

Ju-young Kim

List of Publications by Year in descending order

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papers

4,873
citations

94433

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68
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94
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docs citations

94
times ranked

6890
citing authors

#	ARTICLE	IF	CITATIONS
1	Tensile and compressive behavior of tungsten, molybdenum, tantalum and niobium at the nanoscale. Acta Materialia, 2010, 58, 2355-2363.	7.9	299
2	Fundamental Differences in Mechanical Behavior between Two Types of Crystals at the Nanoscale. Physical Review Letters, 2008, 100, 155502.	7.8	283
3	Solution-processable Glass Li_4Sn_4 Superionic Conductors for All-Solid-State Ion Batteries. Advanced Materials, 2016, 28, 1874-1883.	21.0	265
4	Stretchable, Transparent Electrodes as Wearable Heaters Using Nanotrough Networks of Metallic Glasses with Superior Mechanical Properties and Thermal Stability. Nano Letters, 2016, 16, 471-478.	9.1	265
5	Tensile and compressive behavior of gold and molybdenum single crystals at the nano-scale. Acta Materialia, 2009, 57, 5245-5253.	7.9	217
6	High-resolution, reconfigurable printing of liquid metals with three-dimensional structures. Science Advances, 2019, 5, eaaw2844.	10.3	215
7	Robust nanogenerators based on graft copolymers via control of dielectrics for remarkable output power enhancement. Science Advances, 2017, 3, e1602902.	10.3	204
8	Ultralow-dielectric-constant amorphous boron nitride. Nature, 2020, 582, 511-514.	27.8	173
9	Integrated arrays of air-dielectric graphene transistors as transparent active-matrix pressure sensors for wide pressure ranges. Nature Communications, 2017, 8, 14950.	12.8	167
10	Highly Flexible and Efficient All-Polymer Solar Cells with High-Viscosity Processing Polymer Additive toward Potential of Stretchable Devices. Angewandte Chemie - International Edition, 2018, 57, 13277-13282.	13.8	166
11	Nanolaminates Utilizing Size-Dependent Homogeneous Plasticity of Metallic Glasses. Advanced Functional Materials, 2011, 21, 4550-4554.	14.9	143
12	Influence of surface-roughness on indentation size effect. Acta Materialia, 2007, 55, 3555-3562.	7.9	134
13	Growth of Nanosized Single Crystals for Efficient Perovskite Light-Emitting Diodes. ACS Nano, 2018, 12, 3417-3423.	14.6	109
14	Highly Flexible and Efficient All-Polymer Solar Cells with High-Viscosity Processing Polymer Additive toward Potential of Stretchable Devices. Angewandte Chemie, 2018, 130, 13461-13466.	2.0	108
15	High Dielectric Performances of Flexible and Transparent Cellulose Hybrid Films Controlled by Multidimensional Metal Nanostructures. Advanced Materials, 2017, 29, 1700538.	21.0	106
16	Effects of two gaps and paramagnetic pair breaking on the upper critical field of SmFeAsO . Physical Review B, 2009, 80, .	3.2	88
17	Determination of tensile properties by instrumented indentation technique: Representative stress and strain approach. Surface and Coatings Technology, 2006, 201, 4278-4283.	4.8	87
18	Photo-patternable and transparent films using cellulose nanofibers for stretchable origami electronics. NPG Asia Materials, 2016, 8, e299-e299.	7.9	83

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19	Amine-Based Interfacial Molecules for Inverted Polymer-Based Optoelectronic Devices. <i>Advanced Materials</i> , 2015, 27, 3553-3559.	21.0	77
20	Surface roughness effect in instrumented indentation: A simple contact depth model and its verification. <i>Journal of Materials Research</i> , 2006, 21, 2975-2978.	2.6	65
21	Fully-integrated, bezel-less transistor arrays using reversibly foldable interconnects and stretchable origami substrates. <i>Nanoscale</i> , 2016, 8, 9504-9510.	5.6	65
22	Research on flexible display at Ulsan National Institute of Science and Technology. <i>Npj Flexible Electronics</i> , 2017, 1, .	10.7	59
23	Graphene Coatings as Barrier Layers to Prevent the Water-Induced Corrosion of Silicate Glass. <i>ACS Nano</i> , 2016, 10, 9794-9800.	14.6	58
24	Dependency of Electrochemical Performances of Silicon Lithium-Ion Batteries on Glycosidic Linkages of Polysaccharide Binders. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 4042-4047.	8.0	56
25	A photo-cross-linkable polymeric binder for silicon anodes in lithium ion batteries. <i>RSC Advances</i> , 2013, 3, 12625.	3.6	53
26	“Grafting” From Polymerization inside a Polyelectrolyte Hollow Capsule Microreactor. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 1096-1101.	13.8	52
27	Breathing silicon anodes for durable high-power operations. <i>Scientific Reports</i> , 2015, 5, 14433.	3.3	51
28	Conventional Vickers and true instrumented indentation hardness determined by instrumented indentation tests. <i>Journal of Materials Research</i> , 2010, 25, 337-343.	2.6	49
29	Amphiphilic Graft Copolymers as a Versatile Binder for Various Electrodes of High-Performance Lithium-Ion Batteries. <i>Small</i> , 2016, 12, 3119-3127.	10.0	48
30	A siloxane-incorporated copolymer as an in situ cross-linkable binder for high performance silicon anodes in Li-ion batteries. <i>Nanoscale</i> , 2016, 8, 9245-9253.	5.6	47
31	Evaluating plastic flow properties by characterizing indentation size effect using a sharp indenter. <i>Acta Materialia</i> , 2008, 56, 3338-3343.	7.9	46
32	Suppression of Catastrophic Failure in Metallic Glass-Polyisoprene Nanolaminate Containing Nanopillars. <i>Advanced Functional Materials</i> , 2012, 22, 1972-1980.	14.9	46
33	Weakened Flexural Strength of Nanocrystalline Nanoporous Gold by Grain Refinement. <i>Nano Letters</i> , 2016, 16, 2497-2502.	9.1	44
34	Nanomechanical Approach for Flexibility of Organic-Inorganic Hybrid Perovskite Solar Cells. <i>Nano Letters</i> , 2019, 19, 3707-3715.	9.1	42
35	Study on ductile mode machining of single-crystal silicon by mechanical machining. <i>International Journal of Machine Tools and Manufacture</i> , 2017, 113, 1-9.	13.4	41
36	Cu ₂ Se-based thermoelectric cellular architectures for efficient and durable power generation. <i>Nature Communications</i> , 2021, 12, 3550.	12.8	41

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37	Optimum definition of true strain beneath a spherical indenter for deriving indentation flow curves. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 419, 196-201.	5.6	38
38	Highly efficient flexible optoelectronic devices using metal nanowire-conducting polymer composite transparent electrode. <i>Electronic Materials Letters</i> , 2015, 11, 906-914.	2.2	38
39	Flexibility of Semitransparent Perovskite Light-Emitting Diodes Investigated by Tensile Properties of the Perovskite Layer. <i>Nano Letters</i> , 2019, 19, 971-976.	9.1	37
40	Indentation size effect in nanoporous gold. <i>Acta Materialia</i> , 2017, 138, 52-60.	7.9	36
41	Rate-dependent inhomogeneous-to-homogeneous transition of plastic flows during nanoindentation of bulk metallic glasses: Fact or artifact?. <i>Applied Physics Letters</i> , 2007, 90, 211906.	3.3	35
42	Self-similarity in the structure of coarsened nanoporous gold. <i>Scripta Materialia</i> , 2017, 137, 46-49.	5.2	34
43	Instantaneous and Repeatable Self-Healing of Fully Metallic Electrodes at Ambient Conditions. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 41497-41505.	8.0	31
44	Twinned nanoporous gold with enhanced tensile strength. <i>Acta Materialia</i> , 2018, 155, 253-261.	7.9	30
45	Solution-Processed Stretchable Ag ₂ S Semiconductor Thin Films for Wearable Self-Powered Nonvolatile Memory. <i>Advanced Materials</i> , 2021, 33, e2100066.	21.0	30
46	Microstructure evolution in nanoporous gold thin films made from sputter-deposited precursors. <i>Scripta Materialia</i> , 2013, 69, 720-723.	5.2	26
47	Direct 2D-to-3D transformation of pen drawings. <i>Science Advances</i> , 2021, 7, .	10.3	25
48	Indentation size effect for spherical nanoindentation on nanoporous gold. <i>Scripta Materialia</i> , 2018, 143, 10-14.	5.2	24
49	Highly Efficient Flexible Perovskite Light-Emitting Diodes Using the Modified PEDOT:PSS Hole Transport Layer and Polymer-Silver Nanowire Composite Electrode. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 39274-39282.	8.0	24
50	Enhancement of Mechanical Hardness in SnO _x N _y with a Dense High-Pressure Cubic Phase of SnO ₂ . <i>Chemistry of Materials</i> , 2016, 28, 7051-7057.	6.7	23
51	Nanolaminate of metallic glass and graphene with enhanced elastic modulus, strength, and ductility in tension. <i>Scripta Materialia</i> , 2017, 139, 63-66.	5.2	21
52	Biodegradable Metallic Glass for Stretchable Transient Electronics. <i>Advanced Science</i> , 2021, 8, 2004029.	11.2	21
53	Effective indenter radius and frame compliance in instrumented indentation testing using a spherical indenter. <i>Journal of Materials Research</i> , 2009, 24, 2965-2973.	2.6	20
54	Influence of Indenter Geometry on the Deformation Behavior of Zr ₆₀ Cu ₃₀ Al ₁₀ Bulk Metallic Glass during Nanoindentation. <i>Materials Transactions</i> , 2007, 48, 1765-1769.	1.2	17

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55	Estimation of principal directions of Bi-axial residual stress using instrumented Knoop indentation testing. <i>Metals and Materials International</i> , 2015, 21, 850-856.	3.4	17
56	Modeling and experimental verification for non-equibiaxial residual stress evaluated by Knoop indentations. <i>Metals and Materials International</i> , 2016, 22, 12-19.	3.4	17
57	Critical bending radius of thin single-crystalline silicon with dome and pyramid surface texturing. <i>Scripta Materialia</i> , 2017, 140, 1-4.	5.2	17
58	Constitutive equations optimized for determining strengths of metallic alloys. <i>Mechanics of Materials</i> , 2014, 73, 51-57.	3.2	16
59	Directionality of residual stress evaluated by instrumented indentation testing using wedge indenter. <i>Metals and Materials International</i> , 2017, 23, 465-472.	3.4	16
60	Contact morphology and constitutive equation in evaluating tensile properties of austenitic stainless steels through instrumented spherical indentation. <i>Journal of Materials Science</i> , 2013, 48, 232-239.	3.7	15
61	Evaluation of tensile stress-strain curve of electroplated copper film by characterizing indentation size effect with a single nanoindentation. <i>Metals and Materials International</i> , 2017, 23, 76-81.	3.4	15
62	Microstructural effect on time-dependent plasticity of nanoporous gold. <i>International Journal of Plasticity</i> , 2018, 109, 108-120.	8.8	13
63	Tension-compression asymmetry in plasticity of nanoporous gold. <i>Acta Materialia</i> , 2020, 199, 340-351.	7.9	13
64	Incipient plasticity and fully plastic contact behavior of copper coated with a graphene layer. <i>APL Materials</i> , 2019, 7, .	5.1	11
65	Amorphous Alumina Film Robust under Cyclic Deformation: a Highly Impermeable and a Highly Flexible Encapsulation Material. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 46894-46901.	8.0	11
66	Highly Efficient Self-Encapsulated Flexible Semitransparent Perovskite Solar Cells via Bifacial Cation Exchange. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 33297-33305.	8.0	11
67	Determining effective radius and frame compliance in spherical nanoindentation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 538, 58-62.	5.6	10
68	Assessment of surface-local strains from remnant microindents on a Zr-based metallic glass. <i>Metals and Materials International</i> , 2014, 20, 439-443.	3.4	9
69	Surface residual stress in soda-lime glass evaluated using instrumented spherical indentation testing. <i>Journal of Materials Science</i> , 2015, 50, 7752-7759.	3.7	9
70	Flaw-Containing Alumina Hollow Nanostructures Have Ultrahigh Fracture Strength To Be Incorporated into High-Efficiency GaN Light-Emitting Diodes. <i>Nano Letters</i> , 2018, 18, 1323-1330.	9.1	9
71	Surface residual stress in amorphous SiO ₂ insulating layer on Si substrate near a Cu through-silicon via (TSV) investigated by nanoindentation. <i>Materials Science in Semiconductor Processing</i> , 2021, 135, 106153.	4.0	9
72	Highly Elastic and Corrosion-Resistive Metallic Glass Thin Films for Flexible Encapsulation. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 5578-5585.	8.0	9

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73	Ligament size effect in creep of nanoporous gold. International Journal of Plasticity, 2022, 150, 103192.	8.8	8
74	Mechanical characterization of nano-structured materials using nanoindentation. Metals and Materials International, 2006, 12, 219-223.	3.4	7
75	Grain boundary-assisted resistance to crack propagation in nanoporous gold with fine grains. Scripta Materialia, 2022, 215, 114708.	5.2	7
76	Wall-thickness-dependent strength of nanotubular ZnO. Scientific Reports, 2017, 7, 4327.	3.3	6
77	Colorful Transparent Silicon Photovoltaics with Unprecedented Flexibility. Advanced Functional Materials, 2022, 32, 2110435.	14.9	6
78	Stress-strain curves of flip-chip solder balls based on finite-element modeling of thermal displacements measured by electronic speckle pattern interferometry. Journal of Electronic Materials, 2003, 32, 1322-1329.	2.2	5
79	Determining Stress-strain Curves for Thin Films by Experimental/Computational Nanoindentation. Materials Research Society Symposia Proceedings, 2003, 795, 106.	0.1	5
80	Grain Boundary Conformed Volumetric Mesh Generation from a Three-Dimensional Voxellated Polycrystalline Microstructure. Metals and Materials International, 2018, 24, 845-859.	3.4	5
81	Self-Healing of Nanoporous Gold Under Ambient Conditions. Nano Letters, 2020, 20, 6706-6711.	9.1	5
82	3D Multiscale Gradient Pores Impregnated with Ag Nanowires for Simultaneous Pressure and Bending Detection with Enhanced Linear Sensitivity. Advanced Materials Technologies, 2020, 5, 1901041.	5.8	5
83	“Grafting” from Polymerization inside a Polyelectrolyte Hollow Capsule Microreactor. Angewandte Chemie, 2005, 117, 1120-1125.	2.0	4
84	Preparation of Gold-Polypyrrole Core-shell Nanoparticles. Molecular Crystals and Liquid Crystals, 2001, 371, 127-130.	0.3	3
85	Co-diffusion of boron and phosphorus for ultra-thin crystalline silicon solar cells. Journal Physics D: Applied Physics, 2018, 51, 275101.	2.8	3
86	Calibration of Nanoindentation Systems Based on the Reference Hardness of a Fused Silica. Journal of Korean Institute of Metals and Materials, 2015, 53, 162-168.	1.0	3
87	Highly impermeable and flexible silica encapsulation films synthesized by sol-gel process. Nano Research, 2022, 15, 7476-7483.	10.4	3
88	Compressive Properties of Nanoporous Gold Through Nanoindentation: An Analytical Approach Based on the Expanding Cavity Model. Metals and Materials International, 2021, 27, 3787-3795.	3.4	2
89	Enhanced biaxial stretchability of wrinkled SiO ₂ thin films for stretchable encapsulation. Scripta Materialia, 2022, 207, 114280.	5.2	2
90	Depth-Dependent Hardness Characterization by Nanoindentation using a Berkovich Indenter with a Rounded Tip. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	1

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91	Multiaxial deformation characteristic of a Zr-based bulk metallic glass: Variations of the plastic constraint factor underneath a spherical indenter. <i>Journal of Materials Research</i> , 2007, 22, 2895-2901.	2.6	1
92	On the Characterization of Thin Film-only Mechanical Property Based on the Indentation Image Analysis. <i>Materials Research Society Symposia Proceedings</i> , 2006, 976, 1.	0.1	0
93	Memory Devices: Solution-Processed Stretchable Ag ₂ S Semiconductor Thin Films for Wearable Self-Powered Nonvolatile Memory (<i>Adv. Mater.</i> 23/2021). <i>Advanced Materials</i> , 2021, 33, 2170181.	21.0	0