Zhendong Sha

List of Publications by Year in Descending Order

73 papers	2,636 citations	26 h-index	50 g-index
75 ext. papers	2,925 ext. citations	4.8 avg, IF	5.19 L-index

#	Paper	IF	Citations
73	On the deformation and failure mechanisms of hydrogen alloyed metallic glasses. *Journal of Applied Physics*, **2022**, 131, 085104	2.5	2
72	Ultra-compact metafence to block and channel mechanical waves. *Extreme Mechanics Letters*, **2022**, 52, 101659	3.9	0
71	The effect of pressure-promoted thermal rejuvenation on the fracture energy of metallic glasses. *Journal of Non-Crystalline Solids*, **2022**, 590, 121674	3.9	1
70	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	4.8	1
69	Composition-dependent effects of oxygen on atomic structure and mechanical properties of metallic glasses. *Physical Chemistry Chemical Physics*, **2021**, 23, 1335-1342	3.6	7
68	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	5.7	5
67	Intrinsic and extrinsic effects on the fracture toughness of ductile metallic glasses. *Mechanics of Materials*, **2021**, 162, 104066	3.3	2
66	Hydrogen induced cracking in metallic glasses. *Journal of Applied Physics*, **2021**, 130, 235101	2.5	1
65	Fatigue of Metallic Glasses. *Applied Mechanics Reviews*, **2020**, 72,	8.6	9
64	Mechanical properties of nanoporous metallic glasses: Insights from large-scale atomic simulations. *International Journal of Plasticity*, **2020**, 127, 102657	7.6	22
63	Mechanical behavior of metallic glasses with pressure-promoted thermal rejuvenation. *Journal of Alloys and Compounds*, **2020**, 848, 156597	5.7	9
62	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	2.3	17
61	Notch strengthening in nanoscale metallic glasses. *Acta Materialia*, **2019**, 169, 147-154	8.4	26
60	Simultaneously boost diffusion length and stability of perovskite for high performance solar cells. *Nano Energy*, **2019**, 59, 721-729	17.1	21
59	Temperature and strain-rate dependent mechanical properties of single-layer borophene. *Extreme Mechanics Letters*, **2018**, 19, 39-45	3.9	20
58	Thermal damage and ablation behavior of graphene induced by ultrafast laser irradiation. *Journal of Thermal Stresses*, **2018**, 41, 1153-1168	2.2	5
57	Failure Mechanism of Phosphorene by Nanoindentation. *Journal of Physical Chemistry C*, **2017**, 121, 4708-4713	3.7	5

56	Strong and ductile nanolaminate composites combining metallic glasses and nanoglasses. *International Journal of Plasticity*, **2017**, 90, 231-241	7.6	61
55	Atomistic origin of size effects in fatigue behavior of metallic glasses. *Journal of the Mechanics and Physics of Solids*, **2017**, 104, 84-95	5	52
54	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	3.6	7
53	Remarkable enhancement in failure stress and strain of penta-graphene via chemical functionalization. *Nano Research*, **2017**, 10, 3865-3874	10	17
52	Metallic glass-based chiral nanolattice: Light weight, auxeticity, and superior mechanical properties. *Materials Today*, **2017**, 20, 569-576	21.8	56
51	Deformation and failure mechanisms of nanoscale cellular structures of metallic glasses. *RSC Advances*, **2016**, 6, 100899-100907	3.7	13
50	Atomic vacancies significantly degrade the mechanical properties of phosphorene. *Nanotechnology*, **2016**, 27, 315704	3.4	44
49	Necking and notch strengthening in metallic glass with symmetric sharp-and-deep notches. *Scientific Reports*, **2015**, 5, 10797	4.9	56
48	The Edge-Related Mechanical Properties of Fluorographene Nanoribbons. *Journal of Applied Mechanics, Transactions ASME*, **2015**, 82,	2.7	3
47	Cyclic Deformation in Metallic Glasses. *Nano Letters*, **2015**, 15, 7010-5	11.5	67
46	Molecular dynamics simulations of nano-indentation and wear of the Ti-Al alloy. *Computational Materials Science*, **2015**, 110, 247-253	3.2	26
45	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	2.6	22
44	Strong and superplastic nanoglass. *Nanoscale*, **2015**, 7, 17404-9	7.7	31
43	Ab initio study on the electronic origin of glass-forming ability in the binary Cu2r and the ternary Cu2rAl(Ag) metallic glasses. *Journal of Alloys and Compounds*, **2015**, 619, 16-19	5.7	23
42	Friction between silicon and diamond at the nanoscale. *Journal Physics D: Applied Physics*, **2015**, 48, 255303	3	20
41	Mechanical properties and fracture behavior of single-layer phosphorene at finite temperatures. *Journal Physics D: Applied Physics*, **2015**, 48, 395303	3	86
40	Effects of grain size, temperature and strain rate on the mechanical properties of polycrystalline graphene A molecular dynamics study. *Carbon*, **2015**, 85, 135-146	10.4	96
39	IMPROVED MECHANICAL PROPERTIES OF METALLIC GLASSES **2015**, 87-88		

38	Molecular dynamics simulations on the frictional behavior of a perfluoropolyether film sandwiched between diamond-like-carbon coatings. *Langmuir*, **2014**, 30, 1573-9	4	14
37	The effect of Stone□Thrower□Wales defects on mechanical properties of graphene sheets □A molecular dynamics study. *Carbon*, **2014**, 75, 124-132	10.4	128
36	Is the failure of large-area polycrystalline graphene notch sensitive or insensitive?. *Carbon*, **2014**, 72, 200-206	10.4	36
35	Ab initio study on the effects of dopant□defect cluster on the electronic properties of TiO2-based photocatalysts. *International Journal of Hydrogen Energy*, **2014**, 39, 2049-2055	6.7	15
34	Hydrogenated Grain Boundaries Control the Strength and Ductility of Polycrystalline Graphene. *Journal of Physical Chemistry C*, **2014**, 118, 13769-13774	3.8	39
33	On the notch sensitivity of CuZr nanoglass. *Journal of Applied Physics*, **2014**, 115, 163507	2.5	18
32	Inverse pseudo Hall-Petch relation in polycrystalline graphene. *Scientific Reports*, **2014**, 4, 5991	4.9	67
31	On the failure load and mechanism of polycrystalline graphene by nanoindentation. *Scientific Reports*, **2014**, 4, 7437	4.9	48
30	Thermal transport behavior of polycrystalline graphene: A molecular dynamics study. *Journal of Applied Physics*, **2014**, 116, 204303	2.5	23
29	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	2	8
28	A transition from localized shear banding to homogeneous superplastic flow in nanoglass. *Applied Physics Letters*, **2013**, 103, 211905	3.4	93
27	A modified Tersoff potential for pure and hydrogenated diamond-like carbon. *Computational Materials Science*, **2013**, 67, 146-150	3.2	37
26	Study of the Spreading of Perfluoropolyether Lubricants on a Diamond-Like Carbon Film. *Tribology Transactions*, **2013**, 56, 255-267	1.8	14
25	The nature of the atomic-level structure in the Cu□r binary metallic glasses. *Intermetallics*, **2012**, 26, 8-10	3.5	15
24	Carbon isotope doping induced interfacial thermal resistance and thermal rectification in graphene. *Applied Physics Letters*, **2012**, 100, 101901	3.4	73
23	Effects of grain size and temperature on mechanical and failure properties of ultrananocrystalline diamond. *Diamond and Related Materials*, **2011**, 20, 1303-1309	3.5	25
22	Coupling of magnetic edge states in Li-intercalated bilayer and multilayer zigzag graphene nanoribbons. *Europhysics Letters*, **2011**, 94, 27007	1.6	4
21	Molecular dynamics studies of short to medium range order in Cu64Zr36 metallic glass. *Journal of Alloys and Compounds*, **2011**, 509, 8319-8322	5.7	25

20	The fundamental structural factor in determining the glass-forming ability and mechanical behavior in the Cu□r metallic glasses. *Materials Chemistry and Physics*, **2011**, 127, 292-295	4.4	15
19	A theoretical analysis of the thermal conductivity of hydrogenated graphene. *Carbon*, **2011**, 49, 4752-4759	5.4	152
18	The basic polyhedral clusters, the optimum glass formers, and the composition-structure-property (glass-forming ability) correlation in Cu□r metallic glasses. *Journal of Applied Physics*, **2010**, 107, 063508	2.5	35
17	Perfect spin-filter and spin-valve in carbon atomic chains. *Applied Physics Letters*, **2010**, 96, 042104	3.4	162
16	Statistical composition-structure-property correlation and glass-forming ability based on the full icosahedra in Cu□r metallic glasses. *Applied Physics Letters*, **2010**, 96, 061903	3.4	72
15	Effects of edge passivation by hydrogen on electronic structure of armchair graphene nanoribbon and band gap engineering. *Applied Physics Letters*, **2009**, 94, 122111	3.4	100
14	Electronic structures of □Si3N4(0001)/Si(111) interfaces: Perfect bonding and dangling bond effects. *Journal of Applied Physics*, **2009**, 105, 024108	2.5	23
13	Glass forming abilities of binary Cu100□Zrx (34, 35.5, and 38.2 at. %) metallic glasses: A LAMMPS study. *Journal of Applied Physics*, **2009**, 105, 043521	2.5	39
12	Mechanism of ferromagnetism in nitrogen-doped ZnO: First-principle calculations. *Physical Review B*, **2008**, 78,	3.3	254
11	Electric and magnetic properties of Cr-doped SiC films grown by dual ion beam sputtering deposition. *Journal Physics D: Applied Physics*, **2008**, 41, 035005	3	20
10	The structure and photoluminescence properties of ZnO/SiC multilayer film on Si substrate. *Frontiers of Materials Science in China*, **2007**, 1, 158-161		
9	Possible efficient p-type doping of AlN using Be: An ab initio study. *Applied Physics Letters*, **2007**, 91, 152110	3.4	16
8	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	3	7
7	Structure and photoluminescence properties of Fe-doped ZnO thin films. *Journal Physics D: Applied Physics*, **2006**, 39, 4762-4765	3	122
6	Initial study on the structure and photoluminescence properties of SiC films doped with Al. *Applied Surface Science*, **2006**, 252, 4340-4344	6.7	11
5	Initial study on the structure and optical properties of ZnO film on Si(1 1 1) substrate with a SiC buffer layer. *Physica E: Low-Dimensional Systems and Nanostructures*, **2006**, 33, 263-267	3	17
4	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	3	4
3	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	2.3	17

2	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	2.3	10
1	Structure and photoluminescence properties of SiC films synthesized by the RF-magnetron sputtering technique. *Vacuum*, **2005**, 79, 250-254	3.7	45