

Alfonso H W Ngan

List of Publications by Year in descending order

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52
papers

1,296
citations

361045

20
h-index

360668

35
g-index

52
all docs

52
docs citations

52
times ranked

1526
citing authors

#	ARTICLE	IF	CITATIONS
1	Correcting power-law viscoelastic effects in elastic modulus measurement using depth-sensing indentation. <i>International Journal of Solids and Structures</i> , 2005, 42, 1831-1846.	1.3	148
2	Atomistic modeling of mechanical behavior. <i>Acta Materialia</i> , 2003, 51, 5711-5742.	3.8	115
3	Mesenchymal Stem Cells Reduce Intervertebral Disc Fibrosis and Facilitate Repair. <i>Stem Cells</i> , 2014, 32, 2164-2177.	1.4	84
4	Light-stimulated actuators based on nickel hydroxide-oxyhydroxide. <i>Science Robotics</i> , 2018, 3, .	9.9	75
5	An Unusual Extrusion Texture in Mg-Gd-Y-Zr Alloys. <i>Advanced Engineering Materials</i> , 2016, 18, 1044-1049.	1.6	61
6	Strengthening CrFeCoNiMn _{0.75} Cu _{0.25} high entropy alloy via laser shock peening. <i>International Journal of Plasticity</i> , 2022, 154, 103296.	4.1	60
7	Time-dependent incipient plasticity in Ni ₃ Al as observed in nanoindentation. <i>Journal of Materials Research</i> , 2005, 20, 489-495.	1.2	44
8	Reversible Electrochemical Actuation of Metallic Nanohoneycombs Induced by Pseudocapacitive Redox Processes. <i>ACS Nano</i> , 2015, 9, 3984-3995.	7.3	43
9	Creep of micron-sized aluminium columns. <i>Philosophical Magazine Letters</i> , 2007, 87, 967-977.	0.5	41
10	An improved method for the measurement of mechanical properties of bone by nanoindentation. <i>Journal of Materials Science: Materials in Medicine</i> , 2007, 18, 1875-1881.	1.7	41
11	Nanostructure of collagen fibrils in human nucleus pulposus and its correlation with macroscale tissue mechanics. <i>Journal of Orthopaedic Research</i> , 2010, 28, 497-502.	1.2	40
12	The crystal structures of sintered copper nanoparticles: A molecular dynamics study. <i>International Journal of Plasticity</i> , 2013, 47, 65-79.	4.1	40
13	Molecular dynamics study on compressive yield strength in Ni ₃ Al micro-pillars. <i>Philosophical Magazine Letters</i> , 2006, 86, 355-365.	0.5	39
14	Indentation size effects on the strain rate sensitivity of nanocrystalline Ni ₂₅ at.%Al thin films. <i>Scripta Materialia</i> , 2005, 52, 827-831.	2.6	33
15	Fast and Reversible Actuation of Metallic Muscles Composed of Nickel Nanowire Forest. <i>Advanced Materials</i> , 2016, 28, 5315-5321.	11.1	30
16	A Microplate Compression Method for Elastic Modulus Measurement of Soft and Viscoelastic Collagen Microspheres. <i>Annals of Biomedical Engineering</i> , 2008, 36, 1254-1267.	1.3	27
17	Multiphoton photochemical crosslinking-based fabrication of protein micropatterns with controllable mechanical properties for single cell traction force measurements. <i>Scientific Reports</i> , 2016, 6, 20063.	1.6	26
18	Atomistic simulations of Peierls-Vitek lock formation in Ni ₃ Al. <i>Computational Materials Science</i> , 2004, 29, 259-269.	1.4	25

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19	Creep of micron-sized Ni3Al columns. Scripta Materialia, 2006, 54, 7-12.	2.6	23
20	Nanoindentation Measurement of Mechanical Properties of Soft Solid Covered By a Thin Liquid Film. Soft Materials, 2007, 5, 169-181.	0.8	20
21	Statistical distribution of contact forces in packings of deformable spheres. Mechanics of Materials, 2005, 37, 493-506.	1.7	19
22	Investigation of Viscoelastic Properties of Amorphous Selenium near Glass Transition Using Depth-Sensing Indentation. Soft Materials, 2004, 2, 125-144.	0.8	16
23	Probabilistic nature of the nucleation of dislocations in an applied stress field. Scripta Materialia, 2006, 54, 589-593.	2.6	16
24	A High-Performing, Visible-Light-Driven Actuating Material Responsive to Ultralow Light Intensities. Advanced Materials Technologies, 2019, 4, 1900746.	3.0	16
25	Influence of hydrogen behaviors on tensile properties of equiatomic FeCrNiMnCo high-entropy alloy. Journal of Alloys and Compounds, 2022, 892, 162260.	2.8	16
26	TEM measurement of nanoindentation plastic zones in Ni3Al. Scripta Materialia, 2006, 55, 557-560.	2.6	15
27	The weakest size of precipitated alloys in the micro-regime: The case of duralumin. Journal of Materials Research, 2017, 32, 2003-2013.	1.2	15
28	On the distribution of elastic forces in disordered structures and materials. I. Computer simulation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 433-458.	1.0	14
29	Multiphoton Fabrication of Fibronectin-Functionalized Protein Micropatterns: Stiffness-Induced Maturation of Cell-Matrix Adhesions in Human Mesenchymal Stem Cells. ACS Applied Materials & Interfaces, 2017, 9, 29469-29480.	4.0	13
30	A universal law for metallurgical effects on acoustoplasticity. Materialia, 2019, 5, 100214.	1.3	13
31	Nano-alloys Synthesized by Controlled Crystallization from Supercooled Atomic Clusters of Elements. Journal of Materials Research, 2004, 19, 780-785.	1.2	11
32	Dependence of corrosion properties of AISI 304L stainless steel on the austenite grain size. International Journal of Materials Research, 2017, 108, 552-559.	0.1	11
33	Delayed plasticity in nanoindentation of annealed crystals. Philosophical Magazine, 2006, 86, 1287-1304.	0.7	10
34	Preferential sensing and response to microenvironment stiffness of human dermal fibroblast cultured on protein micropatterns fabricated by 3D multiphoton biofabrication. Scientific Reports, 2017, 7, 12402.	1.6	10
35	Visible-Light-Driven, Nickel-Doped Cobalt Oxides/Hydroxides Actuators with High Stability. ACS Applied Materials & Interfaces, 2020, 12, 30557-30564.	4.0	10
36	Temperature-dependent deformation behavior of a CuZr-based bulk metallic glass composite. Journal of Alloys and Compounds, 2021, 858, 158368.	2.8	10

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37	Crystal plasticity of Cu nanocrystals during collision. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 585, 326-334.	2.6	9
38	Electron-Beam Induced Water Removal, Phase Change, and Crystallization of Anodic-Electrodeposited Turbostratic Nickel Hydroxide-Oxyhydroxide. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018, 215, 1800623.	0.8	9
39	Chemo-mechanical instability of light-induced humidity responsive bilayered actuators. <i>Extreme Mechanics Letters</i> , 2020, 39, 100801.	2.0	9
40	Full-scale atomistic simulations of dislocations in Ni crystal by embedded-atom method. <i>Philosophical Magazine</i> , 2005, 85, 1917-1929.	0.7	7
41	Effects of hydrogen charging and deformation on tensile properties of a multi-component alloy for nuclear applications. <i>Tungsten</i> , 2022, 4, 212-218.	2.0	7
42	Relation Between Yield Stress and Peierls Stress. <i>Physica Status Solidi (B): Basic Research</i> , 2019, 256, 1900107.	0.7	5
43	Novel Stimuli-Responsive Turbostratic Oxides/Hydroxides for Material-Driven Robots. <i>Advanced Intelligent Systems</i> , 2021, 3, 2000215.	3.3	5
44	Effect of Cold Rolling Parameters on Bond Strength of Ti Particle Embedded Al Strips. <i>Transactions of the Indian Institute of Metals</i> , 2018, 71, 2497-2504.	0.7	4
45	Creating robotic intelligence using multistimuli-responsive cobalt-doped manganese oxide. <i>NPG Asia Materials</i> , 2021, 13, .	3.8	4
46	Printed miniature robotic actuators with curvature-induced stiffness control inspired by the insect wing. <i>Bioinspiration and Biomimetics</i> , 2021, 16, 046018.	1.5	3
47	Multi-scale, multi-physics modeling of electrochemical actuation of Ni nanohoneycomb in water. <i>Computational Materials Science</i> , 2017, 128, 109-120.	1.4	2
48	Robotic Hair with Rich Sensation and Piloerection Functionalities Biomimicked by Stimuli-Responsive Materials. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	2
49	An Assessment of the Mechanical Strengths of Aluminide-based Thin Coatings. <i>Materials Research Society Symposia Proceedings</i> , 2000, 649, 8111.	0.1	0
50	On Probabilistic Distribution of Forces in Granular Materials: A Statistical Mechanics Approach. <i>Materials Research Society Symposia Proceedings</i> , 2002, 759, 1.	0.1	0
51	Initial Contact Behavior of Nanograined Ni-25at.%Al Film During Nanoindentation. <i>Materials Research Society Symposia Proceedings</i> , 2004, 841, R8.7.1.	0.1	0
52	Small-scale plasticity critically needs a new mechanics description. <i>Journal of the Mechanical Behavior of Materials</i> , 2013, 22, 3-10.	0.7	0