Papken Hovsepian

List of Publications by Year
in descending order

96 papers	2,918 citations	136950 32 h-index	197818 49 g-index
96 all docs	96 docs citations	96 times ranked	1703 citing authors

#	Article	IF	Citations
1	Comparison of microstructure and mechanical properties of chromium nitride-based coatings deposited by high power impulse magnetron sputtering and by the combined steered cathodic arc/unbalanced magnetron technique. Thin Solid Films, 2004, 457, 270-277.	1.8	196
2	Industrial scale manufactured superlattice hard PVD coatings. Surface Engineering, 2001, 17, 15-27.	2.2	117
3	Properties of various large-scale fabricated TiAlN- and CrN-based superlattice coatings grown by combined cathodic arcâ€“unbalanced magnetron sputter deposition. Surface and Coatings Technology, 2000, 125, 269-277.	4.8	113
4	TiAlN/VN superlattice structured PVD coatings: A new alternative in machining of aluminium alloys for aerospace and automotive components. Surface and Coatings Technology, 2006, 201, 265-272.	4.8	112
5	The corrosion behaviour of macroparticle defects in arc bond-sputtered CrN/NbN superlattice coatings. Surface and Coatings Technology, 2000, 126, 279-287.	4.8	107
6	Wear and friction of TiAlN/VN coatings against Al2O3 in air at room and elevated temperatures. Acta Materialia, 2010, 58, 2912-2925.	7.9	100
7	CrAlYN/CrN superlattice coatings deposited by the combined high power impulse magnetron sputtering/unbalanced magnetron sputtering technique. Surface and Coatings Technology, 2006, 201, 4105-4110.	4.8	94
8	Recent progress in large-scale production of nanoscale multilayer/superlattice hard coatings. Vacuum, 2002, 69, 27-36.	3.5	75
9	TiAlN based nanoscale multilayer coatings designed to adapt their tribological properties at elevated temperatures. Thin Solid Films, 2005, 485, 160-168.	1.8	70
10	Recent progress in the coating protection of gamma titanium-aluminides. Jom, 2006, 58, 17-21.	1.9	67
11	Influence of the bias voltage on the structure and the tribological performance of nanoscale multilayer C/Cr PVD coatings. Thin Solid Films, 2005, 475, 219-226.	1.8	66
12	The role of the growth defects on the corrosion resistance of CrN/NbN superlattice coatings deposited at low temperatures. Thin Solid Films, 2006, 503, 143-148.	1.8	64
13	CrN/NbN superlattice structured coatings with enhanced corrosion resistance achieved by high power impulse magnetron sputtering interface pre-treatment. Thin Solid Films, 2007, 515, 3685-3692.	1.8	55
14	Novel TiAlCN/VCN nanoscale multilayer PVD coatings deposited by the combined high-power impulse magnetron sputtering/unbalanced magnetron sputtering (HIPIMS/UBM) technology. Vacuum, 2008, 82, 1312-1317.	3.5	55
15	Deposition of nanoscale multilayer CrN/NbN physical vapor deposition coatings by high power impulse magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 288-296.	2.1	53
16	Novel coating systems produced by the combined cathodic arc/unbalanced magnetron sputtering for environmental protection of titanium alloys. Surface and Coatings Technology, 2002, 155, 103-111.	4.8	50
17	Tribological properties of unbalanced magnetron sputtered nano-scale multilayer coatings TiAlN/VN and TiAlCrYN deposited on plasma nitrided steels. Surface and Coatings Technology, 2005, 193, 39-45.	4.8	48
18	Elemental distributions and substrate rotation in industrial TiAlN/VN superlattice hard PVD coatings. Surface and Coatings Technology, 2004, 183, 275-282.	4.8	46

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19	Phase separation and formation of the self-organised layered nanostructure in C/Cr coatings in conditions of high ion irradiation. Surface and Coatings Technology, 2005, 200, 1572-1579.	4.8	42
20	Tribological and oxidation behaviour of TiAlCN/VCN nanoscale multilayer coating deposited by the combined HIPIMS/(HIPIMS-UBM) technique. Surface and Coatings Technology, 2011, 205, 2823-2829.	4.8	41
21	Transmission electron microscopy and energy dispersive X-ray spectroscopy on the worn surface of nano-structured TiAlN/VN multilayer coating. Thin Solid Films, 2006, 497, 203-209.	1.8	39
22	Interrelationship between atomic species, bias voltage, texture and microstructure of nano-scale multilayers. Surface and Coatings Technology, 2004, 184, 225-232.	4.8	38
23	Tribocorrosion testing of stainless steel (SS) and PVD coated SS using a modified scanning reference electrode technique. Wear, 2005, 259, 1472-1481.	3.1	38
24	Corrosion performance of CrN/NbN superlattice coatings deposited by the combined cathodic arc/unbalanced magnetron technique. Vacuum, 1999, 53, 117-121.	3.5	37
25	Tribological response and characterization of Moâ€“W doped DLC coating. Wear, 2017, 376-377, 1622-1629.	3.1	37
26	Velocity effects on erosionâ€“corrosion of CrN/NbN â€œsuperlatticeâ€•PVD coatings. Surface and Coatings Technology, 2006, 201, 361-370.	4.8	36
27	The role of the tribofilm and roll-like debris in the wear of nanoscale nitride PVD coatings. Wear, 2007, 263, 1328-1334.	3.1	36
28	Novel CrAlYN/CrN nanoscale multilayer PVD coatings produced by the combined High Power Impulse Magnetron Sputtering/Unbalanced Magnetron Sputtering technique for environmental protection of Î³-TiAl alloys. Surface and Coatings Technology, 2010, 204, 2702-2708.	4.8	36
29	Effect of the degree of high power impulse magnetron sputtering utilisation on the structure and properties of TiN films. Thin Solid Films, 2014, 562, 132-139.	1.8	36
30	High temperature tribological performance of CrAlYN/CrN nanoscale multilayer coatings deposited on Î³-TiAl. Wear, 2009, 267, 965-975.	3.1	34
31	Amorphous Boron containing silicon carbo-nitrides created by ion sputtering. Surface and Coatings Technology, 2011, 206, 149-154.	4.8	34
32	Friction and wear behaviour of Moâ€“W doped carbon-based coating during boundary lubricated sliding. Applied Surface Science, 2016, 366, 260-274.	6.1	34
33	Structure and tribological behaviour of nanoscale multilayer C/Cr coatings deposited by the combined steered cathodic arc/unbalanced magnetron sputtering technique. Thin Solid Films, 2004, 447-448, 7-13.	1.8	33
34	CrN/NbN coatings deposited by HIPIMS: A preliminary study of erosionâ€“corrosion performance. Surface and Coatings Technology, 2010, 204, 1158-1162.	4.8	33
35	A study of the erosionâ€“corrosion of PVD CrN/NbN superlattice coatings in aqueous slurries. Wear, 2005, 259, 256-262.	3.1	29
36	TEM-EELS study of low-friction superlattice TiAlN/VN coating: the wear mechanisms. Tribology Letters, 2006, 24, 171-178.	2.6	29

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37	Coatings tribology drivers for high density plasma technologies. Surface Engineering, 2010, 26, 80-96.	2.2	29
38	Corrosion resistance of CrN/NbN superlattice coatings grown by various physical vapour deposition techniques. Thin Solid Films, 2005, 488, 1-8.	1.8	27
39	Structure and properties of ZrN coatings deposited by high power impulse magnetron sputtering technology. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, .	2.1	27
40	ZrN coatings deposited by high power impulse magnetron sputtering and cathodic arc techniques. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	2.1	27
41	Transmission Electron Microscopy and X-ray Diffraction Investigation of the Microstructure of Nanoscale Multilayer TiAlN/VN Grown by Unbalanced Magnetron Deposition. Journal of Materials Research, 2004, 19, 1093-1104.	2.6	26
42	Performance of nano-structured multilayer PVD coating TiAlN/VN in dry high speed milling of aerospace aluminium 7010-T7651. Surface and Coatings Technology, 2005, 200, 123-127.	4.8	26
43	Structure evolution and properties of TiAlCN/VCN coatings deposited by reactive HIPIMS. Surface and Coatings Technology, 2014, 257, 38-47.	4.8	26
44	Performance of HIPIMS deposited CrN/NbN nanostructured coatings exposed to 650ÂÂ°C in pure steam environment. Materials Chemistry and Physics, 2016, 179, 110-119.	4.0	26
45	Cavitation erosion performance of CrAlYN/CrN nanoscale multilayer coatings deposited on Ti6Al4V by HIPIMS. Journal of Alloys and Compounds, 2019, 788, 719-728.	5.5	26
46	CrAlYCN/CrCN nanoscale multilayer PVD coatings deposited by the combined High Power Impulse Magnetron Sputtering/Unbalanced Magnetron Sputtering (HIPIMS/UBM) technology. Surface and Coatings Technology, 2009, 203, 1237-1243.	4.8	25
47	TiAlCN/VCN nanolayer coatings suitable for machining of Al and Ti alloys deposited by combined high power impulse magnetron sputtering/unbalanced magnetron sputtering. Surface Engineering, 2010, 26, 610-614.	2.2	25
48	Wear associated with growth defects in combined cathodic arc/unbalanced magnetron sputtered CrN/NbN superlattice coatings during erosion in alkaline slurry. Surface and Coatings Technology, 2000, 135, 82-90.	4.8	24
49	Effect of substrate bias voltage on defect generation and their influence on corrosion and tribological properties of HIPIMS deposited CrN/NbN coatings. Surface and Coatings Technology, 2018, 344, 383-393.	4.8	24
50	Lubricated sliding wear mechanism of chromium-doped graphite-like carbon coating. Tribology International, 2014, 77, 186-195.	5.9	23
51	Resistance of nanoscale multilayer C/Cr coatings against environmental attack. Surface and Coatings Technology, 2006, 201, 3596-3605.	4.8	21
52	Novel HIPIMS deposited nanostructured CrN/NbN coatings for environmental protection of steam turbine components. Journal of Alloys and Compounds, 2018, 746, 583-593.	5.5	21
53	Six strategies to produce application tailored nanoscale multilayer structured PVD coatings by conventional and High Power Impulse Magnetron Sputtering (HIPIMS). Thin Solid Films, 2019, 688, 137409.	1.8	20
54	Chromium nitride/niobium nitride nano-scale multilayer coatings deposited at low temperature by the combined cathodic arc/unbalanced magnetron technique. Thin Solid Films, 2006, 503, 133-142.	1.8	19

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55	Development of superlattice CrN/NbN coatings for joint replacements deposited by high power impulse magnetron sputtering. Journal of Materials Science: Materials in Medicine, 2016, 27, 147.	3.6	19
56	Structure of duplex CrN/NbN coatings and their performance against corrosion and wear. Surface and Coatings Technology, 2008, 202, 1661-1667.	4.8	18
57	Influence of the bias voltage on the structure and mechanical performance of nanoscale multilayer CrAlYNâ•CrN physical vapor deposition coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2009, 27, 174-182.	2.1	16
58	Electron energy loss spectroscopy of nano-scale CrAlYN/CrNâ€“CrAlY(O)N/Cr(O)N multilayer coatings deposited by unbalanced magnetron sputtering. Thin Solid Films, 2010, 518, 5121-5127.	1.8	16
59	Cathode poisoning during reactive arc evaporation of titanium in nitrogen atmosphere. Vacuum, 1994, 45, 603-607.	3.5	15
60	Raman spectroscopy study of C/Cr coatings deposited by the combined steered cathodic ARC/unbalanced magnetron sputtering technique. Surface and Coatings Technology, 2005, 200, 1117-1122.	4.8	14
61	Influence of ion bombardment on the properties and microstructure of unbalanced magnetron deposited niobium coatings. Thin Solid Films, 2004, 460, 94-100.	1.8	13
62	Influence of steering magnetic field on the time-resolved plasma chemistry in cathodic arc discharges. Journal Physics D: Applied Physics, 2004, 37, 2101-2106.	2.8	13
63	Thermally grown oxide scales on Î³-TiAl coated with thermal protection systems. Materials at High Temperatures, 2009, 26, 305-316.	1.0	13
64	Tribological behaviour of Moâ€“W doped carbon-based coating at ambient condition. Tribology International, 2015, 90, 135-147.	5.9	13
65	Microstructure and properties of novel wear and corrosion resistant CrON/NbON nano-scale multilayer coatings. Surface and Coatings Technology, 2006, 200, 2731-2737.	4.8	12
66	Structure and Wear Mechanisms of Nanostructured TiAlCN/VCN Multilayer Coatings. Plasma Processes and Polymers, 2007, 4, S916-S920.	3.0	12
67	Effect of High Ion Irradiation on the Structure, Properties and High Temperature Tribology of Nanoscale CrAlYN/CrN Multilayer Coating Deposited by HIPIMSâ€HIPIMS Technique. Plasma Processes and Polymers, 2009, 6, S118.	3.0	12
68	Wear of hydrogen free C/Cr PVD coating against Al2O3 at room temperature. Wear, 2011, 271, 2150-2156.	3.1	12
69	Defect growth in multilayer chromium nitride/niobium nitride coatings produced by combined high power impulse magnetron sputtering and unbalance magnetron sputtering technique. Thin Solid Films, 2017, 636, 558-566.	1.8	12
70	Properties of TiAlCN/VCN Nanoscale Multilayer Coatings Deposited by Mixed High-Power Impulse Magnetron Sputtering (HiPIMS) and Unbalanced Magnetron Sputtering Processesâ€”Impact of HiPIMS During Coating. IEEE Transactions on Plasma Science, 2010, 38, 3062-3070.	1.3	11
71	Microstructure and load bearing capacity of TiN/NbN superlattice coatings deposited on medical grade CoCrMo alloy by HIPIMS. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 132, 105267.	3.1	11
72	Isothermal and dynamic oxidation behaviour of Moâ€“W doped carbon-based coating. Applied Surface Science, 2015, 353, 1291-1309.	6.1	10

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73	Investigating worn surfaces of nanoscale TiAlN/VN multilayer coating using FIB and TEM. Journal of Physics: Conference Series, 2006, 26, 95-98.	0.4	8
74	VmeCN Based Nanoscale Multilayer PVD Coatings Deposited by the Combined High Power Impulse Magnetron Sputtering/Unbalanced Magnetron Sputtering Technology. Plasma Processes and Polymers, 2007, 4, S897-S901.	3.0	8
75	Influence of ion bombardment on structure and tribological performance of nanoscale multilayer C/Cr PVD coatings. Surface Engineering, 2006, 22, 92-98.	2.2	7
76	Synthesis, Structure, and Applications of Nanoscale Multilayer/Superlattice Structured PVD Coatings. Nanostructure Science and Technology, 2006, , 555-644.	0.1	7
77	Oxidation Behaviour of Nanoscale Multilayer CrAlYN/CrN Coatings Deposited by the Combined High Power Impulse Magnetron Sputtering/Unbalanced Magnetron Sputtering Technique. Plasma Processes and Polymers, 2007, 4, S910-S915.	3.0	7
78	Oxidation behaviour of TiAlYN/CrN and CrAlYN/CrN nanoscale multilayer coatings with Al2O3topcoat deposited on Î³-TiAl alloys. Materials at High Temperatures, 2011, 28, 324-335.	1.0	7
79	Long-term behaviour of Nb and Cr nitrides nanostructured coatings under steam at 650ÂÂ°C. Mechanistic considerations. Journal of Alloys and Compounds, 2018, 739, 549-558.	5.5	7
80	Macroparticle induced corrosion for arc bond sputtering CrN/NbN superlattice coatings. Journal of Materials Science Letters, 2001, 20, 1995-1997.	0.5	6
81	Investigation of High Power Impulse Magnetron Sputtering deposited nanoscale CrN/NbN multilayer coating for tribocorrosion resistance. Wear, 2020, 452-453, 203312.	3.1	6
82	TiN/NbN Nanoscale Multilayer Coatings Deposited by High Power Impulse Magnetron Sputtering to Protect Medical-Grade CoCrMo Alloys. Coatings, 2021, 11, 867.	2.6	6
83	C/CrC nanocomposite coating deposited by magnetron sputtering at high ion irradiation conditions. Journal of Applied Physics, 2011, 110, 073301.	2.5	4
84	Technical Note:Corrosion Behavior of Post-Deposition Polished Droplet-Embedded Arc Evaporated and Droplet-Free High Power Impulse Magnetron Sputtering/Direct Current Magnetron Sputtering Coatings. Corrosion, 2017, 73, 685-693.	1.1	4
85	Characterisation of a High-Power Impulse Magnetron Sputtered C/Mo/W wear resistant coating by transmission electron microscopy. Surface and Coatings Technology, 2019, 377, 124853.	4.8	4
86	Correlation between the microstructure and corrosion performance of the HIPIMS nitrided bio-grade CoCrMo alloy. Journal of Alloys and Compounds, 2021, 879, 160429.	5.5	4
87	A novel plasma nitriding process utilising HIPIMS discharge for enhanced tribological and barrier properties of medical grade alloy surfaces. Materials Letters, 2022, 313, 131782.	2.6	4
88	Degradation of a C/CrC PVD coating after annealing in Ar+H₂at 700Â°C studied by Raman spectroscopy and transmission electron microscopy. Materials at High Temperatures, 2009, 26, 169-176.	1.0	3
89	Substrate Finishing and Niobium Content Effects on the High-Temperature Corrosion Resistance in Steam Atmosphere of CrN/NbN Superlattice Coatings Deposited by PVD-HIPIMS. Oxidation of Metals, 2017, 87, 455-467.	2.1	3
90	Improving the Quality of Friction Stir Welds in Aluminium Alloys. Coatings, 2021, 11, 539.	2.6	3

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91	Title is missing!. Journal of Materials Science Letters, 2001, 20, 547-550.	0.5	2
92	Enhanced sulphidation/oxidation resistance of Tiâ€“45<scp>A</scp>lâ€“8<scp>N</scp>b alloy by nanostructured Cr<scp>A</scp>l<scp>YN</scp>/<scp>C</scp>r<scp>N</scp> coatings at 750â€‰Â°C. Materials and Corrosion - Werkstoffe Und Korrosion, 2014, 65, 45-60.	1.5	2
93	Microstructure, Oxidation and Tribological Properties of TiAlCN/VCN Coatings Deposited by Reactive HIPIMS. IOP Conference Series: Materials Science and Engineering, 2012, 39, 012011.	0.6	1
94	Enhanced sulphidation/oxidation resistance of Tiâ€“45Alâ€“8Nb alloy by multilayered coatings at 850Â°C for up to 675 h. Corrosion Engineering Science and Technology, 2014, 49, 590-602.	1.4	1
95	Air oxidation behaviour of standard PVD and novel HIPIMS coatings at 750Â°C for 1000 h. Corrosion Engineering Science and Technology, 2015, 50, 118-127.	1.4	0
96	Synthesis, Structure, and Applications of Nanoscale Multilayer/Superlattice Structured PVD Coatings. , 0, , 555-644.		0