Guillaume Laplanche

List of Publications by Year
in descending order

62 papers	4,832 citations	159585 30 h-index	128289 60 g-index
62 all docs	62 docs citations	62 times ranked	2680 citing authors

#	Article	IF	Citations
1	Microstructure evolution and critical stress for twinning in the CrMnFeCoNi high-entropy alloy. Acta Materialia, 2016, 118, 152-163.	7.9	823
2	Reasons for the superior mechanical properties of medium-entropy CrCoNi compared to high-entropy CrMnFeCoNi. Acta Materialia, 2017, 128, 292-303.	7.9	803
3	Temperature dependencies of the elastic moduli and thermal expansion coefficient of an equiatomic, single-phase CoCrFeMnNi high-entropy alloy. Journal of Alloys and Compounds, 2015, 623, 348-353.	5.5	331
4	Elastic moduli and thermal expansion coefficients of medium-entropy subsystems of the CrMnFeCoNi high-entropy alloy. Journal of Alloys and Compounds, 2018, 746, 244-255.	5.5	215
5	Phase stability and kinetics of Ïƒ-phase precipitation in CrMnFeCoNi high-entropy alloys. Acta Materialia, 2018, 161, 338-351.	7.9	209
6	Oxidation Behavior of the CrMnFeCoNi High-Entropy Alloy. Oxidation of Metals, 2016, 85, 629-645.	2.1	190
7	Analysis of strengthening due to grain boundaries and annealing twin boundaries in the CrCoNi medium-entropy alloy. International Journal of Plasticity, 2020, 124, 155-169.	8.8	167
8	Effect of temperature on the fatigue-crack growth behavior of the high-entropy alloy CrMnFeCoNi. Intermetallics, 2017, 88, 65-72.	3.9	160
9	Microstructural evolution of a CoCrFeMnNi high-entropy alloy after swaging and annealing. Journal of Alloys and Compounds, 2015, 647, 548-557.	5.5	158
10	Thermal activation parameters of plastic flow reveal deformation mechanisms in the CrMnFeCoNi high-entropy alloy. Acta Materialia, 2018, 143, 257-264.	7.9	132
11	Effects of temperature on mechanical properties and deformation mechanisms of the equiatomic CrFeNi medium-entropy alloy. Acta Materialia, 2021, 204, 116470.	7.9	124
12	Effect of temperature and texture on the reorientation of martensite variants in NiTi shape memory alloys. Acta Materialia, 2017, 127, 143-152.	7.9	122
13	Effects of cryogenic temperature and grain size on fatigue-crack propagation in the medium-entropy CrCoNi alloy. Acta Materialia, 2020, 200, 351-365.	7.9	76
14	Temperature and load-ratio dependent fatigue-crack growth in the CrMnFeCoNi high-entropy alloy. Journal of Alloys and Compounds, 2019, 794, 525-533.	5.5	74
15	Columnar to equiaxed transition and grain refinement of cast CrCoNi medium-entropy alloy by microalloying with titanium and carbon. Journal of Alloys and Compounds, 2019, 775, 1068-1076.	5.5	71
16	Powder metallurgy processing and compressive properties of Ti3AlC2/Al composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 530, 168-173.	5.6	68
17	Superior low-cycle fatigue properties of CoCrNi compared to CoCrFeMnNi. Scripta Materialia, 2021, 194, 113667.	5.2	66
18	Laser metal deposition of compositionally graded TiZrNbTa refractory high-entropy alloys using elemental powder blends. Additive Manufacturing, 2019, 25, 252-262.	3.0	62

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19	Growth kinetics of Ïƒ-phase precipitates and underlying diffusion processes in CrMnFeCoNi high-entropy alloys. Acta Materialia, 2020, 199, 193-208.	7.9	51
20	Interdiffusion in Crâ€“Feâ€“Coâ€“Ni medium-entropy alloys. Intermetallics, 2020, 122, 106789.	3.9	49
21	Microstructures and mechanical properties of Al-base composite materials reinforced by Alâ€“Cuâ€“Fe particles. Journal of Alloys and Compounds, 2010, 493, 453-460.	5.5	47
22	Laser metal deposition of a refractory TiZrNbHfTa high-entropy alloy. Additive Manufacturing, 2018, 24, 386-390.	3.0	47
23	Effects of Cr/Ni ratio on physical properties of Cr-Mn-Fe-Co-Ni high-entropy alloys. Acta Materialia, 2022, 227, 117693.	7.9	47
24	Orientation dependence of stress-induced martensite formation during nanoindentation in NiTi shape memory alloys. Acta Materialia, 2014, 68, 19-31.	7.9	45
25	Sudden stress-induced transformation events during nanoindentation of NiTi shape memory alloys. Acta Materialia, 2014, 78, 144-160.	7.9	44
26	Processing of a single-crystalline CrCoNi medium-entropy alloy and evolution of its thermal expansion and elastic stiffness coefficients with temperature. Scripta Materialia, 2020, 177, 44-48.	5.2	44
27	Temperature dependence of elastic moduli in a refractory HfNbTaTiZr high-entropy alloy. Journal of Alloys and Compounds, 2019, 799, 538-545.	5.5	42
28	Effect of Temperature and Texture on Hallâ€“Petch Strengthening by Grain and Annealing Twin Boundaries in the MnFeNi Medium-Entropy Alloy. Metals, 2019, 9, 84.	2.3	42
29	Deformation mechanisms in a superelastic NiTi alloy: An in-situ high resolution digital image correlation study. Materials and Design, 2020, 191, 108622.	7.0	41
30	Comparison of cryogenic deformation of the concentrated solid solutions CoCrFeMnNi, CoCrNi and CoNi. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 783, 139290.	5.6	41
31	Effect of Al, Ti and C additions on WidmanstÃtten microstructures and mechanical properties of cast Al0.6CoCrFeNi compositionally complex alloys. Materials and Design, 2019, 184, 108201.	7.0	34
32	High-Temperature Oxidation in Dry and Humid Atmospheres of the Equiatomic CrMnFeCoNi and CrCoNi High- and Medium-Entropy Alloys. Oxidation of Metals, 2021, 95, 105-133.	2.1	34
33	Processing of NiTi shape memory sheets â€“ Microstructural heterogeneity and evolution of texture. Journal of Alloys and Compounds, 2015, 651, 333-339.	5.5	29
34	Welding of high-entropy alloys and compositionally complex alloysâ€"an overview. Welding in the World, Le Soudage Dans Le Monde, 2021, 65, 1645-1659.	2.5	29
35	Laser metal deposition of refractory high-entropy alloys for high-throughput synthesis and structure-property characterization. International Journal of Extreme Manufacturing, 2021, 3, 015201.	12.7	27
36	Compressive Behavior of <scp><scp>Ti</scp></scp>₃<scp><scp>AlC</scp></scp>₂ and <scp><scp>Ti</scp></scp>₃<scp><scp>Al</scp></scp>_{0.8}<scp><scp>Sn</scp></scp>_{0.2}<scp Phases at Room Temperature. Journal of the American Ceramic Society, 2013, 96, 567-576.	3.8	27

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37	Microstructural and mechanical study of an Al matrix composite reinforced by Al-Cu-Fe icosahedral particles. Journal of Materials Research, 2010, 25, 957-965.	2.6	26
38	Tracer diffusion in the Ïƒ phase of the CoCrFeMnNi system. Acta Materialia, 2021, 203, 116498.	7.9	24
39	Mechanical properties of Alâ€"Cuâ€"Fe quasicrystalline and crystalline phases: An analogy. Intermetallics, 2014, 50, 54-58.	3.9	23
40	On the onset of deformation twinning in the CrFeMnCoNi high-entropy alloy using a novel tensile specimen geometry. Intermetallics, 2019, 110, 106469.	3.9	21
41	Assessment of strain hardening in copper single crystals using in situ SEM microshear experiments. Acta Materialia, 2016, 113, 320-334.	7.9	20
42	On the influence of crystallography and dendritic microstructure on micro shear behavior of single crystal Ni-based superalloys. Acta Materialia, 2018, 160, 173-184.	7.9	18
43	Plasticity induced by nanoindentation in a CrCoNi medium-entropy alloy studied by accurate electron channeling contrast imaging revealing dislocation-low angle grain boundary interactions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 817, 141364.	5.6	14
44	Influence of machining on the surface integrity of high- and medium-entropy alloys. Materials Chemistry and Physics, 2022, 275, 125271.	4.0	14
45	Synthesis and brittle-to-ductile transition of the Ï‰-Al0.7Cu0.2Fe0.1 tetragonal phase. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 4515-4518.	5.6	13
46	Al-matrix composite materials reinforced by Al-Cu-Fe particles. Journal of Physics: Conference Series, 2010, 240, 012013.	0.4	12
47	Elevated-temperature cyclic deformation mechanisms of CoCrNi in comparison to CoCrFeMnNi. Scripta Materialia, 2022, 220, 114926.	5.2	10
48	Spark plasma sintering synthesis and mechanical spectroscopy of the Ï‰-Al0.7Cu0.2Fe0.1 phase. Journal of Materials Science, 2012, 47, 169-175.	3.7	8
49	Benchmark dataset of the effect of grain size on strength in the single-phase FCC CrCoNi medium entropy alloy. Data in Brief, 2019, 27, 104592.	1.0	8
50	On Shear Testing of Single Crystal Ni-Base Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3951-3962.	2.2	7
51	Inner relaxations in equiatomic single-phase high-entropy cantor alloy. Journal of Alloys and Compounds, 2022, 920, 165999.	5.5	7
52	Plasticity of the Ï‰-Al7Cu2Fe phase. Journal of Alloys and Compounds, 2016, 665, 144-151.	5.5	6
53	Data compilation regarding the effects of grain size and temperature on the strength of the single-phase FCC CrFeNi medium-entropy alloy. Data in Brief, 2021, 34, 106712.	1.0	6
54	Laser metal deposition of Al0.6CoCrFeNi with Ti & C additions using elemental powder blends. Surface and Coatings Technology, 2021, 418, 127233.	4.8	6

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55	Design of a new wrought CrCoNi-based medium-entropy superalloy C-264 for high-temperature applications. Materials and Design, 2021, 211, 110174.	7.0	5
56	Influence of Mo/Cr ratio on the lamellar microstructure and mechanical properties of as-cast Al0.75CoCrFeNi compositionally complex alloys. Journal of Alloys and Compounds, 2022, 899, 163183.	5.5	5
57	Data compilation on the effect of grain size, temperature, and texture on the strength of a single-phase FCC MnFeNi medium-entropy alloy. Data in Brief, 2020, 28, 104807.	1.0	3
58	Experimental and Theoretical Investigation on Phase Formation and Mechanical Properties in Crâ€“Coâ€“Ni Alloys Processed Using a Novel Thin-Film Quenching Technique. ACS Combinatorial Science, 2020, 22, 232-247.	3.8	3
59	Data regarding the influence of Al, Ti, and C additions to as-cast Al0.6CoCrFeNi compositionally complex alloys on microstructures and mechanical properties. Data in Brief, 2019, 27, 104742.	1.0	1
60	Data related to the growth of Ïƒ-phase precipitates in CrMnFeCoNi high-entropy alloys: Temporal evolutions of precipitate dimensions and concentration profiles at interfaces. Data in Brief, 2020, 33, 106449.	1.0	1
61	Strain Accommodation in a Superelastic NiTi Alloy: A High Resolution Digital Image Correlation and Transmission Electron Microscopy Study. SSRN Electronic Journal, 0, , .	0.4	0
62	Precipitation Hardenable High Entropy Alloy for Tooling Applications. MRS Advances, 2019, 4, 1427-1433.	0.9	0