gupta. *Journal of Non-Crystalline Solids: X*, **2019**, 1, 100011	2.5	1
228	Fundamentals of Organic-Glass Adhesion **2019**, 1-41		2
227	The relativistic glass transition: A thought experiment. *Journal of Non-Crystalline Solids: X*, **2019**, 2, 100018	2.5	1
226	Topological constraint model for the elasticity of glass-forming systems. *Journal of Non-Crystalline Solids: X*, **2019**, 2, 100019	2.5	19
225	Understanding the molar volume of alkali-alkaline earth-silicate glasses via Voronoi polyhedra analysis. *Scripta Materialia*, **2019**, 166, 1-5	5.6	7
224	Quantifying the internal stress in over-constrained glasses by molecular dynamics simulations. *Journal of Non-Crystalline Solids: X*, **2019**, 1, 100013	2.5	8
223	Fundamentals of Organic-Glass Adhesion **2019**, 1-41		
222	Relative abundance of subsurface hydroxyl and molecular water species in silicate and aluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2019**, 510, 179-185	3.9	15
221	Modeling the Relaxation Behavior of Glasses for Display Applications **2019**, 1-19		
220	Modeling the Relaxation Behavior of Glasses for Display Applications **2019**, 1-19		
219	Quantitative prediction of the structure and properties of Li2OTa2O5SiO2 glasses via phase diagram approach. *Journal of the American Ceramic Society*, **2019**, 102, 185-194	3.8	3
218	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
217	Effects of water on the mechanical properties of silica glass using molecular dynamics. *Acta Materialia*, **2019**, 178, 36-44	8.4	12
216	Simulation of glass network evolution during chemical strengthening: Resolution of the subsurface compression maximum anomaly. *Journal of Non-Crystalline Solids*, **2019**, 522, 119457	3.9	9
215	Topological Origins of the Mixed Alkali Effect in Glass. *Journal of Physical Chemistry B*, **2019**, 123, 7482-7489	3.4	12
214	Data-driven glass/ceramic science research: Insights from the glass and ceramic and data science/informatics communities. *Journal of the American Ceramic Society*, **2019**, 102, 6385-6406	3.8	12
213	Predicting Composition-Structure Relations in Alkali Borosilicate Glasses Using Statistical Mechanics. *Frontiers in Materials*, **2019**, 6,	4	8

212	Topological model for Bi2O3-NaPO3 glasses. I. Prediction of glass transition temperature and fragility. *Journal of Non-Crystalline Solids*, **2019**, 521, 119534	3.9	2
211	Boron anomaly in the thermal conductivity of lithium borate glasses. *Physical Review Materials*, **2019**, 3,	3.2	7
210	Optical properties of a melt-quenched metal-organic framework glass. *Optics Letters*, **2019**, 44, 1623-1625	3.3	33
209	Modeling of Glasses: an Overview **2019**, 1-19		
208	Machine Learning for Glass Modeling. *Springer Handbooks*, **2019**, 1157-1192	1.3	14
207	Liquid fragility determination of oxide glass-formers using temperature-modulated DSC. *International Journal of Applied Glass Science*, **2019**, 10, 321-329	1.8	4
206	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
205	Synthesis and characterization of K2O-ZnO-GeO2-SiO2 optical glasses. *Journal of Non-Crystalline Solids*, **2019**, 503-504, 308-312	3.9	2
204	Effect of water on topological constraints in silica glass. *Scripta Materialia*, **2019**, 160, 48-52	5.6	15
203	Bioactive Glasses for Cancer Therapy **2019**, 273-312		3
202	A metal-organic framework with ultrahigh glass-forming ability. *Science Advances*, **2018**, 4, eaao6827	14.3	112
201	On the Prony series representation of stretched exponential relaxation. *Physica A: Statistical Mechanics and Its Applications*, **2018**, 506, 75-87	3.3	24
200	Hybrid Monte Carlo technique for modeling of crystal nucleation and application to lithium disilicate glass-ceramics. *Computational Materials Science*, **2018**, 149, 202-207	3.2	15
199	Time and humidity dependence of indentation cracking in aluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2018**, 491, 64-70	3.9	14
198	Response to comment on "The glassy state of matter: Its definition and ultimate fate" *Journal of Non-Crystalline Solids*, **2018**, 502, 251-252	3.9	2
197	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
196	Compositional Dependence of Solubility/Retention of Molybdenum Oxides in Aluminoborosilicate-Based Model Nuclear Waste Glasses. *Journal of Physical Chemistry B*, **2018**, 122, 1714-1729	3.4	26
195	A new transferable interatomic potential for molecular dynamics simulations of borosilicate glasses. *Journal of Non-Crystalline Solids*, **2018**, 498, 294-304	3.9	76

194	Hardness of silicate glasses: Atomic-scale origin of the mixed modifier effect. *Journal of Non-Crystalline Solids*, **2018**, 489, 16-21	3.9	25
193	Viscous flow of medieval cathedral glass. *Journal of the American Ceramic Society*, **2018**, 101, 5-11	3.8	25
192	Decoding the glass genome. *Current Opinion in Solid State and Materials Science*, **2018**, 22, 58-64	12	52
191	Predicting Q-Speciation in Binary Phosphate Glasses Using Statistical Mechanics. *Journal of Physical Chemistry B*, **2018**, 122, 7609-7615	3.4	11
190	RelaxPy: Python code for modeling of glass relaxation behavior. *SoftwareX*, **2018**, 7, 255-258	2.7	10
189	Statistical mechanics of topological fluctuations in glass-forming liquids. *Physica A: Statistical Mechanics and Its Applications*, **2018**, 510, 787-801	3.3	9
188	Combining high hardness and crack resistance in mixed network glasses through high-temperature densification. *Physical Review Materials*, **2018**, 2,	3.2	7
187	Effect of nanoscale phase separation on the fracture behavior of glasses: Toward tough, yet transparent glasses. *Physical Review Materials*, **2018**, 2,	3.2	11
186	Predictive model for the composition dependence of glassy dynamics. *Journal of the American Ceramic Society*, **2018**, 101, 1169-1179	3.8	13
185	Unusual thermal response of tellurium near-infrared luminescence in phosphate laser glass. *Optics Letters*, **2018**, 43, 4823-4826	3	5
184	Statistical mechanical model of bonding in mixed modifier glasses. *Journal of the American Ceramic Society*, **2018**, 101, 1906-1915	3.8	15
183	Implicit glass model for simulation of crystal nucleation for glass-ceramics. *Npj Computational Materials*, **2018**, 4,	10.9	14
182	Prediction of the Glass Transition Temperatures of Zeolitic Imidazolate Glasses through Topological Constraint Theory. *Journal of Physical Chemistry Letters*, **2018**, 9, 6985-6990	6.4	21
181	Enabling Computational Design of ZIFs Using ReaxFF. *Journal of Physical Chemistry B*, **2018**, 122, 9616-9624	3.4	30
180	Mechanical and Compositional Design of High-Strength Corning Gorilla Glass **2018**, 1-23		7
179	Comment on "Glass Transition, Crystallization of Glass-Forming Melts, and Entropy" 2018, , 103. *Entropy*, **2018**, 20,	2.8	2
178	Topological constraint model of alkali tellurite glasses. *Journal of Non-Crystalline Solids*, **2018**, 502, 172-175	3.9	6
177	Modeling of delayed elasticity in glass. *Journal of Non-Crystalline Solids*, **2018**, 500, 432-442	3.9	4

176	Temperature dependence of crystal nucleation in BaO□2SiO2 and 5BaO□3SiO2 glasses using differential thermal analysis. *Journal of Non-Crystalline Solids*, **2017**, 459, 45-50	3.9	15
175	Fragility and configurational heat capacity of calcium aluminosilicate glass-forming liquids. *Journal of Non-Crystalline Solids*, **2017**, 461, 24-34	3.9	17
174	Modeling the thermal poling of glasses using molecular dynamics. Part 1: Effects on glass structure. *Journal of Non-Crystalline Solids*, **2017**, 461, 98-103	3.9	9
173	Variability in the relaxation behavior of glass: Impact of thermal history fluctuations and fragility. *Journal of Chemical Physics*, **2017**, 146, 074504	3.9	15
172	Photoelastic response of permanently densified oxide glasses. *Optical Materials*, **2017**, 67, 155-161	3.3	4
171	Modeling the thermal poling of glasses using molecular dynamics. Part 2: Effects on elastic properties. *Journal of Non-Crystalline Solids*, **2017**, 468, 17-26	3.9	1
170	Structure of MgO/CaO sodium aluminosilicate glasses: Raman spectroscopy study. *Journal of Non-Crystalline Solids*, **2017**, 470, 145-151	3.9	24
169	The glassy state of matter: Its definition and ultimate fate. *Journal of Non-Crystalline Solids*, **2017**, 471, 490-495	3.9	135
168	Adhesion of Organic Molecules on Silica Surfaces: A Density Functional Theory Study. *Journal of Physical Chemistry C*, **2017**, 121, 392-401	3.8	13
167	Viscosity of glass-forming systems. *Journal of the American Ceramic Society*, **2017**, 100, 6-25	3.8	105
166	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
165	Computational approaches for investigating interfacial adhesion phenomena of polyimide on silica glass. *Scientific Reports*, **2017**, 7, 10475	4.9	19
164	Effect of Nanoscale Roughness on Adhesion between Glassy Silica and Polyimides: A Molecular Dynamics Study. *Journal of Physical Chemistry C*, **2017**, 121, 24648-24656	3.8	13
163	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
162	Thermometer Effect: Origin of the Mixed Alkali Effect in Glass Relaxation. *Physical Review Letters*, **2017**, 119, 095501	7.4	41
161	Accessing Forbidden Glass Regimes through High-Pressure Sub-T Annealing. *Scientific Reports*, **2017**, 7, 46631	4.9	6
160	Modified elastic model for viscosity in glass-forming systems. *Physical Review B*, **2017**, 96,	3.3	6
159	Topological Origin of the Network Dilation Anomaly in Ion-Exchanged Glasses. *Physical Review Applied*, **2017**, 8,	4.3	13

158	Density of topological constraints as a metric for predicting glass hardness. *Applied Physics Letters*, **2017**, 111, 011907	3.4	35
157	Network Glasses Under Pressure: Permanent Densification in Modifier-Free Al2O3B2O3P2O5SiO2 Systems. *Physical Review Applied*, **2017**, 7,	4.3	21
156	Wet chemical synthesis of apatite-based waste forms A novel room temperature method for the immobilization of radioactive iodine. *Journal of Materials Chemistry A*, **2017**, 5, 14331-14342	13	26
155	Reconciling calorimetric and kinetic fragilities of glass-forming liquids. *Journal of Non-Crystalline Solids*, **2017**, 456, 95-100	3.9	35
154	Nanoductility in silicate glasses is driven by topological heterogeneity. *Physical Review B*, **2016**, 93,	3.3	35
153	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
152	Chemical Strengthening of Alkali-Free Glass via Pressure Vessel Ion Exchange. *International Journal of Applied Glass Science*, **2016**, 7, 446-451	1.8	6
151	Crack nucleation criterion and its application to impact indentation in glasses. *Scientific Reports*, **2016**, 6, 23720	4.9	26
150	Accelerating the Design of Functional Glasses through Modeling. *Chemistry of Materials*, **2016**, 28, 4267-4277	9.6	136
149	Crack initiation in metallic glasses under nanoindentation. *Acta Materialia*, **2016**, 115, 413-422	8.4	30
148	Linking Equilibrium and Nonequilibrium Dynamics in Glass-Forming Systems. *Journal of Physical Chemistry B*, **2016**, 120, 3226-31	3.4	21
147	Interfacial adhesion behavior of polyimides on silica glass: A molecular dynamics study. *Polymer*, **2016**, 98, 1-10	3.9	44
146	Universal behavior of changes in elastic moduli of hot compressed oxide glasses. *Chemical Physics Letters*, **2016**, 651, 88-91	2.5	21
145	Effects of Thermal and Pressure Histories on the Chemical Strengthening of Sodium Aluminosilicate Glass. *Frontiers in Materials*, **2016**, 3,	4	11
144	Competing Indentation Deformation Mechanisms in Glass Using Different Strengthening Methods. *Frontiers in Materials*, **2016**, 3,	4	16
143	Bioactive Glass Innovations Through Academia-Industry Collaboration. *International Journal of Applied Glass Science*, **2016**, 7, 139-146	1.8	7
142	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
141	Characterizing the Fundamental Adhesion of Polyimide Monomers on Crystalline and Glassy Silica Surfaces: A Molecular Dynamics Study. *Journal of Physical Chemistry C*, **2016**, 120, 23631-23639	3.8	19

140	Structural origin of intrinsic ductility in binary aluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2016**, 452, 297-306	3.9	18
139	Confocal depth-resolved micro-X-ray absorption spectroscopy study of chemically strengthened boroaluminosilicate glasses. *RSC Advances*, **2016**, 6, 24060-24065	3.7	3
138	Fragility and basic process energies in vitrifying systems. *Scientific Reports*, **2015**, 5, 8314	4.9	27
137	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
136	Hardness of oxynitride glasses: topological origin. *Journal of Physical Chemistry B*, **2015**, 119, 4109-15	3.4	22
135	Structure-topology-property correlations of sodium phosphosilicate glasses. *Journal of Chemical Physics*, **2015**, 143, 064510	3.9	35
134	Indentation deformation mechanism of isostatically compressed mixed alkali aluminosilicate glasses. *Journal of Non-Crystalline Solids*, **2015**, 426, 175-183	3.9	42
133	Response to "Comment on 'A model for phosphate glass topology considering the modifying ion sub-network"' [J. Chem. Phys. 142, 107103 (2015)]. *Journal of Chemical Physics*, **2015**, 142, 107104	3.9	2
132	Unique effects of thermal and pressure histories on glass hardness: Structural and topological origin. *Journal of Chemical Physics*, **2015**, 143, 164505	3.9	43
131	Methods for Measurement and Statistical Analysis of the Frangibility of Strengthened Glass. *Frontiers in Materials*, **2015**, 2,	4	7
130	Cation Diffusivity and the Mixed Network Former Effect in Borosilicate Glasses. *Journal of Physical Chemistry B*, **2015**, 119, 7106-15	3.4	14
129	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
128	Divergent dynamics and the Kauzmann temperature in glass forming systems. *Scientific Reports*, **2014**, 4, 5160	4.9	30
127	Mixed alkaline earth effect in the compressibility of aluminosilicate glasses. *Journal of Chemical Physics*, **2014**, 140, 054511	3.9	42
126	Two Centuries of Glass Research: Historical Trends, Current Status, and Grand Challenges for the Future. *International Journal of Applied Glass Science*, **2014**, 5, 313-327	1.8	87
125	Composition-Structure-Property Relations of Compressed Borosilicate Glasses. *Physical Review Applied*, **2014**, 2,	4.3	38
124	Modifier constraints in alkali ultraphosphate glasses. *Journal of Non-Crystalline Solids*, **2014**, 405, 12-15	3.9	14
123	Anomalous crystallization as a signature of the fragile-to-strong transition in metallic glass-forming liquids. *Journal of Physical Chemistry B*, **2014**, 118, 10258-65	3.4	13

122	High-speed camera study of Stage III crack propagation in chemically strengthened glass. *Applied Physics A: Materials Science and Processing*, **2014**, 116, 471-477	2.6	10
121	Principles of Pyrex® glass chemistry: structure–property relationships. *Applied Physics A: Materials Science and Processing*, **2014**, 116, 491-504	2.6	32
120	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
119	Dynamic fracturing of strengthened glass under biaxial tensile loading. *Journal of Non-Crystalline Solids*, **2014**, 405, 153-158	3.9	4
118	Pressure-induced changes in interdiffusivity and compressive stress in chemically strengthened glass. *ACS Applied Materials & Interfaces*, **2014**, 6, 10436-44	9.5	19
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