Binghui Deng

List of Publications by Year
in descending order

33 papers	626 citations	623574 14 h-index	610775 24 g-index
34 all docs	34 docs citations	34 times ranked	444 citing authors

#	Article	IF	Citations
1	Machine learning on density and elastic property of oxide glasses driven by large dataset. Journal of Non-Crystalline Solids, 2020, 529, 119768.	1.5	63
2	The normal-auxeticity mechanical phase transition in graphene. 2D Materials, 2017, 4, 021020.	2.0	49
3	Molecular dynamics simulations on fracture toughness of Al2O3-SiO2 glass-ceramics. Scripta Materialia, 2019, 162, 277-280.	2.6	46
4	Critical feature space for predicting the glass forming ability of metallic alloys revealed by machine learning. Chemical Physics, 2020, 538, 110898.	0.9	41
5	Magic auxeticity angle of graphene. Carbon, 2019, 149, 350-354.	5.4	38
6	Experimental method to quantify the ring size distribution in silicate glasses and simulation validation thereof. Science Advances, 2021, 7, .	4.7	36
7	Critical stress map for ZrO2 tetragonal to monoclinic phase transformation in ZrO2-toughened glass-ceramics. Materialia, 2020, 9, 100548.	1.3	35
8	On measuring the fracture energy of model metallic glasses. Journal of Applied Physics, 2018, 124, .	1.1	30
9	Revisiting the Makishimaâ€“Mackenzie model for predicting the young's modulus of oxide glasses. Acta Materialia, 2020, 195, 252-262.	3.8	28
10	Atomic picture of crack propagation in Li₂Oâ€“2SiO₂ glassâ€“ceramics revealed by molecular dynamics simulations. Journal of the American Ceramic Society, 2020, 103, 4304-4312.	1.9	21
11	Toward revealing full atomic picture of nanoindentation deformation mechanisms in Li2O-2SiO2 glass-ceramics. Acta Materialia, 2021, 208, 116715.	3.8	20
12	Toughening of Li₂Oâ€“2SiO₂ glassâ€“ceramics induced by intriguing deformation behavior of lithium disilicate nanocrystal. Journal of the American Ceramic Society, 2020, 103, 965-972.	1.9	18
13	Microstructure and Properties of Electron Beam Welded Tantalum-to-Stainless Steel Joints. Rare Metal Materials and Engineering, 2013, 42, 914-918.	0.8	15
14	Investigation on the structural origin of low thermal expansion coefficient of fused silica. Materialia, 2020, 12, 100752.	1.3	15
15	Revealing the structural role of MgO in aluminosilicate glasses. Acta Materialia, 2022, 222, 117417.	3.8	15
16	Comparison of chain-growth polymerization in solution versus on surface using reactive coarse-grained simulations. Polymer, 2017, 129, 105-116.	1.8	14
17	Data-driven predictive models for chemical durability of oxide glass under different chemical conditions. Npj Materials Degradation, 2020, 4, .	2.6	14
18	Atomic-scale modeling of crack branching in oxide glass. Acta Materialia, 2021, 216, 117098.	3.8	13

#	Article	IF	Citations
19	A reactive coarse-grained model for polydisperse polymers. Polymer, 2016, 98, 88-99.	1.8	11
20	The embrittlement and toughening of metallic glasses from nano-crystallization. Journal of Applied Physics, 2019, 125, .	1.1	11
21	A novel approach to generate glass-ceramics samples for molecular dynamics simulations. Computational Materials Science, 2021, 186, 110008.	1.4	10
22	Design ductile and work-hardenable composites with all brittle constituents. Acta Materialia, 2021, 208, 116770.	3.8	10
23	Nucleation pathways in barium silicate glasses. Scientific Reports, 2021, 11, 69.	1.6	10
24	Investigation of microscale fracture mechanisms in glassâ€“ceramics using peridynamics simulations. Journal of the American Ceramic Society, 2022, 105, 4304-4320.	1.9	10
25	Interface structure characterization of Fe36Ni alloy with ultrasonic soldering. Journal of Alloys and Compounds, 2013, 576, 386-392.	2.8	8
26	Dynamic self-assembly of â€˜livingâ€™ polymeric chains. Chemical Physics Letters, 2017, 668, 14-18.	1.2	8
27	Solvent Effect on the Diffusion of Unentangled Linear Polymer Melts. Langmuir, 2017, 33, 11845-11850.	1.6	8
28	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
29	Revealing the medium-range structure of glassy silica using force-enhanced atomic refinement. Journal of Non-Crystalline Solids, 2021, 573, 121138.	1.5	7
30	Impact of pressure on structure and properties of hotâ€compressed Na₂Oâ€“Al₂O₃â€“SiO₂ glass by molecular dynamics simulations. Journal of the American Ceramic Society, 2021, 104, 2530-2538.	1.9	5
31	Strain rate-dependent tensile response of glassy silicon nanowires studied by accelerated atomistic simulations. Journal of Applied Physics, 2021, 130, .	1.1	5
32	Reduced Plastic Dilatancy in Polymer Glasses. Macromolecular Theory and Simulations, 2021, 30, 2000063.	0.6	3
33	Toward revealing atomic deformation mechanics in lithium disilicate and Î²â€quartz containing glassâ€ceramics. Journal of the American Ceramic Society, 2022, 105, 990.	1.9	1