

Minoru Tomozawa

List of Publications by Year in descending order

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92
papers

2,812
citations

172457

29
h-index

197818

49
g-index

97
all docs

97
docs citations

97
times ranked

1646
citing authors

#	ARTICLE	IF	CITATIONS
1	A simple IR spectroscopic method for determining fictive temperature of silica glasses. Journal of Non-Crystalline Solids, 1995, 185, 191-198.	3.1	239
2	Correlation of silica glass properties with the infrared spectra. Journal of Non-Crystalline Solids, 1997, 209, 166-174.	3.1	152
3	Microhardness of SiO ₂ Glass in Various Environments. Journal of the American Ceramic Society, 1987, 70, 497-502.	3.8	142
4	Diffusion of Water into Silica Glass at Low Temperature. Journal of the American Ceramic Society, 1989, 72, 1850-1855.	3.8	132
5	Effect of Stress on Water Diffusion in Silica Glass. Journal of the American Ceramic Society, 1984, 67, 151-154.	3.8	122
6	Water in glass. Journal of Non-Crystalline Solids, 1985, 73, 197-204.	3.1	82
7	Preparation of BaTiO ₃ /low melting glass core-shell nanoparticles for energy storage capacitor applications. Journal of Materials Chemistry A, 2014, 2, 18087-18096.	10.3	77
8	Surface and bulk structural relaxation kinetics of silica glass. Journal of Non-Crystalline Solids, 1997, 209, 264-272.	3.1	72
9	Kinetics of Crack Tip Blunting of Glasses. Journal of the American Ceramic Society, 1987, 70, 43-48.	3.8	60
10	Phase separation in rare-earth-doped SiO ₂ glasses. Journal of Non-Crystalline Solids, 1993, 159, 246-252.	3.1	60
11	Water diffusion and surface structural relaxation of silica glasses. Journal of Non-Crystalline Solids, 2001, 288, 73-80.	3.1	60
12	Preparation of high purity, low water content fused silica glass. Journal of Non-Crystalline Solids, 2001, 296, 102-106.	3.1	57
13	Dynamic Fatigue of Treated High-Silica Glass: Explanation by Crack Tip Blunting. Journal of the American Ceramic Society, 1987, 70, 377-382.	3.8	54
14	Indentation Creep of Na ₂ O · 3SiO ₂ Glasses with Various Water Contents. Journal of the American Ceramic Society, 1990, 73, 3626-3632.	3.8	47
15	Water Entry into Silica Glass During Slow Crack Growth. Journal of the American Ceramic Society, 1991, 74, 2573-2576.	3.8	47
16	Thermal properties of Na ₂ O · 3SiO ₂ glasses with high water content. Journal of Non-Crystalline Solids, 1983, 56, 343-348.	3.1	45
17	Water diffusion into silica glass at a low temperature under high water vapor pressure. Journal of Non-Crystalline Solids, 2004, 347, 211-219.	3.1	45
18	Surface structural relaxation of silica glass: a possible mechanism of mechanical fatigue. Journal of Non-Crystalline Solids, 2004, 345-346, 449-460.	3.1	43

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19	Concentration Dependence of the Diffusion Coefficient of Water in SiO ₂ Glass. Journal of the American Ceramic Society, 1985, 68, C-251-C-252.	3.8	41
20	Effect of Fictive Temperature on Dynamic Fatigue Behavior of Silica and Soda-Lime Glasses. Journal of the American Ceramic Society, 1995, 78, 1393-1396.	3.8	38
21	Charge carrier concentration and mobility of ions in a silica glass. Journal of Non-Crystalline Solids, 1998, 241, 140-148.	3.1	37
22	Microstructure in Hydrated Silicate Glasses. Journal of the American Ceramic Society, 1983, 66, C-24-C-25.	3.8	36
23	Electrode Polarization of Glasses. Journal of the American Ceramic Society, 1976, 59, 127-130.	3.8	35
24	Birefringence and Microstructure of Anisotropic Borosilicate Glasses. Journal of the American Ceramic Society, 1976, 59, 377-379.	3.8	35
25	Determination of Fictive Temperature of Soda-Lime Silicate Glass. Journal of the American Ceramic Society, 1995, 78, 827-829.	3.8	34
26	Effect of uniaxial stresses on silica glass structure investigated by IR spectroscopy. Journal of Non-Crystalline Solids, 1998, 242, 104-109.	3.1	32
27	Correspondence of phase separation in several charged particle systems. Journal of Chemical Physics, 1992, 97, 2609-2617.	3.0	31
28	Effect of stress on water diffusion in silica glass at various temperatures. Journal of Non-Crystalline Solids, 1994, 167, 139-148.	3.1	31
29	Time dependent diffusion coefficient of water into silica glass at low temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1999, 272, 114-119.	5.6	30
30	Dielectric Characteristics of Glass. Treatise on Materials Science and Technology, 1977, 12, 283-345.	0.1	29
31	Effect of Phase Separation on HF Etch Rate of Borosilicate Glasses. Journal of the American Ceramic Society, 1977, 60, 301-304.	3.8	29
32	HCl Leaching Rate and Microstructure of Phase-Separated Borosilicate Glasses. Journal of the American Ceramic Society, 1978, 61, 509-512.	3.8	29
33	Effect of Minor Third Components on Metastable Immiscibility Boundaries of Binary Glasses. Journal of the American Ceramic Society, 1973, 56, 378-381.	3.8	28
34	Dielectric Relaxation Strength of a Low-Alkali Glass. Journal of the American Ceramic Society, 1981, 64, 713-717.	3.8	27
35	Radial distribution of fictive temperatures in silica optical fibers. Journal of Non-Crystalline Solids, 1997, 217, 272-277.	3.1	27
36	Ion-Exchanged Lithium Aluminosilicate Glass: Strength and Dynamic Fatigue. Journal of the American Ceramic Society, 2016, 99, 2645-2654.	3.8	27

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37	Detection of Phase Separation by FTIR in a Liquidâ€Crystalâ€Display Substrate Aluminoborosilicate Glass. Journal of the American Ceramic Society, 2001, 84, 2111-2116.	3.8	26
38	Mechanical strength increase of abraded silica glass by high pressure water vapor treatment. Journal of Non-Crystalline Solids, 1994, 168, 287-292.	3.1	23
39	An Overview of the Strengthening of Glass Fibers by Surface Stress Relaxation. International Journal of Applied Glass Science, 2015, 6, 34-44.	2.0	23
40	Nernst-Einstein Relation in Sodium Silicate Glass. Journal of the American Ceramic Society, 1975, 58, 183-185.	3.8	22
41	Viscosity and Microstructure of Phase-Separated Borosilicate Glasses. Journal of the American Ceramic Society, 1979, 62, 373-377.	3.8	22
42	Equilibrium oxygen vacancy concentrations and oxidant diffusion in germania, silica, and germania-silica glasses. Journal of Non-Crystalline Solids, 1996, 202, 93-106.	3.1	22
43	Mechanism of Mechanical Strength Increase of Soda-Lime Glass by Aging. Journal of the American Ceramic Society, 1989, 72, 1837-1843.	3.8	21
44	Effect of residual water in silica glass on static fatigue. Journal of Non-Crystalline Solids, 1991, 127, 97-104.	3.1	21
45	Effects of water in simulated borosilicate-based nuclear waste glasses on their properties. Journal of Non-Crystalline Solids, 1996, 195, 188-198.	3.1	20
46	Direct Observation of Crack Tip Geometry of SiO ₂ Glass by Highâ€Resolution Electron Microscopy. Journal of the American Ceramic Society, 1984, 67, C-36.	3.8	19
47	Surface Crystallization and Water Diffusion of Silica Glass Fibers: Causes of Mechanical Strength Degradation. Journal of the American Ceramic Society, 2015, 98, 2411-2421.	3.8	19
48	Effects of fictive temperature and water content on electrical conductivity of silica glasses. Journal of Non-Crystalline Solids, 1996, 203, 262-267.	3.1	18
49	Effect of fictive temperature on mechanical strength of soda-lime glasses. Journal of Non-Crystalline Solids, 1998, 241, 134-139.	3.1	18
50	Sub-critical crack growth rate of soda-lime-silicate glass and less brittle glass as a function of fictive temperature. Journal of Non-Crystalline Solids, 2007, 353, 2675-2680.	3.1	18
51	Dielectric Characteristics of Na ₂ O . 3SiO ₂ Glasses with High Water Contents. Journal of the American Ceramic Society, 1984, 67, 106-109.	3.8	17
52	Electrical and dielectric relaxation in silica glasses at low temperature. Journal of Non-Crystalline Solids, 1997, 211, 237-249.	3.1	17
53	IR reflection spectroscopy of a soda-lime glass surface during ion-exchange. Journal of Non-Crystalline Solids, 1997, 222, 125-130.	3.1	17
54	Relation of Surface Structure of Glass to HF Acid Attack and Stress State. Journal of the American Ceramic Society, 1979, 62, 370-373.	3.8	16

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55	Sodium Transport in the Na ₂ O-H ₂ O-SiO ₂ Glass System. Journal of the American Ceramic Society, 1985, 68, 165-168.	3.8	16
56	Crystallization of lithium metasilicate from lithium disilicate glass. Journal of Non-Crystalline Solids, 1995, 190, 233-237.	3.1	16
57	Effect of crystallizable glass addition on sintering and dielectric behaviors of barium titanate ceramics. Journal of Materials Science: Materials in Electronics, 2013, 24, 2135-2140.	2.2	16
58	Modeling Slow Crack Growth Behavior of Glass Strengthened by a Subcritical Tensile Stress Using Surface Stress Relaxation. Journal of the American Ceramic Society, 2015, 98, 3075-3086.	3.8	16
59	Origin of the Static Fatigue Limit in Oxide Glasses. Journal of the American Ceramic Society, 2016, 99, 3600-3609.	3.8	16
60	Electrical resistivity of silica glasses. Journal of Non-Crystalline Solids, 1993, 163, 203-210.	3.1	15
61	Stochasticity in materials structure, properties, and processing—A review. Applied Physics Reviews, 2018, 5, .	11.3	15
62	Effect of Fluorine on the Phase Separation of Na ₂ O-SiO ₂ Glasses. Journal of the American Ceramic Society, 1981, 64, C-20-C-20.	3.8	14
63	Tensile stress-acceleration of the surface structural relaxation of SiO ₂ optical fibers. Journal of Non-Crystalline Solids, 1997, 222, 376-382.	3.1	14
64	Glass-Metal Reaction in AC Electric Field. Journal of the American Ceramic Society, 1976, 59, 321-324.	3.8	13
65	Mechanical fatigue of silica glass. Journal of Non-Crystalline Solids, 1987, 95-96, 149-160.	3.1	13
66	Crack initiation and mechanical fatigue of silica glass. Journal of Non-Crystalline Solids, 1990, 122, 90-100.	3.1	13
67	Basic Science in Silica Glass Polishing. Materials Research Society Symposia Proceedings, 1994, 337, 89.	0.1	12
68	Water Diffusion in Silica Glass and Wet Oxidation of Si: An Interpretation for the High Speed of Wet Oxidation. Journal of the Electrochemical Society, 2011, 158, G115.	2.9	12
69	Light Scattering from Phase-Separated Glass. Journal of the American Ceramic Society, 1974, 57, 467-470.	3.8	11
70	A Source of the Immiscibility Controversy of Borate and Borosilicate Glass Systems. Journal of the American Ceramic Society, 1999, 82, 206-208.	3.8	11
71	Anomalous Birefringence in Oxide Glasses. Treatise on Materials Science and Technology, 1977, 12, 123-155.	0.1	10
72	Scattering Study of Microstructurally Birefringent Glasses. Journal of the American Ceramic Society, 1980, 63, 276-280.	3.8	10

#	ARTICLE	IF	CITATIONS
73	The origin of anomalous water diffusion in silica glasses at low temperatures. Journal of the American Ceramic Society, 2017, 100, 4548-4561.	3.8	10
74	Compositional Changes as Evidence for Spinodal Decomposition in Glass. Journal of the American Ceramic Society, 1978, 61, 444-447.	3.8	9
75	Glass transition temperature of Na ₂ O ₃ SiO ₂ glasses with high water content.. Journal of the Ceramic Association Japan, 1983, 91, 377-383.	0.2	9
76	Water concentration profile in silica glasses during surface crystallization. Journal of Non-Crystalline Solids, 2001, 279, 179-185.	3.1	9
77	Immiscibility of glass forming systems. Journal of Non-Crystalline Solids, 1986, 84, 142-150.	3.1	7
78	Origin of Viscosity Increase of Phase-Separated Borosilicate Glasses. Journal of the American Ceramic Society, 1992, 75, 3103-3110.	3.8	7
79	Surface shear stress relaxation of silica glass. Journal of the American Ceramic Society, 2019, 102, 4573-4582.	3.8	6
80	Modeling birefringence in SiO ₂ glass fiber using surface stress relaxation. Journal of the American Ceramic Society, 2020, 103, 1666-1676.	3.8	6
81	Dielectric Loss of Microstructurally Anisotropic Borosilicate Glass. Journal of the American Ceramic Society, 1981, 64, 275-278.	3.8	5
82	Anisotropy of Second-Phase Distribution in Phase-Separated and Stretched Glasses. Journal of the American Ceramic Society, 1982, 65, 9-11.	3.8	5
83	Effect of ammonia on static fatigue of silica glass. Journal of Non-Crystalline Solids, 1988, 102, 95-99.	3.1	4
84	The Surface Damage in SiO ₂ Caused by Chemical Mechanical Polishing on Ic-60 Pads. Materials Research Society Symposia Proceedings, 1994, 337, 157.	0.1	4
85	Hydrogen formation observed during high pressure treatment of silica glass. Journal of Non-Crystalline Solids, 2011, 357, 2081-2085.	3.1	3
86	Swelling of Microporous High-Silica Glasses. Journal of the American Ceramic Society, 1982, 65, c127-c128.	3.8	2
87	The effect of water on phase separation of sodium silicate glasses. Journal of Non-Crystalline Solids, 1994, 167, 127-138.	3.1	2
88	Photoelastic confirmation of surface stress relaxation in silica glasses: Fiber bending and rod torsion. Journal of the American Ceramic Society, 2021, 104, 3087-3096.	3.8	2
89	Morphology of Creep Fracture of a Phase-Separated Borosilicate Glass. Journal of the American Ceramic Society, 1980, 63, 126-128.	3.8	1
90	Method to Estimate Thermal Shrinkage Behavior of Glasses. International Journal of Applied Glass Science, 2011, 2, 192-200.	2.0	1

#	ARTICLE	IF	CITATIONS
91	<title>Fatigue-resistant coating of SiO$_2$ glass</title>. , 1991, , .		0
92	Induced anisotropy in oxide glasses. , 1994, , 955-972.		0