

Frederic Sansoz

List of Publications by Year in descending order

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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	In situ tensile behavior of Hiâ€Nicalon silicon carbide fibers exposed to highâ€temperature argon plasma. Journal of the American Ceramic Society, 2022, 105, 525.	1.9	2
2	Hallâ€Petch strengthening limit through partially active segregation in nanocrystalline Ag-Cu alloys. Acta Materialia, 2022, 225, 117560.	3.8	24
3	Columnar grain-driven plasticity and cracking in nanotwinned FCC metals. Acta Materialia, 2021, 212, 116925.	3.8	17
4	Microscale Knudsen Effect over the Transverse Thermal Conductivity of Woven Ceramic Fabrics Under Compression. International Journal of Heat and Mass Transfer, 2021, 171, 121085.	2.5	11
5	Revealing extreme twin-boundary shear deformability in metallic nanocrystals. Science Advances, 2021, 7, eabe4758.	4.7	46
6	Defect-driven selective metal oxidation at atomic scale. Nature Communications, 2021, 12, 558.	5.8	47
7	Heterogeneous solute segregation suppresses strain localization in nanocrystalline Ag-Ni alloys. Acta Materialia, 2020, 200, 91-100.	3.8	15
8	Ideal maximum strengths and defect-induced softening in nanocrystalline-nanotwinned metals. Nature Materials, 2019, 18, 1207-1214.	13.3	87
9	Size-dependent dislocationâ€twin interactions. Nanoscale, 2019, 11, 12672-12679.	2.8	28
10	Anisotropic thermal conductivity under compression in two-dimensional woven ceramic fibers for flexible thermal protection systems. International Journal of Heat and Mass Transfer, 2019, 145, 118721.	2.5	14
11	Development of a semi-empirical potential for simulation of Ni solute segregation into grain boundaries in Ag. Modelling and Simulation in Materials Science and Engineering, 2018, 26, 075004.	0.8	25
12	Molecular dynamics simulation on temperature and stain rate-dependent tensile response and failure behavior of Ni-coated CNT/Mg composites. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	14
13	Influence of intrinsic kink-like defects on screw dislocation â€ coherent twin boundary interactions in copper. Acta Materialia, 2017, 123, 383-393.	3.8	29
14	Slip-activated surface creep with room-temperature super-elongation in metallicâ€nanocrystals. Nature Materials, 2017, 16, 439-445.	13.3	82
15	Segregation-affected yielding and stability in nanotwinned silver by microalloying. Physical Review Materials, 2017, 1, .	0.9	5
16	Strengthening and plasticity in nanotwinned metals. MRS Bulletin, 2016, 41, 292-297.	1.7	55
17	Intrinsic nanotwin effect on thermal boundary conductance in bulk and single-nanowire twinning superlattices. Physical Review B, 2016, 93, .	1.1	25
18	A new form of pseudo-elasticity in small-scale nanotwinned gold. Extreme Mechanics Letters, 2016, 8, 201-207.	2.0	12

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19	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
20	Superplastic deformation and energy dissipation mechanism in surface-bonded carbon nanofibers. <i>Computational Materials Science</i> , 2015, 99, 190-194.	1.4	7
21	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
22	Effect of geometrical constraint condition on the formation of nanoscale twins in the Ni-based metallic glass composite. <i>Philosophical Magazine Letters</i> , 2014, 94, 351-360.	0.5	3
23	Size effects in bimetallic nickel-gold nanowires: Insight from atomic force microscopy nanoindentation. <i>Acta Materialia</i> , 2014, 66, 32-43.	3.8	12
24	Quasicontinuum study of the shear behavior of defective tilt grain boundaries in Cu. <i>Acta Materialia</i> , 2014, 64, 419-428.	3.8	11
25	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
26	Multiscale computational modeling of deformation mechanics and intergranular fracture in nanocrystalline copper. <i>Computational Materials Science</i> , 2014, 90, 253-264.	1.4	6
27	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
28	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
29	Near-ideal theoretical strength in gold nanowires containing angstrom scale twins. <i>Nature Communications</i> , 2013, 4, 1742.	5.8	226
30	Defective twin boundaries in nanotwinned metals. <i>Nature Materials</i> , 2013, 12, 697-702.	13.3	255
31	Growth and properties of coherent twinning superlattice nanowires. <i>Nanoscale</i> , 2012, 4, 5268.	2.8	38
32	Surface Faceting Dependence of Thermal Transport in Silicon Nanowires. <i>Nano Letters</i> , 2011, 11, 5378-5382.	4.5	68
33	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
34	Relationship between hardness and dislocation processes in a nanocrystalline metal at the atomic scale. <i>Physical Review B</i> , 2011, 83, .	1.1	31
35	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
36	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

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37	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
38	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
39	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
40	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
41	Enabling Ultrahigh Plastic Flow and Work Hardening in Twinned Gold Nanowires. <i>Nano Letters</i> , 2009, 9, 1517-1522.	4.5	112
42	Molecular dynamics study of crystal plasticity during nanoindentation in Ni nanowires. <i>Journal of Materials Research</i> , 2009, 24, 948-956.	1.2	32
43	Near-Ideal Strength in Gold Nanowires Achieved through Microstructural Design. <i>ACS Nano</i> , 2009, 3, 3001-3008.	7.3	116
44	An atomistic perspective on twinning phenomena in nano-enhanced fcc metals. <i>Jom</i> , 2008, 60, 79-84.	0.9	38
45	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
46	Quasicontinuum study of incipient plasticity under nanoscale contact in nanocrystalline aluminum. <i>Acta Materialia</i> , 2008, 56, 6013-6026.	3.8	48
47	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
48	Comment on "Deformation mechanisms of face-centered-cubic metal nanowires with twin boundaries" [Appl. Phys. Lett. 90, 151909 (2007)]. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	3
49	Uniaxial Compression Behavior of Bulk Nano-twinned Gold from Molecular Dynamics Simulation. <i>Materials Research Society Symposia Proceedings</i> , 2007, 1049, 1.	0.1	2
50	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
51	Strengthening in Gold Nanopillars with Nanoscale Twins. <i>Nano Letters</i> , 2007, 7, 2056-2062.	4.5	179
52	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
53	Atomistic based continuum investigation of plastic deformation in nanocrystalline copper. <i>International Journal of Plasticity</i> , 2006, 22, 754-774.	4.1	120
54	Grain growth behavior at absolute zero during nanocrystalline metal indentation. <i>Applied Physics Letters</i> , 2006, 89, 111901.	1.5	119

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55	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
56	Mechanical behavior of $\hat{\Sigma}$ tilt grain boundaries in nanoscale Cu and Al: A quasicontinuum study. <i>Acta Materialia</i> , 2005, 53, 1931-1944.	3.8	207
57	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
58	Effects of loading frequency on fatigue crack growth mechanisms in $\hat{\Sigma}$ 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