

Robert Franz

List of Publications by Year in descending order

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citations

279701

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69
all docs

69
docs citations

69
times ranked

1145
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis and structure of refractory high entropy alloy thin films based on the MoNbTaW system. Surface and Coatings Technology, 2022, 439, 128446.	2.2	13
2	Tribological investigations of Mo films deposited on thin polyimide substrates. Surface and Coatings Technology, 2022, 442, 128549.	2.2	2
3	Influence of the nitrogen content on the structure and properties of MoNbTaVW high entropy alloy thin films. Journal of Alloys and Compounds, 2021, 850, 156740.	2.8	43
4	High temperature fracture toughness of single-layer CrAlN and CrAlSiN hard coatings. Surface and Coatings Technology, 2021, 409, 126909.	2.2	12
5	Cathode spot behavior in nitrogen and oxygen gaseous atmospheres and concomitant cathode surface modifications. Surface and Coatings Technology, 2021, 421, 127441.	2.2	8
6	Rapid solidification and metastable phase formation during surface modifications of composite Al-Cr cathodes exposed to cathodic arc plasma. Journal of Materials Science and Technology, 2021, 94, 147-163.	5.6	7
7	Microstructural characterization of medium entropy alloy thin films. Scripta Materialia, 2020, 177, 22-26.	2.6	28
8	Erosion and cathodic arc plasma of Nb-Al cathodes: composite versus intermetallic. Plasma Sources Science and Technology, 2020, 29, 025022.	1.3	10
9	Thermal Stability of MoNbTaVW High Entropy Alloy Thin Films. Coatings, 2020, 10, 941.	1.2	14
10	Insights into surface modification and erosion of multi-element arc cathodes using a novel multilayer cathode design. Journal of Applied Physics, 2020, 127, .	1.1	13
11	Angular-dependent deposition of MoNbTaVW HEA thin films by three different physical vapor deposition methods. Surface and Coatings Technology, 2020, 385, 125356.	2.2	26
12	Correlating high temperature mechanical and tribological properties of CrAlN and CrAlSiN hard coatings. Surface and Coatings Technology, 2019, 372, 361-368.	2.2	35
13	Tribological testing of leather surface coated with sputter-deposited Ti-Ag-O films. Tribology International, 2019, 137, 59-65.	3.0	2
14	Experimental Chemistry and Structural Stability of AlNb ₃ Enabled by Antisite Defects Formation. Materials, 2019, 12, 1104.	1.3	8
15	Crack deflecting microstructure for improved electro-mechanical lifetimes of flexible systems. Materials Letters, 2019, 244, 47-49.	1.3	7
16	Influence of Ar gas pressure on ion energy and charge state distributions in pulsed cathodic arc plasmas from Nb-Al cathodes studied with high time resolution. Journal Physics D: Applied Physics, 2019, 52, 055201.	1.3	5
17	Electromechanical properties of cathodic arc deposited high entropy alloy thin films on polymer substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	10
18	Influence of discharge power and bias potential on microstructure and hardness of sputtered amorphous carbon coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, 021501.	0.9	4

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19	Time and Energy-resolved Average Ion Charge States in Pulsed Cathodic Vacuum Arc Plasmas of Nb-A1 Cathodes as a Function of Ar Pressure. , 2018, , .		0
20	Linking erosion and sputter performance of a rotatable Mo target to microstructure and properties of the deposited thin films. Surface and Coatings Technology, 2018, 352, 354-359.	2.2	9
21	Time-resolved ion energy and charge state distributions in pulsed cathodic arc plasmas of Nb~Al cathodes in high vacuum. Plasma Sources Science and Technology, 2018, 27, 055007.	1.3	10
22	Industrial-scale sputter deposition of molybdenum oxide thin films: Microstructure evolution and properties. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	18
23	Thickness dependence of the electro-mechanical response of sputter-deposited Mo thin films on polyimide: Insights from in situ synchrotron diffraction tensile tests. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 697, 17-23.	2.6	36
24	Non-reactive dc magnetron sputter deposition of Mo-O thin films from ceramic MoOx targets. Surface and Coatings Technology, 2017, 332, 80-85.	2.2	12
25	A correlative experimental and ab initio approach to improve the fracture behavior of Mo thin films by alloying with Cu. Applied Physics Letters, 2017, 111, 134101.	1.5	5
26	Deformation behavior of Re alloyed Mo thin films on flexible substrates: In situ fragmentation analysis supported by first-principles calculations. Scientific Reports, 2017, 7, 7374.	1.6	17
27	Structure evolution in reactively sputtered molybdenum oxide thin films. Vacuum, 2016, 131, 246-251.	1.6	29
28	Erosion behavior of composite Al-Cr cathodes in cathodic arc plasmas in inert and reactive atmospheres. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	12
29	Effect of discharge power on target poisoning and coating properties in reactive magnetron sputter deposition of TiN. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	12
30	ICMCTF 2016 ~ Preface. Surface and Coatings Technology, 2016, 308, 1.	2.2	0
31	The electro-mechanical behavior of sputter-deposited Mo thin films on flexible substrates. Thin Solid Films, 2016, 606, 45-50.	0.8	43
32	Energy consumption and material fluxes in hard coating deposition processes. Surface and Coatings Technology, 2016, 299, 49-55.	2.2	19
33	Influence of ionisation zone motion in high power impulse magnetron sputtering on angular ion flux and NbO_x film growth. Plasma Sources Science and Technology, 2016, 25, 015022.	1.3	28
34	ICMCTF 2015 ~ Preface. Thin Solid Films, 2015, 596, 1.	0.8	0
35	ICMCTF 2015 ~ Preface. Surface and Coatings Technology, 2015, 284, 1.	2.2	0
36	Element- and charge-state-resolved ion energies in the cathodic arc plasma from composite AlCr cathodes in argon, nitrogen and oxygen atmospheres. Surface and Coatings Technology, 2015, 272, 309-321.	2.2	18

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37	Functional Thin Films for Display and Microelectronics Applications. BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik, 2015, 160, 231-234.	0.4	7
38	Influence of pulsed bias duty cycle variations on structural and mechanical properties of arc evaporated (Al,Cr) ₂ O ₃ coatings. Surface and Coatings Technology, 2015, 282, 43-51.	2.2	29
39	ICMCTF 2014 - Preface. Thin Solid Films, 2014, 572, 1.	0.8	0
40	Seed layer stimulated growth of crystalline high Al containing (Al,Cr) ₂ O ₃ coatings deposited by cathodic arc evaporation. Thin Solid Films, 2014, 550, 95-104.	0.8	33
41	Asymmetric particle fluxes from drifting ionization zones in sputtering magnetrons. Plasma Sources Science and Technology, 2014, 23, 025007.	1.3	49
42	Observation of multiple charge states and high ion energies in high-power impulse magnetron sputtering (HiPIMS) and burst HiPIMS using a LaB ₆ target. Plasma Sources Science and Technology, 2014, 23, 035001.	1.3	22
43	Vanadium containing self-adaptive low-friction hard coatings for high-temperature applications: A review. Surface and Coatings Technology, 2013, 228, 1-13.	2.2	190
44	Drifting potential humps in ionization zones: The "propeller blades" of high power impulse magnetron sputtering. Applied Physics Letters, 2013, 103, .	1.5	75
45	Influence of Fe impurities on structure and properties of arc-evaporated AlCrN coatings. Surface and Coatings Technology, 2013, 215, 96-103.	2.2	17
46	Ion Charge State Distributions of Al and Cr in Cathodic Arc Plasmas From Composite Cathodes in Vacuum, Argon, Nitrogen, and Oxygen. IEEE Transactions on Plasma Science, 2013, 41, 1929-1937.	0.6	20
47	Charge state distributions of Al and Cr cathodic arc plasmas. , 2012, , .		1
48	Oxidation behaviour and tribological properties of arc-evaporated ZrAlN hard coatings. Surface and Coatings Technology, 2012, 206, 2337-2345.	2.2	45
49	Tribological Properties of Arc-Evaporated NbAlN Hard Coatings. Tribology Letters, 2012, 45, 143-152.	1.2	7
50	Cathodic arc deposition of (Al,Cr) ₂ O ₃ : Macroparticles and cathode surface modifications. Surface and Coatings Technology, 2011, 206, 1454-1460.	2.2	74
51	Oxidation and diffusion study on AlCrVN hard coatings using oxygen isotopes ¹⁶ O and ¹⁸ O. Thin Solid Films, 2011, 519, 3974-3981.	0.8	14
52	Structure, mechanical properties and oxidation behaviour of arc-evaporated NbAlN hard coatings. Surface and Coatings Technology, 2010, 204, 2447-2453.	2.2	27
53	Abrasive and Adhesive Wear Behavior of Arc-Evaporated Al _{1-x} Cr _x N Hard Coatings. Tribology Letters, 2010, 37, 605-611.	1.2	31
54	In Situ Studies of TiC _{1-x} N _x Hard Coating Tribology. Tribology Letters, 2010, 40, 365-373.	1.2	20

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55	Structure-property relations in ZrCN coatings for tribological applications. Surface and Coatings Technology, 2010, 205, 2134-2141.	2.2	65
56	Investigation on structure and properties of arc-evaporated HfAlN hard coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 528-535.	0.9	7
57	Structure and stability of phases within the NbN-AlN system. Journal Physics D: Applied Physics, 2010, 43, 145403.	1.3	49
58	Influence of phase transition on the tribological performance of arc-evaporated AlCrVN hard coatings. Surface and Coatings Technology, 2009, 203, 1101-1105.	2.2	38
59	TOF-SIMS depth profiling and element mapping on oxidized AlCrVN hard coatings. Analytical and Bioanalytical Chemistry, 2009, 393, 1857-1861.	1.9	8
60	Low-Friction Mechanisms Active for Carbon Containing Coatings: Ti-C-N as a Model System. BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik, 2008, 153, 263-267.	0.4	4
61	Micro- and bonding structure of arc-evaporated AlCrVN hard coatings. Thin Solid Films, 2008, 516, 6151-6157.	0.8	26
62	Oxidation and diffusion processes during annealing of AlCrVN hard coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 302-308.	0.9	18
63	Semi-quantitative chemical analysis of hard coatings by Raman micro-spectroscopy: the aluminium chromium nitride system as an example. Analytical and Bioanalytical Chemistry, 2007, 389, 1569-1576.	1.9	14
64	Structural investigations of aluminum-chromium-nitride hard coatings by Raman micro-spectroscopy. Thin Solid Films, 2006, 515, 2197-2202.	0.8	32
65	High-temperature low-friction properties of vanadium-alloyed AlCrN coatings. Tribology Letters, 2006, 23, 101-107.	1.2	70
66	Phase jumps in the reflected light of a ZnSe layer. AIP Conference Proceedings, 2005, , .	0.3	0
67	Carrier-induced changes of the phase of reflected light at a pumped ZnSe layer. Physical Review B, 2005, 72, .	1.1	14