Liping Huang

List of Publications by Year
in descending order

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77	2,324	201385	233125
papers	citations	27	45
		h-index	g-index

79	79	79	2367
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Tensile ductility and necking in consolidated amorphous alumina. Journal of the American Ceramic Society, 2022, 105, 958-965.	1.9	3
2	Engineering thermoelectric and mechanical properties by nanoporosity in calcium cobaltate films from reactions of Ca(OH)₂/Co₃O₄ multilayers. Nanoscale Advances, 2022, 4, 3353-3361.	2.2	5
3	Why Enhanced Subnanosecond Relaxations Are Important for Toughness in Polymer Glasses. Macromolecules, 2021, 54, 2518-2528.	2.2	12
4	Design ductile and work-hardenable composites with all brittle constituents. Acta Materialia, 2021, 208, 116770.	3.8	10
5	Molecular dynamics study on the viscosity of glassâ€forming systems near and below the glass transition temperature. Journal of the American Ceramic Society, 2021, 104, 6227-6241.	1.9	5
6	Strain rate-dependent tensile response of glassy silicon nanowires studied by accelerated atomistic simulations. Journal of Applied Physics, 2021, 130, .	1.1	5
7	New interaction potentials for alkaline earth silicate and borate glasses. Journal of Non-Crystalline Solids, 2021, 565, 120853.	1.5	11
8	Towards damage resistant Al2O3â€“SiO2 glasses with structural and chemical heterogeneities through consolidation of glassy nanoparticles. Acta Materialia, 2021, 215, 117016.	3.8	8
9	The impact of densification on indentation fracture toughness measurements. Journal of the American Ceramic Society, 2020, 103, 3920-3929.	1.9	13
10	Structural origin of the anomalous density maximum in silica and alkali silicate glasses. Journal of the American Ceramic Society, 2020, 103, 3942-3953.	1.9	6
11	Understanding the response of aluminosilicate and aluminoborate glasses to sharp contact loading using molecular dynamics simulation. Journal of Applied Physics, 2020, 128, .	1.1	8
12	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
13	New interaction potentials for borate glasses with mixed network formers. Journal of Chemical Physics, 2020, 152, 104501.	1.2	28
14	Maxwell relaxation time for nonexponential Î±â€relaxation phenomena in glassy systems. Journal of the American Ceramic Society, 2020, 103, 3590-3599.	1.9	24
15	Understanding cracking behavior of glass from its response to hydrostatic compression. Physical Review Materials, 2020, 4, .	0.9	2
16	Understanding the structural origin of intermediate glasses. Journal of the American Ceramic Society, 2019, 102, 1137-1149.	1.9	8
17	Silica Glass Toughened by Consolidation of Glassy Nanoparticles. Nano Letters, 2019, 19, 5222-5228.	4.5	26
18	Effect of vanadium oxide addition on thermomechanical behaviors of borosilicate glasses: Toward development of high crack resistant glasses for nuclear waste disposal. Journal of Non-Crystalline Solids, 2019, 515, 88-97.	1.5	20

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19	New interaction potentials for alkali and alkaline-earth aluminosilicate glasses. Journal of Chemical Physics, 2019, 150, 154505.	1.2	41
20	Topological constraint model for the elasticity of glass-forming systems. Journal of Non-Crystalline Solids: X, 2019, 2, 100019.	0.5	25
21	Composition â€“ structure â€“ property relationships in alkali aluminosilicate glasses: A combined experimental â€“ computational approach towards designing functional glasses. Journal of Non-Crystalline Solids, 2019, 505, 144-153.	1.5	48
22	Repurposing paper by-product lignosulfonate as a sulfur donor/acceptor for high performance lithiumâ€“sulfur batteries. Sustainable Energy and Fuels, 2018, 2, 422-429.	2.5	26
23	Thermally induced amorphous to amorphous transition in hot-compressed silica glass. Journal of Chemical Physics, 2018, 148, 194501.	1.2	15
24	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
25	New optimization scheme to obtain interaction potentials for oxide glasses. Journal of Chemical Physics, 2018, 148, 194504.	1.2	60
26	The role of ceramic and glass science research in meeting societal challenges: Report from an <scp>NSF</scp>â€sponsored workshop. Journal of the American Ceramic Society, 2017, 100, 1777-1803.	1.9	23
27	Solvent Effect on the Diffusion of Unentangled Linear Polymer Melts. Langmuir, 2017, 33, 11845-11850.	1.6	8
28	Impact of pressure on the structure of glass and its material properties. MRS Bulletin, 2017, 42, 734-737.	1.7	16
29	Phase stability and mechanical properties of Mo1-xNx with 0 â‰¤ x â‰¤ 1. Journal of Applied Physics, 2017, 122, .	1.1	39
30	Modified elastic model for viscosity in glass-forming systems. Physical Review B, 2017, 96, .	1.1	7
31	Tailoring structure and properties of silica glass aided by computer simulation. Journal of Materials Research, 2017, 32, 174-182.	1.2	14
32	Interaction between Deformation and Crack Initiation under Vickers Indentation in Na2Oâ€“TiO2â€“SiO2 Glasses. Frontiers in Materials, 2017, 4, .	1.2	18
33	Computational study of pressure-driven methane transport in hierarchical nanostructured porous carbons. Journal of Chemical Physics, 2016, 144, 044708.	1.2	12
34	Structure and thermo-mechanical response of Na2O-TiO2-SiO2 glasses to temperature. Journal of Non-Crystalline Solids, 2016, 453, 46-58.	1.5	10
35	Structure and properties of Na2O-TiO2-SiO2 glasses: Role of Na and Ti on modifying the silica network. Journal of Non-Crystalline Solids, 2016, 448, 52-61.	1.5	27
36	Structure and thermo-mechanical response of TiO2-SiO2 glasses to temperature. Journal of Non-Crystalline Solids, 2016, 447, 238-247.	1.5	27

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37	Understanding Sodium Borate Glasses and Melts from Their Elastic Response to Temperature. International Journal of Applied Glass Science, 2016, 7, 452-463.	1.0	20
38	Crack initiation in metallic glasses under nanoindentation. Acta Materialia, 2016, 115, 413-422.	3.8	39
39	Mechanical properties of silica glass predicted by a pair-wise potential in molecular dynamics simulations. Journal of Non-Crystalline Solids, 2016, 445-446, 102-109.	1.5	23
40	Nonlinear Elasticity of Silica Glass. Journal of the American Ceramic Society, 2016, 99, 841-848.	1.9	12
41	Eco-friendly synthesis of metal dichalcogenides nanosheets and their environmental remediation potential driven by visible light. Scientific Reports, 2015, 5, 15718.	1.6	100
42	Structure and Properties of Silica Glass Densified in Cold Compression and Hot Compression. Scientific Reports, 2015, 5, 15343.	1.6	112
43	In-situ Raman and Brillouin light scattering study of the international simple glass in response to temperature and pressure. Journal of Non-Crystalline Solids, 2015, 411, 101-105.	1.5	30
44	Aligned Carbon Nanotubes/Amorphous Porous Carbon Nanocomposite: A Molecular Simulation Study. Journal of Physical Chemistry C, 2015, 119, 6806-6812.	1.5	6
45	Indentation deformation mechanism of isostatically compressed mixed alkali aluminosilicate glasses. Journal of Non-Crystalline Solids, 2015, 426, 175-183.	1.5	53
46	Computational Study of Pressure-Driven Gas Transport in Nanostructured Carbons: An Alternative Approach. Journal of Physical Chemistry B, 2015, 119, 12299-12307.	1.2	10
47	Elastic properties and indentation cracking behavior of Na2O-TiO2-SiO2 glasses. Journal of Non-Crystalline Solids, 2015, 429, 129-142.	1.5	31
48	TiO₂-Decorated Graphite Nanoplatelet Nanocomposites for High-Temperature Sensor Applications. Small, 2015, 11, 361-366.	5.2	13
49	Challenges in Modeling Mixed Ionic-Covalent Glass Formers. Springer Series in Materials Science, 2015, , 87-112.	0.4	6
50	Intrinsic ductility of glassy solids. Journal of Applied Physics, 2014, 115, .	1.1	70
51	Thermal Sensitive Quantum and Phonon Confinements for Temperature Mapping in Extreme Environments. Journal of Physical Chemistry C, 2014, 118, 7222-7228.	1.5	9
52	Brittle to Ductile Transition in Densified Silica Glass. Scientific Reports, 2014, 4, 5035.	1.6	119
53	Size effect on thermal stability of nanocrystalline anatase TiO₂. Journal Physics D: Applied Physics, 2013, 46, 255303.	1.3	21
54	Size-dependent elasticity of amorphous silica nanowire: A molecular dynamics study. Applied Physics Letters, 2013, 103, 201905.	1.5	13

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55	Nanocasting of hierarchical nanostructured porous carbon in molecular dynamics simulation. Journal of Materials Chemistry A, 2013, 1, 3886.	5.2	14
56	Suppression of shear banding in amorphous ZrCuAl nanopillars by irradiation. Journal of Applied Physics, 2013, 113, 083514.	1.1	30
57	Elastic interpretation of the glass transition in aluminosilicate liquids. Physical Review B, 2012, 85, .	1.1	27
58	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î±</mml:mi><mml:mo>â€“</mml:mo><mml:mi>Î²</mml:mi></mml:mrow></mml:math>transfo and disorder in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>-cristobalite silica. Physical Review B, 2012, 85, .	1.1	17
59	Challenges in Ceramic Science: A Report from the Workshop on Emerging Research Areas in Ceramic Science. Journal of the American Ceramic Society, 2012, 95, 3699-3712.	1.9	59
60	In-situ high temperature Raman and Brillouin light scattering studies of sodium silicate glasses. Journal of Non-Crystalline Solids, 2012, 358, 3418-3426.	1.5	40
61	Molecular dynamics simulation of amorphous silica under uniaxial tension: From bulk to nanowire. Journal of Non-Crystalline Solids, 2012, 358, 3481-3487.	1.5	69
62	A simple and convenient set-up for high-temperature Brillouin light scattering. Journal Physics D: Applied Physics, 2012, 45, 275302.	1.3	39
63	Thermometry based on phonon confinement effect in nanoparticles. Applied Physics Letters, 2011, 98, 113102.	1.5	16
64	Ti-decorated C60 as catalyst for hydrogen generation and storage. Applied Physics Letters, 2010, 96, .	1.5	18
65	Designing Glasses with Tunable Structure and Properties by Computer Simulation. Materials Research Society Symposia Proceedings, 2009, 1229, 80801.	0.1	0
66	Molecular design of photoactive acenes for organic photovoltaics. Journal of Chemical Physics, 2009, 130, 194701.	1.2	19
67	Polyamorphic transitions in vitreous B2O3under pressure. Journal of Physics Condensed Matter, 2008, 20, 075107.	0.7	23
68	Transformation pathways of silica under high pressure. Nature Materials, 2006, 5, 977-981.	13.3	91
69	Anomalous thermomechanical properties and laser-induced densification of vitreous silica. Applied Physics Letters, 2006, 89, 141915.	1.5	18
70	Thermomechanical anomalies and polyamorphism inB2O3glass: A molecular dynamics simulation study. Physical Review B, 2006, 74, .	1.1	67
71	Structural Origin of Negative Thermal Expansion in High-Temperature Silica Polymorphs. Physical Review Letters, 2005, 95, 215901.	2.9	30
72	Amorphous-amorphous transitions in silica glass. I. Reversible transitions and thermomechanical anomalies. Physical Review B, 2004, 69, .	1.1	138

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73	Amorphous-amorphous transitions in silica glass. II. Irreversible transitions and densification limit. Physical Review B, 2004, 69, .	1.1	99
74	Structural transitions in silica glass: thermo-mechanical anomalies and polyamorphism. Journal of Non-Crystalline Solids, 2004, 349, 1-9.	1.5	80
75	Molecular dynamics study of cristobalite silica using a charge transfer three-body potential: Phase transformation and structural disorder. Journal of Chemical Physics, 2003, 118, 1487-1498.	1.2	96
76	The alkoxide sol-gel process in the calcium phosphate system and its applications. Applied Organometallic Chemistry, 1999, 13, 555-564.	1.7	16
77	Anomalous Thermomechanical Properties of Network Glasses. Ceramic Engineering and Science Proceedings, 0, , 81-96.	0.1	0