Dongchan D Jang

List of Publications by Year
in descending order

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60 papers	3,422 citations	257450 24 h-index	175258 52 g-index
62 all docs	62 docs citations	62 times ranked	3521 citing authors

#	Article	IF	Citations
1	Interfacial plasticity mediated by lath boundaries in reduced-activation ferritic/martensitic steels. Journal of Nuclear Materials, 2022, 559, 153439.	2.7	4
2	Dissolution of nanosized NbC precipitates in austenite matrix during elastic deformation - Deleterious effect of high number density. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 833, 142506.	5.6	3
3	Deformation mechanism of embedded hydride within the polycrystalline zirconium matrix. Journal of Nuclear Materials, 2022, 565, 153736.	2.7	7
4	â€œEffect of proton irradiation on Î´-ferrite in the thermally aged austenitic stainless steel weld: Precipitation of G-phase and additional hardeningâ€• Journal of Nuclear Materials, 2021, 544, 152656.	2.7	8
5	Scalable Fabrication of High-Performance Thin-Shell Oxide Nanoarchitected Materials via Proximity-Field Nanopatterning. ACS Nano, 2021, 15, 3960-3970.	14.6	11
6	Flexible Protective Film: Ultrahard, Yet Flexible Hybrid Nanocomposite Reinforced by 3D Inorganic Nanoshell Structures. Advanced Functional Materials, 2021, 31, 2010254.	14.9	19
7	Dynamic evolution of nanosized NbC precipitates in austenite matrix during deformation and its contribution to strengthening. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 806, 140816.	5.6	13
8	Friction Control by Deformation Mode in Nanopatterned Amorphous Carbon. Nano Letters, 2021, 21, 107-113.	9.1	5
9	Parametric study on the structural response of a high burnup spent nuclear fuel rod under drop impact considering post-irradiated fuel conditions. Nuclear Engineering and Technology, 2020, 52, 1079-1092.	2.3	7
10	Crack-tip plasticity and intrinsic toughening in nano-sized brittle amorphous carbon. International Journal of Plasticity, 2020, 127, 102642.	8.8	9
11	MEMS-based in-situ tensile experiments designed to arrest catastrophic failure in brittle nanomaterials. Extreme Mechanics Letters, 2020, 41, 101071.	4.1	3
12	Stabilized Amorphous Calcium Carbonate as a Precursor of Microcoating on Calcite. Materials, 2020, 13, 3762.	2.9	7
13	Evaluation of thermal ageing activation energy of Î´-ferrite in an austenitic stainless steel weld using nanopillar compression test. Scripta Materialia, 2020, 186, 236-241.	5.2	12
14	Plastic deformation of bi-crystalline Zr-ZrH2. Journal of Nuclear Materials, 2020, 533, 152111.	2.7	3
15	Microstructural Evolution of Alâ€“Znâ€“Mgâ€“Cu Alloys in Accordance with Homogenization Time. Journal of Nanoscience and Nanotechnology, 2020, 20, 6890-6896.	0.9	1
16	Ductilization of Nanoporous Ceramics by Crystallinity Control. Nano Letters, 2019, 19, 8488-8494.	9.1	2
17	Characterization of Plastic Deformation in Lath Martensitic Steel by Micro-pillar Compression Focused on Sub-block and Lath Boundaries. Jom, 2019, 71, 3536-3542.	1.9	1
18	Meso-scale modeling and simulation for reduced activation ferritic/martensitic steel. Fusion Engineering and Design, 2019, 146, 232-235.	1.9	1

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19	On Strength of Brittle Nanomaterials: Confinement Effect on Weibull Distributions. Frontiers in Materials, 2019, 6, .	2.4	3
20	Micropillar compression study of the influence of size and internal boundary on the strength of HT9 tempered martensitic steel. Journal of Nuclear Materials, 2018, 503, 263-270.	2.7	7
21	Transparent Urethaneâ€“Siloxane Hybrid Materials for Flexible Cover Windows with Ceramic-Like Strength, yet Polymer-Like Modulus. ACS Applied Materials & Interfaces, 2018, 10, 43122-43130.	8.0	28
22	Emergence of New Densityâ€“Strength Scaling Law in 3D Hollow Ceramic Nanoarchitectures. Small, 2018, 14, e1802239.	10.0	21
23	Multifunctional Polymer Nanocomposites Reinforced by 3D Continuous Ceramic Nanofillers. ACS Nano, 2018, 12, 9126-9133.	14.6	44
24	Structural integrity of a high-burnup spent fuel rod under drop impact considering pellet-clad interfacial bonding influence. Nuclear Engineering and Design, 2018, 337, 324-340.	1.7	16
25	Grain Scale Representative Volume Element Simulation to Investigate the Effect of Crystal Orientation on Void Growth in Single and Multi-Crystals. Metals, 2018, 8, 436.	2.3	8
26	Flexible Coatings: Flexible Hard Coating: Glassâ€Like Wear Resistant, Yet Plasticâ€Like Compliant, Transparent Protective Coating for Foldable Displays (Adv. Mater. 19/2017). Advanced Materials, 2017, 29, .	21.0	5
27	Development of a Probabilistic Safety Assessment Framework for an Interim Dry Storage Facility Subjected to an Aircraft Crash Using Best-Estimate Structural Analysis. Nuclear Engineering and Technology, 2017, 49, 411-425.	2.3	5
28	Flexible Hard Coating: Glassâ€Like Wear Resistant, Yet Plasticâ€Like Compliant, Transparent Protective Coating for Foldable Displays. Advanced Materials, 2017, 29, 1700205.	21.0	107
29	Probabilistic risk assessment of aircraft impact on a spent nuclear fuel dry storage. Nuclear Engineering and Design, 2017, 311, 104-119.	1.7	10
30	Delocalized Plastic Flow in Proton-Irradiated Monolithic Metallic Glasses. Scientific Reports, 2016, 6, 23244.	3.3	11
31	Nanosized Nanocrystalline and Nanotwinned Metals. , 2016, , 2704-2712.		0
32	Grain Boundary Sliding in Aluminum Nanoâ€Biâ€Crystals Deformed at Room Temperature. Small, 2014, 10, 100-108.	10.0	30
33	Strength, stiffness, and microstructure of Cu(In,Ga)Se2 thin films deposited via sputtering and co-evaporation. Applied Physics Letters, 2014, 105, 011907.	3.3	35
34	Nanometallic Glasses: Size Reduction Brings Ductility, Surface State Drives Its Extent. Nano Letters, 2013, 13, 4462-4468.	9.1	112
35	Fabrication and deformation of three-dimensional hollow ceramic nanostructures. Nature Materials, 2013, 12, 893-898.	27.5	423
36	Fatigue deformation of microsized metallic glasses. Scripta Materialia, 2013, 68, 773-776.	5.2	32

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37	Nanomedicine. , 2012, , 1644-1644.		0
38	Nanostructures for Coloration (Organisms other than Animals). , 2012, , 1790-1803.		0
39	Nano-FET. , 2012, , 1543-1543.		0
40	Exploring Deformation Mechanisms in Nanostructured Materials. Jom, 2012, 64, 1241-1252.	1.9	33
41	Deformation mechanisms in nanotwinned metal nanopillars. Nature Nanotechnology, 2012, 7, 594-601.	31.5	385
42	Crystallographic orientation and size dependence of tensionâ€“compression asymmetry in molybdenum nano-pillars. International Journal of Plasticity, 2012, 28, 46-52.	8.8	86
43	Plasticity of indium nanostructures as revealed by synchrotron X-ray microdiffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 538, 89-97.	5.6	31
44	Catastrophic vs Gradual Collapse of Thin-Walled Nanocrystalline Ni Hollow Cylinders As Building Blocks of Microlattice Structures. Nano Letters, 2011, 11, 4118-4125.	9.1	34
45	Size-induced weakening and grain boundary-assisted deformation in 60 nm grained Ni nanopillars. Scripta Materialia, 2011, 64, 77-80.	5.2	174
46	Influence of Homogeneous Interfaces on the Strength of 500 nm Diameter Cu Nanopillars. Nano Letters, 2011, 11, 1743-1746.	9.1	93
47	Effects of size on the strength and deformation mechanism in Zr-based metallic glasses. International Journal of Plasticity, 2011, 27, 858-867.	8.8	141
48	Nanolaminates Utilizing Sizeâ€Dependent Homogeneous Plasticity of Metallic Glasses. Advanced Functional Materials, 2011, 21, 4550-4554.	14.9	143
49	An atomically quantized hierarchy of shear transformation zones in a metallic glass. Journal of Applied Physics, 2011, 109, .	2.5	97
50	Tensile and compressive behavior of tungsten, molybdenum, tantalum and niobium at the nanoscale. Acta Materialia, 2010, 58, 2355-2363.	7.9	299
51	Transition from a strong-yet-brittle to aÂstronger-and-ductile state by size reductionÂofÂmetallicÂglasses. Nature Materials, 2010, 9, 215-219.	27.5	606
52	Nano-Electro-Mechanical Switches Derived from Carbon-Based Nanomaterials. Nanoscience and Nanotechnology Letters, 2010, 2, 163-169.	0.4	1
53	Carbon-based nano-electro-mechanical systems. Proceedings of SPIE, 2010, , .	0.8	0
54	Insight into the deformation behavior of niobium single crystals under uniaxial compression and tension at the nanoscale. Scripta Materialia, 2009, 61, 300-303.	5.2	108

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55	Emergence of New Mechanical Functionality in Materials via Size Reduction. Advanced Functional Materials, 2009, 19, 2880-2886.	14.9	39
56	Grain-boundary relaxation and its effect on plasticity in nanocrystalline Fe. Journal of Applied Physics, 2006, 99, 083504.	2.5	57
57	The Contribution of Grain-Boundary Activity to Plasticity in Nanocrystalline Fe - The Effect of Grain-Boundary Relaxation. Journal of Metastable and Nanocrystalline Materials, 2005, 24-25, 555-558.	0.1	0
58	Grain-size dependence of plastic deformation in nanocrystalline Fe. Journal of Applied Physics, 2003, 93, 9282-9286.	2.5	80
59	Evaluation of Thermal Ageing Activation Energy of Î”-Ferrite in an Austenitic Stainless Steel Weld Using Nanopillar Compression Test. SSRN Electronic Journal, 0, , .	0.4	0
60	Multiomics characterization of dose- and time-dependent effects of ionizing radiation on human skin keratinocytes. Korean Journal of Chemical Engineering, 0, , 1.	2.7	2