

# Frederic Sansoz

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

58

papers

2,346

citations

26

h-index

48

g-index

60

ext. papers

2,608

ext. citations

7.7

avg, IF

5.44

L-index

#	Paper	IF	Citations
58	Hall-Petch strengthening limit through partially active segregation in nanocrystalline Ag-Cu alloys. <i>Acta Materialia</i> , <b>2022</b> , 225, 117560	8.4	3
57	In situ tensile behavior of Hi-Nicalon silicon carbide fibers exposed to high-temperature argon plasma. <i>Journal of the American Ceramic Society</i> , <b>2022</b> , 105, 525	3.8	0
56	Columnar grain-driven plasticity and cracking in nanotwinned FCC metals. <i>Acta Materialia</i> , <b>2021</b> , 212, 116925	8.4	2
55	Microscale Knudsen Effect over the Transverse Thermal Conductivity of Woven Ceramic Fabrics Under Compression. <i>International Journal of Heat and Mass Transfer</i> , <b>2021</b> , 171, 121085	4.9	4
54	Revealing extreme twin-boundary shear deformability in metallic nanocrystals. <i>Science Advances</i> , <b>2021</b> , 7, eabe4758	14.3	14
53	Defect-driven selective metal oxidation at atomic scale. <i>Nature Communications</i> , <b>2021</b> , 12, 558	17.4	11
52	Heterogeneous solute segregation suppresses strain localization in nanocrystalline Ag-Ni alloys. <i>Acta Materialia</i> , <b>2020</b> , 200, 91-100	8.4	5
51	Ideal maximum strengths and defect-induced softening in nanocrystalline-nanotwinned metals. <i>Nature Materials</i> , <b>2019</b> , 18, 1207-1214	27	40
50	Size-dependent dislocation-twin interactions. <i>Nanoscale</i> , <b>2019</b> , 11, 12672-12679	7.7	19
49	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> , <b>2019</b> , 145, 118721	4.9	9
48	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> , <b>2018</b> , 124, 1	2.6	8
47	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> , <b>2018</b> , 26, 075004	2	12
46	Influence of intrinsic kink-like defects on screw dislocation-coherent twin boundary interactions in copper. <i>Acta Materialia</i> , <b>2017</b> , 123, 383-393	8.4	22
45	Slip-activated surface creep with room-temperature super-elongation in metallic nanocrystals. <i>Nature Materials</i> , <b>2017</b> , 16, 439-445	27	54
44	Segregation-affected yielding and stability in nanotwinned silver by microalloying. <i>Physical Review Materials</i> , <b>2017</b> , 1,	3.2	3
43	Intrinsic nanotwin effect on thermal boundary conductance in bulk and single-nanowire twinning superlattices. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	17
42	A new form of pseudo-elasticity in small-scale nanotwinned gold. <i>Extreme Mechanics Letters</i> , <b>2016</b> , 8, 201-207	3.9	10

41	Strengthening and plasticity in nanotwinned metals. <i>MRS Bulletin</i> , <b>2016</b> , 41, 292-297	3.2	43
40	Strong Hall-Petch Type Behavior in the Elastic Strain Limit of Nanotwinned Gold Nanowires. <i>Nano Letters</i> , <b>2015</b> , 15, 3865-70	11.5	33
39	Fracture Behavior of Woven Silicon Carbide Fibers Exposed to High-Temperature Nitrogen and Oxygen Plasmas. <i>Journal of the American Ceramic Society</i> , <b>2015</b> , 98, 4003-4009	3.8	9
38	Superplastic deformation and energy dissipation mechanism in surface-bonded carbon nanofibers. <i>Computational Materials Science</i> , <b>2015</b> , 99, 190-194	3.2	6
37	Size effects in bimetallic nickel-gold nanowires: Insight from atomic force microscopy nanoindentation. <i>Acta Materialia</i> , <b>2014</b> , 66, 32-43	8.4	10
36	Quasicontinuum study of the shear behavior of defective tilt grain boundaries in Cu. <i>Acta Materialia</i> , <b>2014</b> , 64, 419-428	8.4	10
35	Role of cone angle on the mechanical behavior of cup-stacked carbon nanofibers studied by atomistic simulations. <i>Carbon</i> , <b>2014</b> , 66, 523-529	10.4	17
34	Multiscale computational modeling of deformation mechanics and intergranular fracture in nanocrystalline copper. <i>Computational Materials Science</i> , <b>2014</b> , 90, 253-264	3.2	4
33	Effect of geometrical constraint condition on the formation of nanoscale twins in the Ni-based metallic glass composite. <i>Philosophical Magazine Letters</i> , <b>2014</b> , 94, 351-360	1	3
32	An atomistic simulation study of the mechanisms and kinetics of surface bond strengthening in thermally-treated cone-stacked carbon nanofibers. <i>Carbon</i> , <b>2013</b> , 56, 351-357	10.4	8
31	A two-scale model predicting the mechanical behavior of nanocrystalline solids. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2013</b> , 61, 1895-1914	5	11
30	Near-ideal theoretical strength in gold nanowires containing angstrom scale twins. <i>Nature Communications</i> , <b>2013</b> , 4, 1742	17.4	188
29	Defective twin boundaries in nanotwinned metals. <i>Nature Materials</i> , <b>2013</b> , 12, 697-702	27	210
28	Growth and properties of coherent twinning superlattice nanowires. <i>Nanoscale</i> , <b>2012</b> , 4, 5268-76	7.7	33
27	Surface faceting dependence of thermal transport in silicon nanowires. <i>Nano Letters</i> , <b>2011</b> , 11, 5378-82	11.5	64
26	Atomistic processes controlling flow stress scaling during compression of nanoscale face-centered-cubic crystals. <i>Acta Materialia</i> , <b>2011</b> , 59, 3364-3372	8.4	33
25	Relationship between hardness and dislocation processes in a nanocrystalline metal at the atomic scale. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	26
24	Effects of twin and surface facet on strain-rate sensitivity of gold nanowires at different temperatures. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	33

23	Repulsive force of twin boundary on curved dislocations and its role on the yielding of twinned nanowires. <i>Scripta Materialia</i> , <b>2010</b> , 63, 50-53	5.6	29
22	Nanoindentation and plasticity in nanocrystalline Ni nanowires: A case study in size effect mitigation. <i>Scripta Materialia</i> , <b>2010</b> , 63, 1136-1139	5.6	26
21	A force-matching method for quantitative hardness measurements by atomic force microscopy with diamond-tipped sapphire cantilevers. <i>Ultramicroscopy</i> , <b>2010</b> , 111, 11-9	3.1	20
20	Size-dependent yield stress in twinned gold nanowires mediated by site-specific surface dislocation emission. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 091914	3.4	64
19	Fundamental differences in the plasticity of periodically twinned nanowires in Au, Ag, Al, Cu, Pb and Ni. <i>Acta Materialia</i> , <b>2009</b> , 57, 6090-6101	8.4	106
18	Enabling ultrahigh plastic flow and work hardening in twinned gold nanowires. <i>Nano Letters</i> , <b>2009</b> , 9, 1517-22	11.5	104
17	Molecular dynamics study of crystal plasticity during nanoindentation in Ni nanowires. <i>Journal of Materials Research</i> , <b>2009</b> , 24, 948-956	2.5	27
16	Near-ideal strength in gold nanowires achieved through microstructural design. <i>ACS Nano</i> , <b>2009</b> , 3, 3001-3007	18.7	105
15	Making the surface of nanocrystalline Ni on an Si substrate ultrasmooth by direct electrodeposition. <i>Scripta Materialia</i> , <b>2008</b> , 59, 103-106	5.6	13
14	Comment on Deformation mechanisms of face-centered-cubic metal nanowires with twin boundaries [Appl. Phys. Lett. 90, 151909 (2007)]. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 086101	3.4	3
13	An atomistic perspective on twinning phenomena in nano-enhanced fcc metals. <i>Jom</i> , <b>2008</b> , 60, 79-84	2.1	34
12	Incidence of nanoscale heterogeneity on the nanoindentation of a semicrystalline polymer: Experiments and modeling. <i>Acta Materialia</i> , <b>2008</b> , 56, 2296-2306	8.4	16
11	Quasicontinuum study of incipient plasticity under nanoscale contact in nanocrystalline aluminum. <i>Acta Materialia</i> , <b>2008</b> , 56, 6013-6026	8.4	44
10	Atomic mechanism of shear localization during indentation of a nanostructured metal. <i>Materials Science and Engineering C</i> , <b>2007</b> , 27, 1509-1513	8.3	23
9	Strengthening in Gold Nanopillars with Nanoscale Twins. <i>Nano Letters</i> , <b>2007</b> , 7, 2056-2062	11.5	159
8	Size and microstructure effects on the mechanical behavior of FCC bicrystals by quasicontinuum method. <i>Thin Solid Films</i> , <b>2007</b> , 515, 3158-3163	2.2	13
7	Uniaxial Compression Behavior of Bulk Nano-twinned Gold from Molecular Dynamics Simulation. <i>Materials Research Society Symposia Proceedings</i> , <b>2007</b> , 1049, 1		1
6	Atomistic based continuum investigation of plastic deformation in nanocrystalline copper. <i>International Journal of Plasticity</i> , <b>2006</b> , 22, 754-774	7.6	105

5	Grain growth behavior at absolute zero during nanocrystalline metal indentation. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 111901	3.4	111
4	Micromechanics of deformation of metallic-glass matrix composites from in situ synchrotron strain measurements and finite element modeling. <i>Acta Materialia</i> , <b>2005</b> , 53, 1883-1893	8.4	79
3	Mechanical behavior of tilt grain boundaries in nanoscale Cu and Al: A quasicontinuum study. <i>Acta Materialia</i> , <b>2005</b> , 53, 1931-1944	8.4	191
2	Incidence of atom shuffling on the shear and decohesion behavior of a symmetric tilt grain boundary in copper. <i>Scripta Materialia</i> , <b>2004</b> , 50, 1283-1288	5.6	74
1	Effects of loading frequency on fatigue crack growth mechanisms in Ti microstructure with large colony size. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2003</b> , 356, 81-92	5.3	25