Zhendong Sha

List of Publications by Year
in descending order

75 papers	3,230 citations	147726 31 h-index	149623 56 g-index
75 all docs	75 docs citations	75 times ranked	3229 citing authors

#	Article	IF	Citations
1	Mechanism of ferromagnetism in nitrogen-doped ZnO: First-principle calculations. Physical Review B, 2008, 78, .	1.1	269
2	A theoretical analysis of the thermal conductivity of hydrogenated graphene. Carbon, 2011, 49, 4752-4759.	5.4	176
3	Perfect spin-filter and spin-valve in carbon atomic chains. Applied Physics Letters, 2010, 96, 042104.	1.5	174
4	The effect of Stoneâ€"Throwerâ€"Wales defects on mechanical properties of graphene sheets â€" A molecular dynamics study. Carbon, 2014, 75, 124-132.	5.4	162
5	Effects of grain size, temperature and strain rate on the mechanical properties of polycrystalline graphene â€" A molecular dynamics study. Carbon, 2015, 85, 135-146.	5.4	136
6	Structure and photoluminescence properties of Fe-doped ZnO thin films. Journal Physics D: Applied Physics, 2006, 39, 4762-4765.	1.3	133
7	Effects of edge passivation by hydrogen on electronic structure of armchair graphene nanoribbon and band gap engineering. Applied Physics Letters, 2009, 94, .	1.5	112
8	A transition from localized shear banding to homogeneous superplastic flow in nanoglass. Applied Physics Letters, 2013, 103, .	1.5	110
9	Mechanical properties and fracture behavior of single-layer phosphorene at finite temperatures. Journal Physics D: Applied Physics, 2015, 48, 395303.	1.3	103
10	Cyclic Deformation in Metallic Glasses. Nano Letters, 2015, 15, 7010-7015.	4.5	89
11	Statistical composition-structure-property correlation and glass-forming ability based on the full icosahedra in Cuâ€"Zr metallic glasses. Applied Physics Letters, 2010, 96, .	1.5	83
12	Carbon isotope doping induced interfacial thermal resistance and thermal rectification in graphene. Applied Physics Letters, 2012, 100, .	1.5	80
13	Inverse Pseudo Hall-Petch Relation in Polycrystalline Graphene. Scientific Reports, 2014, 4, 5991.	1.6	79
14	Strong and ductile nanolaminate composites combining metallic glasses and nanoglasses. International Journal of Plasticity, 2017, 90, 231-241.	4.1	78
15	Metallic glass-based chiral nanolattice: Light weight, auxeticity, and superior mechanical properties. Materials Today, 2017, 20, 569-576.	8.3	72
16	Necking and notch strengthening in metallic glass with symmetric sharp-and-deep notches. Scientific Reports, 2015, 5, 10797.	1.6	68
17	Atomistic origin of size effects in fatigue behavior of metallic glasses. Journal of the Mechanics and Physics of Solids, 2017, 104, 84-95.	2.3	68
18	On the failure load and mechanism of polycrystalline graphene by nanoindentation. Scientific Reports, 2014, 4, 7437.	1.6	58

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19	A modified Tersoff potential for pure and hydrogenated diamond-like carbon. Computational Materials Science, 2013, 67, 146-150.	1.4	55
20	Atomic vacancies significantly degrade the mechanical properties of phosphorene. Nanotechnology, 2016, 27, 315704.	1.3	54
21	Structure and photoluminescence properties of SiC films synthesized by the RF-magnetron sputtering technique. Vacuum, 2005, 79, 250-254.	1.6	47
22	Is the failure of large-area polycrystalline graphene notch sensitive or insensitive?. Carbon, 2014, 72, 200-206.	5.4	45
23	Hydrogenated Grain Boundaries Control the Strength and Ductility of Polycrystalline Graphene. Journal of Physical Chemistry C, 2014, 118, 13769-13774.	1.5	43
24	Glass forming abilities of binary Cu100â^'xZrx (34, 35.5, and 38.2â€‚at.â€‰%) metallic glasses: A LAMMPS study. Journal of Applied Physics, 2009, 105, .	1.1	42
25	Mechanical properties of nanoporous metallic glasses: Insights from large-scale atomic simulations. International Journal of Plasticity, 2020, 127, 102657.	4.1	40
26	Strong and superplastic nanoglass. Nanoscale, 2015, 7, 17404-17409.	2.8	39
27	Notch strengthening in nanoscale metallic glasses. Acta Materialia, 2019, 169, 147-154.	3.8	39
28	The basic polyhedral clusters, the optimum glass formers, and the composition-structure-property (glass-forming ability) correlation in Cuâ€"Zr metallic glasses. Journal of Applied Physics, 2010, 107, .	1.1	38
29	Molecular dynamics simulations of nano-indentation and wear of the Î³Ti-Al alloy. Computational Materials Science, 2015, 110, 247-253.	1.4	38
30	A molecular dynamics study of the mechanical properties of h-BCN monolayer using a modified Tersoff interatomic potential. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 2821-2827.	0.9	34
31	Simultaneously boost diffusion length and stability of perovskite for high performance solar cells. Nano Energy, 2019, 59, 721-729.	8.2	33
32	Tuning the thermal conductivity of multi-layer graphene with interlayer bonding and tensile strain. Applied Physics A: Materials Science and Processing, 2015, 120, 1275-1281.	1.1	32
33	Friction between silicon and diamond at the nanoscale. Journal Physics D: Applied Physics, 2015, 48, 255303.	1.3	30
34	Molecular dynamics studies of short to medium range order in Cu64Zr36 metallic glass. Journal of Alloys and Compounds, 2011, 509, 8319-8322.	2.8	29
35	Effects of grain size and temperature on mechanical and failure properties of ultrananocrystalline diamond. Diamond and Related Materials, 2011, 20, 1303-1309.	1.8	28
36	Thermal transport behavior of polycrystalline graphene: A molecular dynamics study. Journal of Applied Physics, 2014, 116, .	1.1	28

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37	Ab initio study on the electronic origin of glass-forming ability in the binary Cuâ€“Zr and the ternary Cuâ€“Zrâ€“Al(Ag) metallic glasses. Journal of Alloys and Compounds, 2015, 619, 16-19.	2.8	26
38	Temperature and strain-rate dependent mechanical properties of single-layer borophene. Extreme Mechanics Letters, 2018, 19, 39-45.	2.0	26
39	Remarkable enhancement in failure stress and strain of penta-graphene via chemical functionalization. Nano Research, 2017, 10, 3865-3874.	5.8	24
40	Electronic structures of Î²-Si3N4(0001)/Si(111) interfaces: Perfect bonding and dangling bond effects. Journal of Applied Physics, 2009, 105, .	1.1	23
41	A two-step fused machine learning approach for the prediction of glass-forming ability of metallic glasses. Journal of Alloys and Compounds, 2021, 875, 160040.	2.8	23
42	Fatigue of Metallic Glasses. Applied Mechanics Reviews, 2020, 72, .	4.5	23
43	The structure and optical properties of SiC film on Si (111) substrate with a ZnO buffer layer by RF-magnetron sputtering technique. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 355, 228-232.	0.9	22
44	Electric and magnetic properties of Cr-doped SiC films grown by dual ion beam sputtering deposition. Journal Physics D: Applied Physics, 2008, 41, 035005.	1.3	21
45	Molecular Dynamics Simulations on the Frictional Behavior of a Perfluoropolyether Film Sandwiched between Diamond-like-Carbon Coatings. Langmuir, 2014, 30, 1573-1579.	1.6	21
46	On the notch sensitivity of CuZr nanoglass. Journal of Applied Physics, 2014, 115, .	1.1	20
47	Initial study on the structure and optical properties of ZnO film on Si(111) substrate with a SiC buffer layer. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 33, 263-267.	1.3	18
48	Possible efficient p-type doping of AlN using Be: An ab initio study. Applied Physics Letters, 2007, 91, 152110.	1.5	18
49	The nature of the atomic-level structure in the Cuâ€“Zr binary metallic glasses. Intermetallics, 2012, 26, 8-10.	1.8	17
50	Ab initio study on the effects of dopantâ€“defect cluster on the electronic properties of TiO2-based photocatalysts. International Journal of Hydrogen Energy, 2014, 39, 2049-2055.	3.8	17
51	The fundamental structural factor in determining the glass-forming ability and mechanical behavior in the Cuâ€“Zr metallic glasses. Materials Chemistry and Physics, 2011, 127, 292-295.	2.0	16
52	Study of the Spreading of Perfluoropolyether Lubricants on a Diamond-Like Carbon Film. Tribology Transactions, 2013, 56, 255-267.	1.1	16
53	Mechanical behavior of metallic glasses with pressure-promoted thermal rejuvenation. Journal of Alloys and Compounds, 2020, 848, 156597.	2.8	16
54	Deformation and failure mechanisms of nanoscale cellular structures of metallic glasses. RSC Advances, 2016, 6, 100899-100907.	1.7	14

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55	The structure and photoluminescence properties of SiC films doped with Al. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 346, 186-192.	0.9	11
56	Initial study on the structure and photoluminescence properties of SiC films doped with Al. Applied Surface Science, 2006, 252, 4340-4344.	3.1	11
57	Composition-dependent effects of oxygen on atomic structure and mechanical properties of metallic glasses. Physical Chemistry Chemical Physics, 2021, 23, 1335-1342.	1.3	10
58	Failure Mechanism of Phosphorene by Nanoindentation. Journal of Physical Chemistry C, 2017, 121, 4708-4713.	1.5	9
59	Structure and optical properties of the SiC/ZnO five-layer multi-layer on Si (111) substrate with a SiC buffer layer. Journal Physics D: Applied Physics, 2006, 39, 3240-3243.	1.3	8
60	Atomistic Molecular Dynamics Study of Structural and Thermomechanical Properties of Zdol Lubricants on Hydrogenated Diamond-Like Carbon. IEEE Transactions on Magnetics, 2013, 49, 5227-5235.	1.2	8
61	One-Step Synthesis of Silicon Oxynitride Films Using a Steady-State and High-Flux Helicon-Wave Excited Nitrogen Plasma. Plasma Chemistry and Plasma Processing, 2017, 37, 1237-1247.	1.1	8
62	Thermal damage and ablation behavior of graphene induced by ultrafast laser irradiation. Journal of Thermal Stresses, 2018, 41, 1153-1168.	1.1	8
63	Intrinsic and extrinsic effects on the fracture toughness of ductile metallic glasses. Mechanics of Materials, 2021, 162, 104066.	1.7	7
64	On the deformation and failure mechanisms of hydrogen alloyed metallic glasses. Journal of Applied Physics, 2022, 131, .	1.1	7
65	Tuning the mechanical properties of cellular metallic glasses. International Journal of Plasticity, 2022, 156, 103373.	4.1	7
66	The effect of pressure-promoted thermal rejuvenation on the fracture energy of metallic glasses. Journal of Non-Crystalline Solids, 2022, 590, 121674.	1.5	6
67	Coupling of magnetic edge states in Li-intercalated bilayer and multilayer zigzag graphene nanoribbons. Europhysics Letters, 2011, 94, 27007.	0.7	5
68	Ultra-compact metafence to block and channel mechanical waves. Extreme Mechanics Letters, 2022, 52, 101659.	2.0	5
69	Creep rupture behavior of 2.25Cr1Mo0.25V steel and weld for hydrogenation reactors under different stress levels. Reviews on Advanced Materials Science, 2022, 61, 334-349.	1.4	5
70	Initial study on the structure and photoluminescence properties of SiC films doped with Co. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 35, 38-41.	1.3	4
71	The Edge-Related Mechanical Properties of Fluorographene Nanoribbons. Journal of Applied Mechanics, Transactions ASME, 2015, 82, .	1.1	3
72	Hydrogen induced cracking in metallic glasses. Journal of Applied Physics, 2021, 130, .	1.1	3

#	ARTICLE	IF	CITATIONS
73	The structure and photoluminescence properties of ZnO/SiC multilayer film on Si substrate. Frontiers of Materials Science in China, 2007, 1, 158-161.	0.5	0
74	Notch Strengthening in Nanoscale Metallic Glasses. SSRN Electronic Journal, 2018, , .	0.4	0
75	IMPROVED MECHANICAL PROPERTIES OF METALLIC GLASSES. , 2015, , 87-88.		0