

Frederic Sansoz

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3727739/publications.pdf>

Version: 2024-02-01

58
papers

2,893
citations

172207

29
h-index

168136

53
g-index

60
all docs

60
docs citations

60
times ranked

2410
citing authors

#	ARTICLE	IF	CITATIONS
1	Defective twin boundaries in nanotwinned metals. <i>Nature Materials</i> , 2013, 12, 697-702.	13.3	255
2	Near-ideal theoretical strength in gold nanowires containing angstrom scale twins. <i>Nature Communications</i> , 2013, 4, 1742.	5.8	226
3	Mechanical behavior of $\frac{1}{2}$ tilt grain boundaries in nanoscale Cu and Al: A quasicontinuum study. <i>Acta Materialia</i> , 2005, 53, 1931-1944.	3.8	207
4	Strengthening in Gold Nanopillars with Nanoscale Twins. <i>Nano Letters</i> , 2007, 7, 2056-2062.	4.5	179
5	Fundamental differences in the plasticity of periodically twinned nanowires in Au, Ag, Al, Cu, Pb and Ni. <i>Acta Materialia</i> , 2009, 57, 6090-6101.	3.8	125
6	Atomistic based continuum investigation of plastic deformation in nanocrystalline copper. <i>International Journal of Plasticity</i> , 2006, 22, 754-774.	4.1	120
7	Grain growth behavior at absolute zero during nanocrystalline metal indentation. <i>Applied Physics Letters</i> , 2006, 89, 111901.	1.5	119
8	Near-Ideal Strength in Gold Nanowires Achieved through Microstructural Design. <i>ACS Nano</i> , 2009, 3, 3001-3008.	7.3	116
9	Enabling Ultrahigh Plastic Flow and Work Hardening in Twinned Gold Nanowires. <i>Nano Letters</i> , 2009, 9, 1517-1522.	4.5	112
10	Micromechanics of deformation of metallic-glass matrix composites from in situ synchrotron strain measurements and finite element modeling. <i>Acta Materialia</i> , 2005, 53, 1883-1893.	3.8	88
11	Ideal maximum strengths and defect-induced softening in nanocrystalline-nanotwinned metals. <i>Nature Materials</i> , 2019, 18, 1207-1214.	13.3	87
12	Incidence of atom shuffling on the shear and decohesion behavior of a symmetric tilt grain boundary in copper. <i>Scripta Materialia</i> , 2004, 50, 1283-1288.	2.6	83
13	Slip-activated surface creep with room-temperature super-elongation in metallic nanocrystals. <i>Nature Materials</i> , 2017, 16, 439-445.	13.3	82
14	Size-dependent yield stress in twinned gold nanowires mediated by site-specific surface dislocation emission. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	73
15	Surface Faceting Dependence of Thermal Transport in Silicon Nanowires. <i>Nano Letters</i> , 2011, 11, 5378-5382.	4.5	68
16	Strengthening and plasticity in nanotwinned metals. <i>MRS Bulletin</i> , 2016, 41, 292-297.	1.7	55
17	Quasicontinuum study of incipient plasticity under nanoscale contact in nanocrystalline aluminum. <i>Acta Materialia</i> , 2008, 56, 6013-6026.	3.8	48
18	Defect-driven selective metal oxidation at atomic scale. <i>Nature Communications</i> , 2021, 12, 558.	5.8	47

#	ARTICLE	IF	CITATIONS
19	Revealing extreme twin-boundary shear deformability in metallic nanocrystals. <i>Science Advances</i> , 2021, 7, eabe4758.	4.7	46
20	Strong Hall-Petch Type Behavior in the Elastic Strain Limit of Nanotwinned Gold Nanowires. <i>Nano Letters</i> , 2015, 15, 3865-3870.	4.5	41
21	An atomistic perspective on twinning phenomena in nano-enhanced fcc metals. <i>Jom</i> , 2008, 60, 79-84.	0.9	38
22	Atomistic processes controlling flow stress scaling during compression of nanoscale face-centered-cubic crystals. <i>Acta Materialia</i> , 2011, 59, 3364-3372.	3.8	38
23	Growth and properties of coherent twinning superlattice nanowires. <i>Nanoscale</i> , 2012, 4, 5268.	2.8	38
24	Effects of loading frequency on fatigue crack growth mechanisms in $\sqrt{2}$ Ti microstructure with large colony size. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 356, 81-92.	2.6	36
25	Effects of twin and surface facet on strain-rate sensitivity of gold nanowires at different temperatures. <i>Physical Review B</i> , 2010, 81, .	1.1	35
26	Molecular dynamics study of crystal plasticity during nanoindentation in Ni nanowires. <i>Journal of Materials Research</i> , 2009, 24, 948-956.	1.2	32
27	Repulsive force of twin boundary on curved dislocations and its role on the yielding of twinned nanowires. <i>Scripta Materialia</i> , 2010, 63, 50-53.	2.6	32
28	Relationship between hardness and dislocation processes in a nanocrystalline metal at the atomic scale. <i>Physical Review B</i> , 2011, 83, .	1.1	31
29	Influence of intrinsic kink-like defects on screw dislocation-coherent twin boundary interactions in copper. <i>Acta Materialia</i> , 2017, 123, 383-393.	3.8	29
30	Size-dependent dislocation-twin interactions. <i>Nanoscale</i> , 2019, 11, 12672-12679.	2.8	28
31	Nanoindentation and plasticity in nanocrystalline Ni nanowires: A case study in size effect mitigation. <i>Scripta Materialia</i> , 2010, 63, 1136-1139.	2.6	26
32	Intrinsic nanotwin effect on thermal boundary conductance in bulk and single-nanowire twinning superlattices. <i>Physical Review B</i> , 2016, 93, .	1.1	25
33	Development of a semi-empirical potential for simulation of Ni solute segregation into grain boundaries in Ag. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2018, 26, 075004.	0.8	25
34	Atomic mechanism of shear localization during indentation of a nanostructured metal. <i>Materials Science and Engineering C</i> , 2007, 27, 1509-1513.	3.8	24
35	Hall-Petch strengthening limit through partially active segregation in nanocrystalline Ag-Cu alloys. <i>Acta Materialia</i> , 2022, 225, 117560.	3.8	24
36	A force-matching method for quantitative hardness measurements by atomic force microscopy with diamond-tipped sapphire cantilevers. <i>Ultramicroscopy</i> , 2010, 111, 11-19.	0.8	22

#	ARTICLE	IF	CITATIONS
37	Incidence of nanoscale heterogeneity on the nanoindentation of a semicrystalline polymer: Experiments and modeling. <i>Acta Materialia</i> , 2008, 56, 2296-2306.	3.8	19
38	Role of cone angle on the mechanical behavior of cup-stacked carbon nanofibers studied by atomistic simulations. <i>Carbon</i> , 2014, 66, 523-529.	5.4	19
39	Columnar grain-driven plasticity and cracking in nanotwinned FCC metals. <i>Acta Materialia</i> , 2021, 212, 116925.	3.8	17
40	Making the surface of nanocrystalline Ni on an Si substrate ultrasmooth by direct electrodeposition. <i>Scripta Materialia</i> , 2008, 59, 103-106.	2.6	15
41	Heterogeneous solute segregation suppresses strain localization in nanocrystalline Ag-Ni alloys. <i>Acta Materialia</i> , 2020, 200, 91-100.	3.8	15
42	Molecular dynamics simulation on temperature and strain rate-dependent tensile response and failure behavior of Ni-coated CNT/Mg composites. <i>Applied Physics A: Materials Science and Processing</i> , 2018, 124, 1.	1.1	14
43	Anisotropic thermal conductivity under compression in two-dimensional woven ceramic fibers for flexible thermal protection systems. <i>International Journal of Heat and Mass Transfer</i> , 2019, 145, 118721.	2.5	14
44	Size and microstructure effects on the mechanical behavior of FCC bicrystals by quasicontinuum method. <i>Thin Solid Films</i> , 2007, 515, 3158-3163.	0.8	13
45	A two-scale model predicting the mechanical behavior of nanocrystalline solids. <i>Journal of the Mechanics and Physics of Solids</i> , 2013, 61, 1895-1914.	2.3	12
46	Size effects in bimetallic nickel-gold nanowires: Insight from atomic force microscopy nanoindentation. <i>Acta Materialia</i> , 2014, 66, 32-43.	3.8	12
47	Fracture Behavior of Woven Silicon Carbide Fibers Exposed to High-Temperature Nitrogen and Oxygen Plasmas. <i>Journal of the American Ceramic Society</i> , 2015, 98, 4003-4009.	1.9	12
48	A new form of pseudo-elasticity in small-scale nanotwinned gold. <i>Extreme Mechanics Letters</i> , 2016, 8, 201-207.	2.0	12
49	Quasicontinuum study of the shear behavior of defective tilt grain boundaries in Cu. <i>Acta Materialia</i> , 2014, 64, 419-428.	3.8	11
50	Microscale Knudsen Effect over the Transverse Thermal Conductivity of Woven Ceramic Fabrics Under Compression. <i>International Journal of Heat and Mass Transfer</i> , 2021, 171, 121085.	2.5	11
51	An atomistic simulation study of the mechanisms and kinetics of surface bond strengthening in thermally-treated cone-stacked carbon nanofibers. <i>Carbon</i> , 2013, 56, 351-357.	5.4	9
52	Superplastic deformation and energy dissipation mechanism in surface-bonded carbon nanofibers. <i>Computational Materials Science</i> , 2015, 99, 190-194.	1.4	7
53	Multiscale computational modeling of deformation mechanics and intergranular fracture in nanocrystalline copper. <i>Computational Materials Science</i> , 2014, 90, 253-264.	1.4	6
54	Segregation-affected yielding and stability in nanotwinned silver by microalloying. <i>Physical Review Materials</i> , 2017, 1, .	0.9	5

#	ARTICLE	IF	CITATIONS
55	Comment on "Deformation mechanisms of face-centered-cubic metal nanowires with twin boundaries" [Appl. Phys. Lett. 90, 151909 (2007)]. Applied Physics Letters, 2008, 93, .	1.5	3
56	Effect of geometrical constraint condition on the formation of nanoscale twins in the Ni-based metallic glass composite. Philosophical Magazine Letters, 2014, 94, 351-360.	0.5	3
57	Uniaxial Compression Behavior of Bulk Nano-twinned Gold from Molecular Dynamics Simulation. Materials Research Society Symposia Proceedings, 2007, 1049, 1.	0.1	2
58	In situ tensile behavior of HiNicalon silicon carbide fibers exposed to high temperature argon plasma. Journal of the American Ceramic Society, 2022, 105, 525.	1.9	2