Allan Matthews

List of Publications by Year
in descending order

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349 papers	23,419 citations	11651 70 h-index	9861 141 g-index
363 all docs	363 docs citations	363 times ranked	10339 citing authors

#	Article	IF	Citations
1	Plasma electrolysis for surface engineering. Surface and Coatings Technology, 1999, 122, 73-93.	4.8	2,548
2	On the significance of the H/E ratio in wear control: a nanocomposite coating approach to optimised tribological behaviour. Wear, 2000, 246, 1-11.	3.1	2,330
3	Characterisation of oxide films produced by plasma electrolytic oxidation of a Tiâ€“6Alâ€“4V alloy. Surface and Coatings Technology, 2000, 130, 195-206.	4.8	589
4	Spectroscopic study of electrolytic plasma and discharging behaviour during the plasma electrolytic oxidation (PEO) process. Journal Physics D: Applied Physics, 2010, 43, 105203.	2.8	475
5	Advances in piezoelectric thin films for acoustic biosensors, acoustofluidics and lab-on-chip applications. Progress in Materials Science, 2017, 89, 31-91.	32.8	467
6	An electrochemical impedance spectroscopy study of the corrosion behaviour of PVD coated steels in 0.5 N NaCl aqueous solution: Part II.. Corrosion Science, 2003, 45, 1257-1273.	6.6	446
7	Discharge characterization in plasma electrolytic oxidation of aluminium. Journal Physics D: Applied Physics, 2003, 36, 2110-2120.	2.8	404
8	Abrasive wear/corrosion properties and TEM analysis of Al2O3 coatings fabricated using plasma electrolysis. Surface and Coatings Technology, 2002, 149, 245-251.	4.8	387
9	Design criteria for wear-resistant nanostructured and glassy-metal coatings. Surface and Coatings Technology, 2004, 177-178, 317-324.	4.8	386
10	Deposition of layered bioceramic hydroxyapatite/TiO2 coatings on titanium alloys using a hybrid technique of micro-arc oxidation and electrophoresis. Surface and Coatings Technology, 2000, 125, 407-414.	4.8	370
11	Anodic processes in plasma electrolytic oxidation of aluminium in alkaline solutions. Electrochimica Acta, 2004, 49, 2085-2095.	5.2	363
12	Coatings tribologyâ€”contact mechanisms and surface design. Tribology International, 1998, 31, 107-120.	5.9	348
13	An electrochemical impedance spectroscopy study of the corrosion behaviour of PVD coated steels in 0.5 N NaCl aqueous solution: Part I. Establishment of equivalent circuits for EIS data modelling. Corrosion Science, 2003, 45, 1243-1256.	6.6	323
14	EIS comparison on corrosion performance of PVD TiN and CrN coated mild steel in 0.5 N NaCl aqueous solution. Corrosion Science, 2001, 43, 1953-1961.	6.6	302
15	Evaluation of PVD nitride coatings, using impact, scratch and Rockwell-C adhesion tests. Thin Solid Films, 1995, 270, 431-438.	1.8	299
16	A perspective on the optimisation of hard carbon and related coatings for engineering applications. Thin Solid Films, 2007, 515, 6619-6653.	1.8	293
17	Thickness effects on the mechanical properties of micro-arc discharge oxide coatings on aluminium alloys. Surface and Coatings Technology, 1999, 116-119, 1055-1060.	4.8	258
18	The use of scratch adhesion testing for the determination of interfacial adhesion: The importance of frictional drag. Surface and Coatings Technology, 1988, 36, 503-517.	4.8	251

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19	Oxide ceramic coatings on aluminium alloys produced by a pulsed bipolar plasma electrolytic oxidation process. Surface and Coatings Technology, 2005, 199, 150-157.	4.8	244
20	Kinetic aspects of aluminium titanate layer formation on titanium alloys by plasma electrolytic oxidation. Applied Surface Science, 2002, 200, 172-184.	6.1	238
21	Engineering applications for diamond-like carbon. Diamond and Related Materials, 1994, 3, 902-911.	3.9	235
22	Tribology of thin coatings. Ceramics International, 2000, 26, 787-795.	4.8	225
23	Corrosion resistance of multi-layered plasma-assisted physical vapour deposition TiN and CrN coatings. Surface and Coatings Technology, 2001, 141, 164-173.	4.8	205
24	Structure, mechanical and tribological properties of nitrogen-containing chromium coatings prepared by reactive magnetron sputtering. Surface and Coatings Technology, 1999, 115, 222-229.	4.8	177
25	Self-healing plasma electrolytic oxidation coatings doped with benzotriazole loaded halloysite nanotubes on AM50 magnesium alloy. Corrosion Science, 2016, 111, 753-769.	6.6	172
26	Fatigue properties of KeroniteÂ® coatings on a magnesium alloy. Surface and Coatings Technology, 2004, 182, 78-84.	4.8	171
27	Corrosion performance of some titanium-based hard coatings. Surface and Coatings Technology, 1991, 49, 489-495.	4.8	164
28	Low temperature plasma diffusion treatment of stainless steels for improved wear resistance. Surface and Coatings Technology, 1993, 62, 608-617.	4.8	158
29	Surface characterisation of DC plasma electrolytic oxidation treated 6082 aluminium alloy: Effect of current density and electrolyte concentration. Surface and Coatings Technology, 2010, 205, 1679-1688.	4.8	156
30	Towards smart electrolytic plasma technologies: An overview of methodological approaches to process modelling. Surface and Coatings Technology, 2015, 269, 2-22.	4.8	146
31	PEO coatings obtained on an Mgâ€“Mn type alloy under unipolar and bipolar modes in silicate-containing electrolytes. Surface and Coatings Technology, 2010, 204, 2316-2322.	4.8	145
32	Corrosion properties and contact resistance of TiN, TiAlN and CrN coatings in simulated proton exchange membrane fuel cell environments. Journal of Power Sources, 2010, 195, 3814-3821.	7.8	127
33	Multilayer composite ceramicmetal-DLC coatings for sliding wear applications. Tribology International, 1996, 29, 559-570.	5.9	126
34	TiN coating adhesion studies using the scratch test method. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1985, 3, 2411-2414.	2.1	124
35	Characteristics of a plasma electrolytic nitrocarburising treatment for stainless steels. Surface and Coatings Technology, 2001, 139, 135-142.	4.8	123
36	Tribological coatings: contact mechanisms and selection. Journal Physics D: Applied Physics, 2007, 40, 5463-5475.	2.8	123

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37	Impact wear and abrasion resistance of CrN, AlCrN and AlTiN PVD coatings. Surface and Coatings Technology, 2013, 215, 170-177.	4.8	122
38	Coating fracture toughness determined by Vickers indentation: an important parameter in cavitation erosion resistance of WCâ€“Co thermally sprayed coatings. Surface and Coatings Technology, 2004, 177-178, 489-496.	4.8	119
39	Spatial characteristics of discharge phenomena in plasma electrolytic oxidation of aluminium alloy. Surface and Coatings Technology, 2004, 177-178, 779-783.	4.8	117
40	Residual stresses in plasma electrolytic oxidation coatings on Al alloy produced by pulsed unipolar current. Surface and Coatings Technology, 2005, 200, 1580-1586.	4.8	115
41	Crystalline alumina deposited at low temperatures by ionized magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1997, 15, 1084-1088.	2.1	113
42	Titanium Nitride PVD Coating Technology. Surface Engineering, 1985, 1, 93-104.	2.2	110
43	Structure and surface energy of low-index surfaces of stoichiometric Î±-Al2O3 and Î±-Cr2O3. Surface and Coatings Technology, 2006, 201, 4205-4208.	4.8	107
44	A comparative study of the influence of plasma treatments, PVD coatings and ion implantation on the tribological performance of Tiâ€“6Alâ€“4V. Surface and Coatings Technology, 1999, 114, 70-80.	4.8	104
45	Plasma Nitriding in a Low Pressure Triode Discharge to Provide Improvements in Adhesion and Load Support for Wear Resistant Coatings. Surface Engineering, 1991, 7, 207-215.	2.2	102
46	Tribological and electrochemical performance of PVD TiN coatings on the femoral head of Tiâ€“6Alâ€“4V artificial hip joints. Surface and Coatings Technology, 2003, 163-164, 597-604.	4.8	101
47	Hybrid techniques in surface engineering. Surface and Coatings Technology, 1995, 71, 88-92.	4.8	96
48	Influence of annealing on the hydrogen bonding and the microstructure of diamondlike and polymerlike hydrogenated amorphous carbon films. Physical Review B, 1995, 51, 9597-9605.	3.2	96
49	Recent developments in plasma assisted physical vapour deposition. Journal Physics D: Applied Physics, 2000, 33, R173-R186.	2.8	96
50	Effect of current mode on PEO treatment of magnesium in Ca- and P-containing electrolyte and resulting coatings. Applied Surface Science, 2014, 316, 558-567.	6.1	93
51	Thick Ti/TiN multilayered coatings for abrasive and erosive wear resistance. Surface and Coatings Technology, 1994, 70, 19-25.	4.8	92
52	Wear resistant composite coatings deposited by electron enhanced closed field unbalanced magnetron sputtering. Surface and Coatings Technology, 1995, 73, 185-197.	4.8	89
53	Dynamic impact wear of TiCxNy and Ti-DLC composite coatings. Wear, 1995, 185, 151-157.	3.1	89
54	Hard tribological Tiâ€“Bâ€“N, Tiâ€“Crâ€“Bâ€“N, Tiâ€“Siâ€“Bâ€“N and Tiâ€“Alâ€“Siâ€“Bâ€“N coatings. Surface and Coatings Technology, 2005, 200, 208-212.	4.8	86

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55	Effect of combined shot-peening and PEO treatment on fatigue life of 2024ÂAl alloy. Thin Solid Films, 2006, 515, 1187-1191.	1.8	85
56	The Role of Cathodic Current in Plasma Electrolytic Oxidation of Aluminum: Phenomenological Concepts of the â€œSoft Sparkingâ€•Mode. Langmuir, 2017, 33, 11059-11069.	3.5	85
57	Corrosion performance of layered coatings produced by physical vapour deposition. Surface and Coatings Technology, 1990, 43-44, 481-492.	4.8	84
58	Structure, hardness and mechanical properties of magnetron-sputtered titaniumâ€“aluminium boride films. Surface and Coatings Technology, 1999, 120-121, 412-417.	4.8	84
59	Effects of solution pH and electrical parameters on hydroxyapatite coatings deposited by a plasma-assisted electrophoresis technique. Journal of Biomedical Materials Research Part B, 2001, 57, 612-618.	3.1	84
60	Deposition of Ti-N compounds by thermionically assisted triode reactive ion plating. Thin Solid Films, 1980, 72, 541-549.	1.8	83
61	Application of Voltage Pulse Transient Analysis during Plasma Electrolytic Oxidation for Assessment of Characteristics and Corrosion Behaviour of Ca- and P-containing Coatings on Magnesium. Electrochimica Acta, 2014, 149, 218-230.	5.2	83
62	In situ impedance spectroscopy of the plasma electrolytic oxidation process for deposition of Ca- and P-containing coatings on Ti. Surface and Coatings Technology, 2016, 301, 54-62.	4.8	83
63	Characterization and corrosion evaluation of TiO2:n-HA coatings on titanium alloy formed by plasma electrolytic oxidation. Surface and Coatings Technology, 2015, 269, 258-265.	4.8	82
64	Investigation into the impact wear behaviour of ceramic coatings. Surface and Coatings Technology, 1995, 74-75, 857-868.	4.8	80
65	Evaluating the microstructure and performance of nanocomposite PVD TiAlBN coatings. Surface and Coatings Technology, 2002, 151-152, 338-343.	4.8	80
66	Excessive oxygen evolution during plasma electrolytic oxidation of aluminium. Thin Solid Films, 2007, 516, 460-464.	1.8	79
67	A comparison of the wear and fatigue properties of plasma-assisted physical vapour deposition TiN, CrN and duplex coatings on Ti-6Al-4V. Surface and Coatings Technology, 1993, 62, 600-607.	4.8	76
68	Enhanced plasma nitriding at low pressures: A comparative study of d.c. and r.f. techniques. Surface and Coatings Technology, 1990, 41, 295-304.	4.8	75
69	Impact testing of duplex and non-duplex (Ti,Al)N and Crâ€“N PVD coatings. Surface and Coatings Technology, 2003, 163-164, 353-361.	4.8	74
70	Design aspects for advanced tribological surface coatings. Surface and Coatings Technology, 1998, 100-101, 1-6.	4.8	73
71	Duplex surface treatments combining plasma electrolytic nitrocarburising and plasma-immersion ion-assisted deposition. Surface and Coatings Technology, 2001, 142-144, 1129-1136.	4.8	72
72	Structure, mechanical and tribological properties of Tiâ€“Bâ€“N and Tiâ€“Alâ€“Bâ€“N multiphase thin films produced by electron-beam evaporation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 2851-2857.	2.1	71

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73	Structure, mechanical and tribological properties of sputtered TiAlBN thin films. Surface and Coatings Technology, 1999, 113, 126-133.	4.8	69
74	Micro-scale abrasive wear testing of duplex and non-duplex (single-layered) PVD (Ti,Al)N, TiN and Crâ€“N coatings. Tribology International, 2002, 35, 363-372.	5.9	69
75	A study of the reciprocating-sliding wear performance of plasma surface treated titanium alloy. Wear, 2010, 269, 60-70.	3.1	69
76	Assessment of Coating Adhesion. Surface Engineering, 1986, 2, 49-54.	2.2	68
77	Developments in ionization assisted processes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1985, 3, 2354-2363.	2.1	67
78	Deposition of duplex Al2O3/DLC coatings on Al alloys for tribological applications using a combined micro-arc oxidation and plasma-immersion ion implantation technique. Surface and Coatings Technology, 2000, 131, 506-513.	4.8	66
79	A comparative study of the corrosion performance of TiN, Ti(B,N) and (Ti,Al)N coatings produced by physical vapour deposition methods. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 140, 722-726.	5.6	64
80	Deposition and evaluation of duplex hydroxyapatite and plasma electrolytic oxidation coatings on magnesium. Surface and Coatings Technology, 2015, 269, 170-182.	4.8	64
81	Micro-abrasion wear testing of PVD TiN coatings on untreated and plasma nitrided AISI H13 steel. Wear, 2001, 249, 971-979.	3.1	63
82	An approach to elucidate the different response of PVD coatings in different tribological tests. Surface and Coatings Technology, 2003, 174-175, 891-898.	4.8	63
83	Frequency response studies for the plasma electrolytic oxidation process. Surface and Coatings Technology, 2007, 201, 8661-8670.	4.8	61
84	Diamond for wear and corrosion applications. Diamond and Related Materials, 1992, 1, 1049-1064.	3.9	60
85	Structural characteristics and residual stresses in oxide films produced on Ti by pulsed unipolar plasma electrolytic oxidation. Philosophical Magazine, 2008, 88, 795-807.	1.6	59
86	Metallurgical study of low-temperature plasma carbon diffusion treatments for stainless steels. Surface and Coatings Technology, 1993, 60, 416-423.	4.8	58
87	Comparative Tribology Studies of Hard Ceramic and Composite Metal-DLC Coatings in Sliding Friction Conditions. Tribology Transactions, 1995, 38, 829-836.	2.0	57
88	Tribological evaluation of AISI 304 stainless steel duplex treated by plasma electrolytic nitrocarburising and diamond-like carbon coating. Wear, 2002, 253, 986-993.	3.1	57
89	Investigation of abradable seal coating performance using scratch testing. Surface and Coatings Technology, 2007, 202, 1214-1220.	4.8	57
90	Composite hydroxyapatiteâ€“PTFE coatings on Mgâ€“Mnâ€“Ce alloy for resorbable implant applications via a plasma electrolytic oxidation-based route. Journal of the Taiwan Institute of Chemical Engineers, 2014, 45, 3104-3109.	5.3	56

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91	TiN and CrN PVD coatings on electroless nickel-coated steel substrates. Surface and Coatings Technology, 1993, 60, 474-479.	4.8	54
92	Problems in the physical vapour deposition of titanium nitride. Thin Solid Films, 1985, 126, 283-291.	1.8	53
93	Hard Carbon Coatings: The Way Forward. MRS Bulletin, 1997, 22, 22-26.	3.5	53
94	In vitro biological response of plasma electrolytically oxidized and plasmaâ€sprayed hydroxyapatite coatings on Tiâ€“6Alâ€“4V alloy. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2013, 101B, 939-949.	3.4	53
95	X-Ray diffraction investigations of magnetron sputtered TiCN coatings. Surface and Coatings Technology, 1995, 74-75, 312-319.	4.8	50
96	Very-high-rate reactive sputtering of alumina hard coatings. Surface and Coatings Technology, 1997, 96, 262-266.	4.8	50
97	Impedance spectroscopy characterisation of PEO process and coatings on aluminium. Thin Solid Films, 2007, 516, 428-432.	1.8	50
98	Characteristics of a thermionically assisted triode ion-plating system. Thin Solid Films, 1981, 80, 41-48.	1.8	49
99	The nanostructure and mechanical properties of PVD CrCu (N) coatings. Surface and Coatings Technology, 2003, 162, 222-227.	4.8	49
100	Evaluation of abradable seal coating mechanical properties. Wear, 2009, 267, 1501-1510.	3.1	49
101	Substrate surface finish effects in duplex coatings of PAPVD TiN and CrN with electroless nickel-phosphorus interlayers. Surface and Coatings Technology, 1996, 81, 215-224.	4.8	48
102	Material transfer phenomena and failure mechanisms of a nanostructured Crâ€“Alâ€“N coating in laboratory wear tests and an industrial punch tool application. Surface and Coatings Technology, 2008, 203, 816-821.	4.8	47
103	The effect of combined shot-peening and PEO treatment on the corrosion performance of 2024 Al alloy. Thin Solid Films, 2007, 516, 417-421.	1.8	46
104	Reactive ionized magnetron sputtering of crystalline alumina coatings. Surface and Coatings Technology, 1998, 98, 1473-1476.	4.8	45
105	Experimental and theoretical studies of the low-temperature growth of chromia and alumina. Surface and Coatings Technology, 1999, 116-119, 699-704.	4.8	45
106	A comparative study of the cyclic thermal oxidation of PVD nickel aluminide coatings. Surface and Coatings Technology, 2002, 155, 67-79.	4.8	45
107	Effect of positive and negative pulse voltages on surface properties and equivalent circuit of the plasma electrolytic oxidation process. Surface and Coatings Technology, 2015, 284, 427-437.	4.8	45
108	Incorporation of halloysite nanotubes into forsterite surface layer during plasma electrolytic oxidation of AM50 Mg alloy. Electrochimica Acta, 2019, 299, 772-788.	5.2	45

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109	Structure and corrosion properties of PVD Crâ€“N coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 772-780.	2.1	44
110	Microstructure of direct current and pulse magnetron sputtered Crâ€“B coatings. Thin Solid Films, 2006, 515, 1511-1516.	1.8	43
111	DC plasma electrolytic oxidation of biodegradable cp-Mg: In-vitro corrosion studies. Surface and Coatings Technology, 2013, 234, 132-142.	4.8	43
112	Cyclic oxidation resistance of Niâ€“Al alloy coatings deposited on steel by a cathodic arc plasma process. Surface and Coatings Technology, 2001, 135, 158-165.	4.8	42
113	Plasmaâ€based surface engineering processes for wear and corrosion protection. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1995, 13, 1202-1207.	2.1	41
114	Plasma nitriding of Ti6Al4V alloy and AISI M2 steel substrates using D.C. glow discharges under a triode configuration. Surface and Coatings Technology, 2005, 200, 1954-1961.	4.8	41
115	The effect of pulsed magnetron sputtering on the structure and mechanical properties of CrB2 coatings. Surface and Coatings Technology, 2006, 201, 3970-3976.	4.8	41
116	Charge transfer mechanisms underlying Contact Glow Discharge Electrolysis. Electrochimica Acta, 2019, 312, 441-456.	5.2	41
117	Some fundamental aspects of glow discharges in plasma-assisted processes. Surface and Coatings Technology, 1987, 33, 17-29.	4.8	40
118	Micro-abrasive wear of PVD duplex and single-layered coatings. Surface and Coatings Technology, 2001, 142-144, 1137-1143.	4.8	40
119	Pulse current plasma assisted electrolytic cleaning of AISI 4340 steel. Journal of Materials Processing Technology, 2010, 210, 54-63.	6.3	40
120	Plasma electrolytic oxidation coatings on cp-Mg with cerium nitrate and benzotriazole immersion post-treatments. Surface and Coatings Technology, 2018, 344, 330-341.	4.8	40
121	Low temperature deposition of Cr(N)/TiO2 coatings using a duplex process of unbalanced magnetron sputtering and micro-arc oxidation. Surface and Coatings Technology, 2000, 133-134, 331-337.	4.8	39
122	Characterisation and tribological evaluation of nitrogen-containing molybdenumâ€“copper PVD metallic nanocomposite films. Surface and Coatings Technology, 2005, 190, 345-356.	4.8	39
123	The structure and properties of chromium diboride coatings deposited by pulsed magnetron sputtering of powder targets. Surface and Coatings Technology, 2005, 200, 1366-1371.	4.8	39
124	Investigation of the nanostructure and wear properties of physical vapor deposited CrCuN nanocomposite coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2005, 23, 423-433.	2.1	38
125	Tribological properties of duplex plasma oxidised, nitrided and PVD coated Tiâ€“6Alâ€“4V. Surface and Coatings Technology, 2011, 206, 395-404.	4.8	38
126	Evaluating the effects of plasma diffusion processing and duplex diffusion/PVD-coating on the fatigue performance of Tiâ€“6Alâ€“4V alloy. International Journal of Fatigue, 2011, 33, 1313-1323.	5.7	38

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127	Role of cathodic current in plasma electrolytic oxidation of Al: A quantitative approach to in-situ evaluation of cathodically induced effects. Electrochimica Acta, 2019, 317, 221-231.	5.2	38
128	The influence of stacking fault energy on plasticity mechanisms in triode-plasma nitrided austenitic stainless steels: Implications for the structure and stability of nitrogen-expanded austenite. Acta Materialia, 2019, 164, 60-75.	7.9	38
129	Smart Functionalization of Ceramic-Coated AZ31 Magnesium Alloy. ACS Applied Materials & Interfaces, 2020, 12, 30833-30846.	8.0	38
130	The effect of boron additions on the tribological behaviour of TiN coatings produced by electron-beam evaporative PVD. Surface and Coatings Technology, 1999, 116-119, 648-653.	4.8	37
131	Deposition of functional coatings from acrylic acid and octamethylcyclotetrasiloxane onto steel using an atmospheric pressure dielectric barrier discharge. Surface and Coatings Technology, 2008, 203, 822-825.	4.8	37
132	Comparative tribological and adhesion studies of some titanium-based ceramic coatings. Surface and Coatings Technology, 1990, 43-44, 888-897.	4.8	36
133	Wear behaviour of carbon-containing tungsten coatings prepared by reactive magnetron sputtering. Surface and Coatings Technology, 1999, 112, 85-90.	4.8	36
134	Hard and superhard TiAlBN coatings deposited by twin electron-beam evaporation. Surface and Coatings Technology, 2007, 201, 6078-6083.	4.8	36
135	Fretting wear behavior of duplex PEO/chameleon coating on Al alloy. Surface and Coatings Technology, 2018, 352, 238-246.	4.8	36
136	Properties and Performance Crtialn of Multilayer Hard Coatings Deposited Using Magnetron Sputter Ion Plating. Surface Engineering, 2002, 18, 391-396.	2.2	35
137	Influence of current density and electrolyte concentration on DC PEO titania coatings. Surface Engineering, 2014, 30, 102-108.	2.2	35
138	Ionization assisted physical vapor deposition of zirconia thermal barrier coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1986, 4, 2656-2660.	2.1	34
139	Evaluation of some titanium-based ceramic coatings on high speed steel cutting tools. Surface and Coatings Technology, 1991, 49, 468-473.	4.8	34
140	Adhesion of diamond-like carbon films on polymers: an assessment of the validity of the scratch test technique applied to flexible substrates. Journal of Adhesion Science and Technology, 1994, 8, 651-662.	2.6	34
141	Plasma-based physical vapor deposition surface engineering processes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, S224-S231.	2.1	34
142	Laser surface modification treatment of aluminum bronze with B4C. Applied Surface Science, 2012, 263, 804-809.	6.1	34
143	Evaporative ion plating: process mechanisms and optimization. IEEE Transactions on Plasma Science, 1990, 18, 869-877.	1.3	33
144	Active process control of reactive sputter deposition. Vacuum, 1995, 46, 723-729.	3.5	33

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145	Modelling the Deformation Behaviour of Multilayer Coatings. Tribology Letters, 2001, 11, 103-106.	2.6	33
146	A simple transferable interatomic potential model for binary oxides applied to bulk and the (0001) surface. Journal of Crystal Growth, 2006, 290, 235-240.	1.5	33
147	The nanostructure, wear and corrosion performance of arc-evaporated CrBxNy nanocomposite coatings. Surface and Coatings Technology, 2009, 204, 246-255.	4.8	33
148	Impact wear resistance of plasma diffusion treated and duplex treated/PVD-coated Tiâ€“6Alâ€“4V alloy. Surface and Coatings Technology, 2012, 206, 2645-2654.	4.8	33
149	Raman spectra of hard carbon films and hard carbon films containing secondary elements. Carbon, 1991, 29, 225-231.	10.3	32
150	Adhesion assessment of DLC films on PET using a simple tensile tester: Comparison of different theories. Journal of Adhesion Science and Technology, 1995, 9, 769-784.	2.6	32
151	A model for galvanostatic anodising of Al in alkaline solutions. Electrochimica Acta, 2005, 50, 5458-5464.	5.2	32
152	Characteristics and in vitro response of thin hydroxyapatiteâ€“titania films produced by plasma electrolytic oxidation of Ti alloys in electrolytes with particle additions. RSC Advances, 2016, 6, 12688-12698.	3.6	32
153	Mechanical properties and abrasive wear behaviour of Al-based PVD amorphous/nanostructured coatings. Surface and Coatings Technology, 2017, 310, 59-69.	4.8	32
154	Deposition and characterisation of TiAlBN coatings produced by direct electron-beam evaporation of Ti and Ti-Al-B-N material from a twin crucible source. Thin Solid Films, 1999, 343-344, 242-245.	1.8	31
155	Deposition of multicomponent chromium boride based coatings by pulsed magnetron sputtering of powder targets. Surface and Coatings Technology, 2005, 200, 1616-1623.	4.8	31
156	Substrate and bonding layer effects on performance of DLC and TiN biomedical coatings in Hank's solution under cyclic impactâ€“sliding loads. Surface and Coatings Technology, 2013, 237, 219-229.	4.8	31
157	Ion plating processes: Design criteria and system optimization. Surface and Coatings Technology, 1988, 36, 233-242.	4.8	30
158	Tribological behaviour of pulsed magnetron sputtered CrB2 coatings examined by reciprocating sliding wear testing against aluminium alloy and steel. Surface and Coatings Technology, 2008, 202, 1470-1478.	4.8	30
159	Small signal frequency response studies for plasma electrolytic oxidation. Surface and Coatings Technology, 2009, 203, 2896-2904.	4.8	30
160	Toward rational design of ceramic coatings generated on valve metals by plasma electrolytic oxidation: The role of cathodic polarisation. Ceramics International, 2021, 47, 34137-34158.	4.8	30
161	Nano-structured TiO2 films by plasma electrolytic oxidation combined with chemical and thermal post-treatments of titanium, for dye-sensitised solar cell applications. Thin Solid Films, 2010, 519, 1723-1728.	1.8	29
162	AC plasma electrolytic oxidation of additively manufactured and cast AlSi12 alloys. Surface and Coatings Technology, 2020, 399, 126116.	4.8	29

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163	Characterisation of duplex and non-duplex (Ti,Al)N and Crâ€“N PVD coatings. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 336, 39-51.	5.6	28
164	Mechanical behaviour of cp-magnesium with duplex hydroxyapatite and PEO coatings. Materials Science and Engineering C, 2015, 49, 190-200.	7.3	28
165	Renewable Adsorbent for the Separation of Surfactant-Stabilized Oil in Water Emulsions Based on Nanostructured Sawdust. ACS Sustainable Chemistry and Engineering, 2019, 7, 18935-18942.	6.7	28
166	Process effects in ion plating. Vacuum, 1990, 41, 2196-2200.	3.5	27
167	Plasma Surface Engineering of Metals. MRS Bulletin, 1996, 21, 46-51.	3.5	27
168	Effect of Pt nanoparticle decoration on the H2 storage performance of plasma-derived nanoporous graphene. Carbon, 2021, 171, 294-305.	10.3	27
169	Vacuum arc deposition of metal/ceramic coatings on polymer substrates. Surface and Coatings Technology, 1998, 108-109, 160-165.	4.8	26
170	Flexible nanoporous activated carbon for adsorption of organics from industrial effluents. Nanoscale, 2021, 13, 15311-15323.	5.6	26
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