

Helmut Riedl

List of Publications by Year in descending order

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docs citations

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citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of WC/C target composition and bias potential on the structure-mechanical properties of non-reactively sputtered WC coatings. <i>Surface and Coatings Technology</i> , 2022, 432, 128036.	2.2	3
2	TGO formation and oxygen diffusion in Al-rich gamma-TiAl PVD-coatings on TNM alloys. <i>Scripta Materialia</i> , 2022, 210, 114455.	2.6	7
3	Anisotropic super-hardness of hexagonal WB ₂ thin films. <i>Materials Research Letters</i> , 2022, 10, 70-77.	4.1	21
4	Influence of Si on the oxidation behavior of TM-Si-B ₂ coatings (TM=Ti, Cr, Hf, Ta, W). <i>Surface and Coatings Technology</i> , 2022, 434, 128178.	2.2	23
5	Magnetron sputtered NiAl/TiB _x multilayer thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2022, 40, .	0.9	2
6	Quantitative Depth Profiling Using Online-Laser Ablation of Solid Samples in Liquid (LASIL) to Investigate the Oxidation Behavior of Transition Metal Borides. <i>Molecules</i> , 2022, 27, 3221.	1.7	0
7	High temperature oxidation resistance of physical vapor deposited Hf-Si-B ₂ thin films. <i>Corrosion Science</i> , 2022, 205, 110413.	3.0	8
8	Non-reactive HiPIMS deposition of NbC _x thin films: Effect of the target power density on structure-mechanical properties. <i>Surface and Coatings Technology</i> , 2022, 444, 128674.	2.2	7
9	Ultra-high oxidation resistance of nano-structured thin films. <i>Materials and Design</i> , 2021, 201, 109499.	3.3	5
10	Influence of Ta on the oxidation resistance of WB ₂ coatings. <i>Journal of Alloys and Compounds</i> , 2021, 864, 158121.	2.8	18
11	Phase formation and mechanical properties of reactively and non-reactively sputtered Ti-B-N hard coatings. <i>Surface and Coatings Technology</i> , 2021, 420, 127327.	2.2	13
12	Reactive HiPIMS deposition of Al-oxide thin films using W-alloyed Al targets. <i>Surface and Coatings Technology</i> , 2021, 422, 127467.	2.2	5
13	Time-averaged and time-resolved ion fluxes related to reactive HiPIMS deposition of Ti-Al-N films. <i>Surface and Coatings Technology</i> , 2021, 424, 127638.	2.2	5
14	Structure and mechanical properties of reactive and non-reactive sputter deposited WC based coatings. <i>Journal of Alloys and Compounds</i> , 2021, 885, 161129.	2.8	11
15	Influence of the non-metal species on the oxidation kinetics of Hf, HfN, HfC, and HfB ₂ coatings. <i>Materials and Design</i> , 2021, 211, 110136.	3.3	22
16	Reactive HiPIMS deposition of Ti-Al-N: Influence of the deposition parameters on the cubic to hexagonal phase transition. <i>Surface and Coatings Technology</i> , 2020, 382, 125007.	2.2	24
17	Processing Fiber-Reinforced Polymers: Specific Wear Phenomena Caused by Filler Materials. <i>Polymer Engineering and Science</i> , 2020, 60, 78-85.	1.5	5
18	Laser based analysis of transition metal boride thin films using liquid standards. <i>Microchemical Journal</i> , 2020, 152, 104449.	2.3	6

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19	Correlation between fracture characteristics and valence electron concentration of sputtered Hf-C-N based thin films. <i>Surface and Coatings Technology</i> , 2020, 399, 126212.	2.2	18
20	Thermally stable superhard diborides: An ab initio guided case study for V-W-diboride thin films. <i>Acta Materialia</i> , 2020, 186, 487-493.	3.8	20
21	How to get noWear? â€œ A new take on the design of in-situ formed high performing low-friction tribofilms. <i>Materials and Design</i> , 2020, 190, 108519.	3.3	25
22	Structure and mechanical properties of architecturally designed Ti-Al-N and Ti-Al-Ta-N-based multilayers. <i>Surface and Coatings Technology</i> , 2020, 385, 125355.	2.2	4
23	How microalloying of the Al target can improve process and film characteristics of sputtered alumina. <i>Surface and Coatings Technology</i> , 2020, 393, 125762.	2.2	5
24	Assessment of ductile character in superhard Ta-C-N thin films. <i>Acta Materialia</i> , 2019, 179, 17-25.	3.8	32
25	Strain and stress analyses on thermally annealed Ti-Al-N/Mo-Si-B multilayer coatings by synchrotron X-ray diffraction. <i>Surface and Coatings Technology</i> , 2019, 361, 364-370.	2.2	9
26	Adhesive wear formation on PVD coated tools applied in hot forming of Al-Si coated steel sheets. <i>Wear</i> , 2019, 430-431, 309-316.	1.5	12
27	Microstructure of Al-containing magnetron sputtered TiB ₂ thin films. <i>Thin Solid Films</i> , 2019, 688, 137361.	0.8	10
28	Hard Tiâ€œAlâ€œN endowed with high heat-resistance through alloying with Ta and Ce. <i>Surface and Coatings Technology</i> , 2019, 372, 26-33.	2.2	12
29	Guidelines for increasing the oxidation resistance of Ti-Al-N based coatings. <i>Thin Solid Films</i> , 2019, 688, 137290.	0.8	30
30	Thermomechanical properties and oxidation resistance of Ceâ€œSi alloyed Tiâ€œAlâ€œN thin films. <i>Vacuum</i> , 2019, 166, 231-238.	1.6	3
31	The influence of synthetic air flow on the properties of arc evaporated Al-Cr-O-N coatings. <i>Thin Solid Films</i> , 2019, 688, 137252.	0.8	5
32	Impact of lanthanum and boron on the growth, thermomechanical properties and oxidation resistance of Tiâ€œAlâ€œN thin films. <i>Thin Solid Films</i> , 2019, 688, 137239.	0.8	9
33	Influence of Tantalum on phase stability and mechanical properties of WB ₂ . <i>MRS Communications</i> , 2019, 9, 375-380.	0.8	31
34	Influence of carbon deficiency on phase formation and thermal stability of super-hard TaC _y thin films. <i>Scripta Materialia</i> , 2018, 149, 150-154.	2.6	25
35	Crack path identification in a nanostructured pearlitic steel using atom probe tomography. <i>Scripta Materialia</i> , 2018, 142, 66-69.	2.6	13
36	Thermal stability and mechanical properties of Ti-Al-B-N thin films. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 71, 320-324.	1.7	16

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37	Tuning structure and mechanical properties of Ta-C coatings by N-alloying and vacancy population. <i>Scientific Reports</i> , 2018, 8, 17669.	1.6	27
38	Atomic scale investigations of thermally treated nano-structured Ti-Al-N/Mo-Si-B multilayers. <i>Surface and Coatings Technology</i> , 2018, 349, 480-487.	2.2	11
39	Nano-structural investigation of Ti-Al-N/Mo-Si-B multilayer coatings: A comparative study by APT and HR-TEM. <i>Vacuum</i> , 2018, 157, 173-179.	1.6	9
40	Substoichiometry and tantalum dependent thermal stability of λ -structured W-Ta-B thin films. <i>Scripta Materialia</i> , 2018, 155, 5-10.	2.6	38
41	Ab initio inspired design of ternary boride thin films. <i>Scientific Reports</i> , 2018, 8, 9288.	1.6	54
42	Influence of Mo on the structure and the tribomechanical properties of arc evaporated Ti-Al-N. <i>Surface and Coatings Technology</i> , 2017, 311, 330-336.	2.2	34
43	Atomistic Modeling-Based Design of Novel Materials. <i>Advanced Engineering Materials</i> , 2017, 19, 1600688.	1.6	14
44	Thermal stability and oxidation resistance of sputtered Ti Al Cr N hard coatings. <i>Surface and Coatings Technology</i> , 2017, 324, 48-56.	2.2	68
45	Arc evaporated W-alloyed Ti-Al-N coatings for improved thermal stability, mechanical, and tribological properties. <i>Surface and Coatings Technology</i> , 2017, 332, 275-282.	2.2	19
46	Cerium doping of Ti-Al-N coatings for excellent thermal stability and oxidation resistance. <i>Surface and Coatings Technology</i> , 2017, 326, 165-172.	2.2	16
47	Ti-Al-N/Mo-Si-B multilayers: An architectural arrangement for high temperature oxidation resistant hard coatings. <i>Surface and Coatings Technology</i> , 2017, 328, 80-88.	2.2	22
48	Non-reactively sputtered ultra-high temperature Hf-C and Ta-C coatings. <i>Surface and Coatings Technology</i> , 2017, 309, 436-444.	2.2	35
49	Effect of Mo on the thermal stability, oxidation resistance, and tribo-mechanical properties of arc evaporated Ti-Al-N coatings. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017, 35, .	0.9	18
50	Thermal conductivity and mechanical properties of AlN-based thin films. <i>Journal of Applied Physics</i> , 2016, 119, .	1.1	41
51	Development of a multi-variate calibration approach for quantitative analysis of oxidation resistant Mo-Si-B coatings using laser ablation inductively coupled plasma mass spectrometry. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2016, 120, 57-62.	1.5	12
52	Interface controlled microstructure evolution in nanolayered thin films. <i>Scripta Materialia</i> , 2016, 123, 13-16.	2.6	9
53	Influence of oxygen impurities on growth morphology, structure and mechanical properties of Ti-Al-N thin films. <i>Thin Solid Films</i> , 2016, 603, 39-49.	0.8	21
54	Composition driven phase evolution and mechanical properties of Mo-Cr-N hard coatings. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	34

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55	Oxidation behavior and tribological properties of multilayered Ti-Al-N/Mo-Si-B thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	0.9	14
56	Thermal stability and mechanical properties of boron enhanced Mo-Si coatings. Surface and Coatings Technology, 2015, 280, 282-290.	2.2	19
57	Ab initio studies on the adsorption and implantation of Al and Fe to nitride materials. Journal of Applied Physics, 2015, 118, 125306.	1.1	4
58	Solid solution hardening of vacancy stabilized Ti-W-B ₂ . Acta Materialia, 2015, 101, 55-61.	3.8	45
59	Thermal expansion of rock-salt cubic AlN. Applied Physics Letters, 2015, 107, .	1.5	25
60	Microstructure and piezoelectric response of Y-Al-N thin films. Acta Materialia, 2015, 100, 81-89.	3.8	60
61	Origin of high temperature oxidation resistance of Ti-Al-Ta-N coatings. Surface and Coatings Technology, 2014, 257, 78-86.	2.2	77
62	Phase stability, mechanical properties and thermal stability of Y alloyed Ti-Al-N coatings. Surface and Coatings Technology, 2013, 235, 174-180.	2.2	47