Seok-Woo Lee

List of Publications by Year
in descending order

57 papers	2,061 citations	236925 25 h-index	233421 45 g-index
58 all docs	58 docs citations	58 times ranked	1955 citing authors

#	Article	IF	Citations
1	Crystallization-induced plasticity of Cuâ€“Zr containing bulk amorphous alloys. Acta Materialia, 2006, 54, 349-355.	7.9	252
2	Superplastic Deformation of Defect-Free Au Nanowires via Coherent Twin Propagation. Nano Letters, 2011, 11, 3499-3502.	9.1	189
3	Uniaxial compression of fcc Au nanopillars on an MgO substrate: The effects of prestraining and annealing. Acta Materialia, 2009, 57, 4404-4415.	7.9	162
4	Size effect in compression of single-crystal gold microparticles. Acta Materialia, 2011, 59, 5202-5215.	7.9	136
5	Size dependence of the yield strength of fcc and bcc metallic micropillars with diameters of a few micrometers. Philosophical Magazine, 2012, 92, 1238-1260.	1.6	114
6	Compression testing of metallic glass at small length scales: Effects on deformation mode and stability. Acta Materialia, 2010, 58, 5789-5796.	7.9	97
7	Exercise-induced piezoelectric stimulation for cartilage regeneration in rabbits. Science Translational Medicine, 2022, 14, eabi7282.	12.4	88
8	Size Effect Suppresses Brittle Failure in Hollow Cu₆₀Zr₄₀ Metallic Glass Nanolattices Deformed at Cryogenic Temperatures. Nano Letters, 2015, 15, 5673-5681.	9.1	77
9	Higher compressive strengths and the Bauschinger effect in conformally passivated copper nanopillars. Acta Materialia, 2012, 60, 3444-3455.	7.9	68
10	Mechanism of the deformation-induced nanocrystallization in a Cu-based bulk amorphous alloy under uniaxial compression. Scripta Materialia, 2006, 54, 1439-1444.	5.2	66
11	Micro-pillar plasticity controlled by dislocation nucleation at surfaces. Philosophical Magazine, 2011, 91, 1084-1096.	1.6	63
12	Modelling dislocations in a free-standing thin film. Modelling and Simulation in Materials Science and Engineering, 2009, 17, 075007.	2.0	51
13	Modeling dislocation nucleation strengths in pristine metallic nanowires under experimental conditions. Acta Materialia, 2013, 61, 2244-2259.	7.9	51
14	Mesoscale modeling of jet initiation behavior and microstructural evolution during cold spray single particle impact. Acta Materialia, 2020, 182, 197-206.	7.9	48
15	Emergence of enhanced strengths and Bauschinger effect in conformally passivated copper nanopillars as revealed by dislocation dynamics. Acta Materialia, 2013, 61, 1872-1885.	7.9	41
16	Cold-temperature deformation of nano-sized tungsten and niobium as revealed by in-situ nano-mechanical experiments. Science China Technological Sciences, 2014, 57, 652-662.	4.0	39
17	Ultrahigh Elastic Strain Energy Storage in Metal-Oxide-Infiltrated Patterned Hybrid Polymer Nanocomposites. Nano Letters, 2017, 17, 7416-7423.	9.1	38
18	A Cu-based amorphous alloy with a simultaneous improvement in its glass forming ability and plasticity. Metals and Materials International, 2007, 13, 21-24.	3.4	31

#	Article	IF	Citations
19	Unraveling the Mesoscale Evolution of Microstructure during Supersonic Impact of Aluminum Powder Particles. Scientific Reports, 2018, 8, 10075.	3.3	31
20	Geometrical analysis of 3D dislocation dynamics simulations of FCC micro-pillar plasticity. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 1903-1910.	5.6	29
21	Effects of focused-ion-beam irradiation and prestraining on the mechanical properties of FCC Au microparticles on a sapphire substrate. Journal of Materials Research, 2011, 26, 1653-1661.	2.6	29
22	Microstructure and Micromechanical Response in Gas-Atomized Al 6061 Alloy Powder and Cold-Sprayed Splats. Journal of Thermal Spray Technology, 2018, 27, 1563-1578.	3.1	29
23	Premium 7075 Aluminium Alloys Produced by Reciprocating Extrusion. Advanced Engineering Materials, 2004, 6, 936-943.	3.5	28
24	Cryogenic nanoindentation size effect in [0 0 1]-oriented face-centered cubic and body-centered cubic single crystals. Applied Physics Letters, 2013, 103, .	3.3	26
25	An Mg-Al-Zn Alloy with Verry High Specific Strength and Superior High-strain-rate Superplasticity Processed by Reciprocating Extrusion. Advanced Engineering Materials, 2004, 6, 948-952.	3.5	25
26	Superelasticity and cryogenic linear shape memory effects of CaFe2As2. Nature Communications, 2017, 8, 1083.	12.8	22
27	Cross-Split of Dislocations: An Athermal and Rapid Plasticity Mechanism. Scientific Reports, 2016, 6, 25966.	3.3	19
28	Design of a bulk amorphous alloy containing Cuâ€“Zr with simultaneous improvement in glass-forming ability and plasticity. Journal of Materials Research, 2007, 22, 486-492.	2.6	18
29	Dislocation junctions and jogs in a free-standing FCC thin film. Modelling and Simulation in Materials Science and Engineering, 2011, 19, 025002.	2.0	16
30	Emergence of film-thickness- and grain-size-dependent elastic properties in nanocrystalline thin films. Scripta Materialia, 2013, 68, 261-264.	5.2	14
31	The effect of defects on strength of gold microparticles. Scripta Materialia, 2019, 171, 83-86.	5.2	14
32	Surface states of gas-atomized Al 6061 powders â€“ Effects of heat treatment. Applied Surface Science, 2020, 534, 147643.	6.1	14
33	A high strength Cu-based alloy containing superlattice structures. Scripta Materialia, 2007, 56, 457-460.	5.2	12
34	Observation of asymmetry in domain wall velocity under transverse magnetic field. APL Materials, 2016, 4, 032504.	5.1	11
35	Mechanical properties of supersonic-impacted Al6061 powder particles. Scripta Materialia, 2019, 171, 52-56.	5.2	11
36	Ferromagnetic formation of two phases due to MnP and InMn3 from InMnP:Zn implanted with Mn (10at.%). Applied Physics Letters, 2006, 88, 232511.	3.3	9

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37	Pyramid-Shaped Si/Ge Superlattice Quantum Dots with Enhanced Photoluminescence Properties. Advanced Materials, 2006, 18, 367-370.	21.0	8
38	A parameter governing the plasticity of Cuâ€“Zr containing bulk metallic glasses. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 172-175.	5.6	8
39	Superelastic and micaceous deformation in the intermetallic compound CaFe2As2. Scripta Materialia, 2017, 141, 10-14.	5.2	8
40	Ultrahigh elastically compressible and strain-engineerable intermetallic compounds under uniaxial mechanical loading. APL Materials, 2019, 7, .	5.1	8
41	Effects of point defects on the mechanical response of LaRu2P2. Acta Materialia, 2018, 160, 224-234.	7.9	7
42	Self-Aligned Nanolenses with Multilayered Ge/SiO2 Core/Shell Structures on Siâ€‰(001). Advanced Materials, 2007, 19, 222-226.	21.0	6
43	Strong, ductile, and thermally stable Cu-based metal-intermetallic nanostructured composites. Scientific Reports, 2017, 7, 40409.	3.3	6
44	Defect structures in solution-grown single crystals of the intermetallic compound Ag3Sn. Journal of Materials Science, 2018, 53, 5317-5328.	3.7	6
45	Insights into the plasticity of Ag3Sn from density functional theory. International Journal of Plasticity, 2018, 110, 57-73.	8.8	6
46	Dislocation dynamics simulations in a cylinder. IOP Conference Series: Materials Science and Engineering, 2009, 3, 012007.	0.6	5
47	Modeling pseudo-elastic behavior in small-scale ThCr2Si2-type crystals. Computational Materials Science, 2018, 150, 86-95.	3.0	4
48	A Nanoindentation Study of the Plastic Deformation and Fracture Mechanisms in Single-Crystalline CaFe2As2. Jom, 2018, 70, 1074-1080.	1.9	4
49	Effects of temperature on surface-controlled dislocation multiplication in body-centered-cubic metal nanowires. Computational Materials Science, 2019, 168, 172-179.	3.0	4
50	Uniaxial compression of [001]-oriented CaFe2As2 single crystals:the effects of microstructure and temperature on superelasticity Part I: Experimental observations. Acta Materialia, 2021, 203, 116464.	7.9	4
51	Shear localization and size-dependent strength of YCd6 quasicrystal approximant at the micrometer length scale. Journal of Materials Science, 2018, 53, 6980-6990.	3.7	3
52	Heterogeneous Distribution of Mechanical Properties of Single-Particle Cold Spray Impacts. Journal of Thermal Spray Technology, 2022, 31, 498-507.	3.1	3
53	Pseudoelasticity of SrNi₂P₂ Micropillar via Double Lattice Collapse and Expansion. Nano Letters, 2021, 21, 7913-7920.	9.1	2
54	Uniaxial compression of [001]-oriented CaFe2As2 single crystals: the effect of microstructure and temperature on superelasticity Part II: Modeling. Acta Materialia, 2021, 203, 116462.	7.9	1

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55	Plasticity criterion for bulk amorphous alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 477, 344-349.	5.6	0
56	Characterization of Dislocations in Single-Crystalline Ag3Sn Intermetallic Alloys. Microscopy and Microanalysis, 2017, 23, 760-761.	0.4	0
57	Low-temperature failure mechanism of [001] niobium micropillars under uniaxial tension. Journal of Materials Research, 2021, 36, 1-12.	2.6	0