

Tomas Polcar

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

181
papers

3,806
citations

34
h-index

51
g-index

189
ext. papers

4,475
ext. citations

4.7
avg, IF

5.93
L-index

#	Paper	IF	Citations
181	Analysis of hypervelocity impacts: the tungsten case. <i>Nuclear Fusion</i> , 2022 , 62, 026034	3.3	0
180	Interface-Driven Strain in Heavy Ion-Irradiated Zr/Nb Nanoscale Metallic Multilayers: Validation of Distortion Modeling via Local Strain Mapping.. <i>ACS Applied Materials & Interfaces</i> , 2022 ,	9.5	2
179	Multi-scale model predicting friction of crystalline materials. <i>Advanced Materials Interfaces</i> , 2022 , 9, 2100914	9.4	0
178	Formation of Solid Lubricants during High Temperature Tribology of Silver-Doped Molybdenum Nitride Coatings Deposited by dcMS and HIPIMS. <i>Coatings</i> , 2021 , 11, 1415	2.9	2
177	Failure of Solid Lubricant W-S-C Coatings under Boundary Lubrication Conditions. <i>Journal of Materials Engineering and Performance</i> , 2021 , 30, 3990-3999	1.6	0
176	Stochastic thermodynamics of nanoscale friction. <i>Physical Review E</i> , 2021 , 103, 052104	2.4	1
175	Effect of Noninteracting Intercalants on Layer Exfoliation in Transition-Metal Dichalcogenides. <i>Physical Review Applied</i> , 2021 , 15,	4.3	1
174	Exploring Nanoscale Lubrication Mechanisms of Multilayer MoS During Sliding: The Effect of Humidity. <i>Frontiers in Chemistry</i> , 2021 , 9, 684441	5	1
173	Factors controlling segregation tendency of solute Ti, Ag and Ta into different symmetrical tilt grain boundaries of tungsten: First-principles and experimental study. <i>Acta Materialia</i> , 2021 , 211, 116868	8.4	4
172	Friction-Induced Chemical and Structural Modifications of Molybdenum Disulphide Thin Films. <i>Journal of Materials Engineering and Performance</i> , 2021 , 30, 4117-4125	1.6	1
171	Blister formation in He-H co-implanted InP: A comprehensive atomistic study. <i>Applied Surface Science</i> , 2021 , 552, 149426	6.7	4
170	Tribological properties of V2O5 studied via reactive molecular dynamics simulations. <i>Tribology International</i> , 2021 , 154, 106750	4.9	0
169	Fabrication of nanocrystalline supersaturated WAl alloys with enhanced thermal stability and high sinterability. <i>Journal of Physics and Chemistry of Solids</i> , 2021 , 148, 109686	3.9	2
168	Phase behaviour of (Ti:Mo) S2 binary alloys arising from electron-lattice coupling. <i>Computational Materials Science</i> , 2021 , 186, 110044	3.2	2
167	Effect of substrate bias voltage on the mechanical properties and deformation mechanisms in the nanostructured Ti-22Nb-10Zr coating. <i>Surface and Coatings Technology</i> , 2021 , 405, 126674	4.4	0
166	Structure, mechanical and tribological properties of MoSe2 and Mo-Se-N solid lubricant coatings. <i>Surface and Coatings Technology</i> , 2021 , 405, 126536	4.4	5
165	Insight into high temperature performance of magnetron sputtered Si-Ta-C-(N) coatings with an ion-implanted interlayer. <i>Applied Surface Science</i> , 2021 , 541, 148526	6.7	3

164	Interphase boundary layer-dominated strain mechanisms in Cu ⁺ implanted Zr-Nb nanoscale multilayers. <i>Acta Materialia</i> , 2021 , 202, 317-330	8.4	8
163	Tribological behaviour of Mo-S-N solid lubricant coatings in vacuum, nitrogen gas and elevated temperatures. <i>Surface and Coatings Technology</i> , 2021 , 405, 126722	4.4	3
162	Fine control of lattice thermal conductivity in low-dimensional materials. <i>Physical Review B</i> , 2021 , 103,	3.3	3
161	An insight on the MoS ₂ tribo-film formation to determine the friction performance of Mo-S-N sputtered coatings. <i>Surface and Coatings Technology</i> , 2021 , 408, 126791	4.4	3
160	Ultra-low friction and edge-pinning effect in large-lattice-mismatch van der Waals heterostructures. <i>Nature Materials</i> , 2021 ,	27	21
159	Nanotribology of transition metal dichalcogenide flakes deposited by chemical vapour deposition: The influence of chemical composition and sliding speed on nanoscale friction of monolayers. <i>Applied Surface Science</i> , 2021 , 556, 149762	6.7	1
158	Tribological properties of Mo-S-C coating deposited by pulsed d.c. magnetron sputtering. <i>Wear</i> , 2021 , 480-481, 203939	3.5	1
157	Revisiting the electronic nature of nanodiamonds. <i>Diamond and Related Materials</i> , 2021 , 120, 108627	3.5	1
156	A new protocol for the identification of singlet fission sensitizers through computational screening. <i>Journal of Computational Chemistry</i> , 2021 , 42, 2241-2249	3.5	1
155	Phototribology: Control of Friction by Light. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 43746-43754	5.4	2
154	Helium migration in Zr-Nb multilayers under electric field. <i>Journal of Nuclear Materials</i> , 2021 , 555, 153133	3.3	2
153	Titanium doped MoSe ₂ coatings [Synthesis, structure, mechanical and tribological properties investigation. <i>Applied Surface Science</i> , 2021 , 568, 150990	6.7	3
152	Room and High Temperature Tribological Performance of Multilayered TiSiN/TiN and TiSiN/TiN(Ag) Coatings Deposited by Sputtering. <i>Coatings</i> , 2020 , 10, 1191	2.9	5
151	Synthesis, microstructure and mechanical properties of WS ₂ self-lubricant thin films deposited by magnetron sputtering. <i>Tribology International</i> , 2020 , 150, 106363	4.9	10
150	Elucidating the role of TiCl ₄ post-treatment on percolation of TiO ₂ electron transport layer in perovskite solar cells. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 385501	3	3
149	Synthesis and structural properties of Mo-S-N sputtered coatings. <i>Applied Surface Science</i> , 2020 , 527, 146790	6.7	10
148	Ab initio description of nanodiamonds: A DFT and TDDFT benchmark. <i>Diamond and Related Materials</i> , 2020 , 108, 107959	3.5	2
147	The fabrication of high strength Zr/Nb nanocomposites using high-pressure torsion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 790, 139693	5.3	5

146	Mechanisms of friction and wear reduction by h-BN nanosheet and spherical W nanoparticle additives to base oil: Experimental study and molecular dynamics simulation. <i>Tribology International</i> , 2020 , 151, 106493	4.9	20
145	The structural evolution of light-ion implanted 6H-SiC single crystal: Comparison of the effect of helium and hydrogen. <i>Acta Materialia</i> , 2020 , 188, 609-622	8.4	33
144	Volume and pressure of helium bubbles inside liquid Pb16Li. A molecular dynamics study. <i>Nuclear Fusion</i> , 2020 , 60, 046018	3.3	1
143	Comparative Study of DC and RF Sputtered MoSe2 Coatings Containing Carbon—An Approach to Optimize Stoichiometry, Microstructure, Crystallinity and Hardness. <i>Coatings</i> , 2020 , 10, 133	2.9	12
142	Precise control of the interlayer twist angle in large scale MoS homostructures. <i>Nature Communications</i> , 2020 , 11, 2153	17.4	55
141	A 2D finite element approach for predicting the machining performance of nanolayered TiAlCrN coating on WC-Co cutting tool during dry turning of AISI 1045 steel. <i>Ceramics International</i> , 2020 , 46, 25073-25088	5.1	8
140	Nanotribological Investigation of Sliding Properties of Transition Metal Dichalcogenide Thin Film Coatings. <i>ACS Applied Materials & Interfaces</i> , 2020 ,	9.5	4
139	Control of energy dissipation in sliding low-dimensional materials. <i>Physical Review B</i> , 2020 , 102,	3.3	7
138	Effect of electric fields in low-dimensional materials: Nanofrictional response as a case study. <i>Physical Review B</i> , 2020 , 102,	3.3	1
137	Exploring the Stability of Twisted van der Waals Heterostructures. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 45214-45221	9.5	6
136	Deformation Behavior of Nanocrystalline Body-Centered Cubic Iron with Segregated, Foreign Interstitial: A Molecular Dynamics Study. <i>Materials</i> , 2020 , 13,	3.5	1
135	Triboelectrification of Two-Dimensional Chemical Vapor Deposited WS at Nanoscale. <i>Scientific Reports</i> , 2019 , 9, 12570	4.9	2
134	Thermodynamic aspects of nanoscale friction. <i>Physical Review B</i> , 2019 , 100,	3.3	7
133	Controllable Tunneling Triboelectrification of Two-Dimensional Chemical Vapor Deposited MoS. <i>Scientific Reports</i> , 2019 , 9, 334	4.9	7
132	Mechanical properties and microstructural stability of CuTa/Cu composite coatings. <i>Surface and Coatings Technology</i> , 2019 , 364, 22-31	4.4	18
131	Superlubricity achieved for commensurate sliding: MoS2 frictional anisotropy in silico. <i>Computational Materials Science</i> , 2019 , 163, 17-23	3.2	12
130	Structure, mechanical and tribological properties of Mo-S-N solid lubricant coatings. <i>Applied Surface Science</i> , 2019 , 486, 1-14	6.7	32
129	Atomic-scale design of friction and energy dissipation. <i>Physical Review B</i> , 2019 , 99,	3.3	17

128	Vacancy-interface-helium interaction in Zr-Nb multi-layer system: A first-principles study. <i>Journal of Nuclear Materials</i> , 2019 , 518, 11-20	3.3	13
127	Nanoscale frictional properties of ordered and disordered MoS ₂ . <i>Tribology International</i> , 2019 , 136, 67-74	4.9	15
126	The wettability and tribological behaviour of thin F-doped WS ₂ films deposited by magnetron sputtering. <i>Surface and Coatings Technology</i> , 2019 , 378, 125033	4.4	7
125	Microstructural evolution of helium-irradiated 6H-SiC subjected to different irradiation conditions and annealing temperatures: A multiple characterization study. <i>Acta Materialia</i> , 2019 , 181, 160-172	8.4	34
124	Deformation-Controlled Design of Metallic Nanocomposites. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 46296-46302	9.5	1
123	The role of β orthorhombic phase content on the tenacity and fracture toughness behavior of Ti-22Nb-10Zr coating used in the design of long-term medical implants. <i>Applied Surface Science</i> , 2019 , 464, 328-336	6.7	4
122	Structural Ordering of Molybdenum Disulfide Studied via Reactive Molecular Dynamics Simulations. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 8937-8946	9.5	20
121	Competing mechanisms on the strength of ion-irradiated Zr/Nb nanoscale multilayers: Interface strength versus radiation hardening. <i>Scripta Materialia</i> , 2018 , 152, 31-35	5.6	14
120	Fracture toughness and sliding properties of magnetron sputtered CrBC and CrBCN coatings. <i>Applied Surface Science</i> , 2018 , 443, 635-643	6.7	11
119	Development of new β -Ti-Nb-Zr biocompatible coating with low Young's modulus and high toughness for medical applications. <i>Materials and Design</i> , 2018 , 142, 44-55	8.1	16
118	In situ TEM observations on the structural evolution of a nanocrystalline W-Ti alloy at elevated temperatures. <i>Journal of Alloys and Compounds</i> , 2018 , 749, 1000-1008	5.7	7
117	Tribological and cutting performance of TiAlCrN films with different Cr contents deposited with multilayered structure. <i>Tribology International</i> , 2018 , 119, 345-353	4.9	30
116	Effect of layer thickness on the mechanical behaviour of oxidation-strengthened Zr/Nb nanoscale multilayers. <i>Journal of Materials Science</i> , 2018 , 53, 5860-5878	4.3	13
115	Effect of the addition of Si into V ₂ O ₅ coatings: Structure and tribo-mechanical properties. <i>Surface and Coatings Technology</i> , 2018 , 349, 111-118	4.4	7
114	Influence of Cr additions on the structure and oxidation resistance of multilayered TiAlCrN films. <i>Surface and Coatings Technology</i> , 2017 , 313, 158-167	4.4	38
113	2H- δ T Phase Engineering of Layered Tantalum Disulfides in Electrocatalysis: Oxygen Reduction Reaction. <i>Chemistry - A European Journal</i> , 2017 , 23, 8082-8091	4.8	24
112	On the lubricity of transition metal dichalcogenides: an ab initio study. <i>Nanoscale</i> , 2017 , 9, 5597-5607	7.7	24
111	Electronic metal-support interaction enhanced oxygen reduction activity and stability of boron carbide supported platinum. <i>Nature Communications</i> , 2017 , 8, 15802	17.4	122

110	Study on the crack resistance of CrBN composite coatings via nano-indentation and scratch tests. <i>Journal of Alloys and Compounds</i> , 2017 , 708, 1103-1109	5-7	33
109	Vibrational contributions to intrinsic friction in charged transition metal dichalcogenides. <i>Nanoscale</i> , 2017 , 9, 11488-11497	7-7	8
108	Parylene C topographic micropattern as a template for patterning PDMS and Polyacrylamide hydrogel. <i>Scientific Reports</i> , 2017 , 7, 5764	4-9	9
107	Overcoming nanoscale friction barriers in transition metal dichalcogenides. <i>Physical Review B</i> , 2017 , 96,	3-3	11
106	Combined size and texture-dependent deformation and strengthening mechanisms in Zr/Nb nano-multilayers. <i>Acta Materialia</i> , 2017 , 124, 247-260	8-4	42
105	Selective oxidation-induced strengthening of Zr/Nb nanoscale multilayers. <i>Acta Materialia</i> , 2017 , 122, 1-10	8-4	19
104	Evolution of structural, mechanical and tribological properties of NiP/MWCNT coatings as a function of annealing temperature. <i>Surface and Coatings Technology</i> , 2016 , 302, 195-201	4-4	16
103	Repetitive nano-impact tests as a new tool to measure fracture toughness in brittle materials. <i>Journal of the European Ceramic Society</i> , 2016 , 36, 3235-3243	6	10
102	Layering effects on low frequency modes in n-layered MX ₂ transition metal dichalcogenides. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 4807-13	3-6	13
101	A comparison of empirical potentials for sliding simulations of MoS ₂ . <i>Computational Materials Science</i> , 2016 , 115, 158-169	3-2	33
100	Nanomechanical characterization of alumina coatings grown on FeCrAl alloy by thermal oxidation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016 , 57, 310-20	4-1	4
99	Broadband Optical Absorption Caused by the Plasmonic Response of Coalesced Au Nanoparticles Embedded in a TiO ₂ Matrix. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 16931-16945	3-8	24
98	Bubbles formation in helium ion irradiated Cu/W multilayer nanocomposites: Effects on structure and mechanical properties. <i>Journal of Nuclear Materials</i> , 2016 , 473, 18-27	3-3	42
97	Structural and mechanical properties of irradiated Zr/Nb multilayer nanocomposites. <i>Materials Letters</i> , 2016 , 163, 138-141	3-3	20
96	Effect of annealing temperature on microstructure, mechanical and tribological properties of nano-SiC reinforced Ni-P coatings. <i>Wear</i> , 2016 , 356-357, 86-93	3-5	20
95	Fracture toughness determination by repetitive nano-impact testing in Cu/W nanomultilayers with length-scale-dependent films properties. <i>Procedia Structural Integrity</i> , 2016 , 2, 1391-1404	1	1
94	Biological behaviour of thin films consisting of Au nanoparticles dispersed in a TiO ₂ dielectric matrix. <i>Vacuum</i> , 2015 , 122, 360-368	3-7	18
93	Protective double-layer coatings prepared by plasma enhanced chemical vapor deposition on tool steel. <i>Surface and Coatings Technology</i> , 2015 , 272, 229-238	4-4	9

92	Oxidation and diffusion processes during annealing of TiSi(V)N films. <i>Surface and Coatings Technology</i> , 2015 , 275, 120-126	4.4	14
91	Microstructural evolution of nanometric Ti(NiCu) ₂ precipitates in annealed NiTiCu thin films. <i>Vacuum</i> , 2015 , 117, 1-3	3.7	3
90	Length-scale-dependent mechanical behaviour of Zr/Nb multilayers as a function of individual layer thickness. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 632, 137-146	5.3	30
89	NiTi(Cu) shape memory alloy interlayers supporting low friction functional coatings. <i>Tribology International</i> , 2015 , 88, 135-142	4.9	5
88	Tribological behavior of uncoated and DLC-coated CoCr and Ti-alloys in contact with UHMWPE and PEEK counterbodies. <i>Tribology International</i> , 2015 , 89, 97-104	4.9	15
87	Thin films composed of Ag nanoclusters dispersed in TiO ₂ : Influence of composition and thermal annealing on the microstructure and physical responses. <i>Applied Surface Science</i> , 2015 , 358, 595-604	6.7	23
86	A High-Resolution TEM/EELS Study of the Effect of Doping Elements on the Sliding Mechanisms of Sputtered WS ₂ Coatings. <i>Tribology Transactions</i> , 2015 , 58, 113-118	1.8	10
85	Friction Force Microscopy Analysis of Self-Adaptive W-S-C Coatings: Nanoscale Friction and Wear. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 21056-64	9.5	19
84	The influence of nitrogen and oxygen additions on the thermal characteristics of aluminium-based thin films. <i>Materials Chemistry and Physics</i> , 2015 , 163, 569-580	4.4	6
83	PVD-grown antibacterial Ag-TiN films on piezoelectric PVDF substrates for sensor applications. <i>Surface and Coatings Technology</i> , 2015 , 281, 117-124	4.4	16
82	Structural and mechanical properties of nanocrystalline Zr co-sputtered a-C:(H) amorphous films. <i>Applied Surface Science</i> , 2015 , 325, 64-72	6.7	22
81	Tribological properties of self-lubricating TiSiVN coatings at room temperature. <i>Surface and Coatings Technology</i> , 2015 , 267, 8-14	4.4	18
80	Evolution of the functional properties of titaniumSilver thin films for biomedical applications: Influence of in-vacuum annealing. <i>Surface and Coatings Technology</i> , 2015 , 261, 262-271	4.4	15
79	Electro-vibrational coupling effects on Intrinsic friction in transition metal dichalcogenides. <i>RSC Advances</i> , 2015 , 5, 106809-106818	3.7	13
78	First-principles comparative study on the interlayer adhesion and shear strength of transition-metal dichalcogenides and graphene. <i>Physical Review B</i> , 2015 , 92,	3.3	35
77	Tailoring Nanoscale Friction in MX ₂ Transition Metal Dichalcogenides. <i>Inorganic Chemistry</i> , 2015 , 54, 5739-44	5.1	36
76	Effect of the substrate dilution on the room and high temperature tribological behaviour of Ni-based coatings deposited by PTA on grey cast iron. <i>Surface and Coatings Technology</i> , 2015 , 281, 11-19	4.4	14
75	Thin films composed of gold nanoparticles dispersed in a dielectric matrix: The influence of the host matrix on the optical and mechanical responses. <i>Thin Solid Films</i> , 2015 , 596, 8-17	2.2	20

74	Stress-induced martensitic transformation in NiTi(Cu) interlayers controlling stress distribution in functional coatings during sliding. <i>Applied Surface Science</i> , 2015 , 325, 192-202	6.7	4
73	Structure, mechanical and tribological properties of self-lubricant WSiC coatings. <i>Surface and Coatings Technology</i> , 2015 , 261, 7-14	4.4	40
72	Tribological analysis of thin films by pin-on-disc: Evaluation of friction and wear measurement uncertainty. <i>Tribology International</i> , 2014 , 74, 154-163	4.9	21
71	Effect of rough surface patterning on the tribology of WSiC self-lubricant coatings. <i>Tribology International</i> , 2014 , 69, 77-83	4.9	22
70	The effect of increasing V content on the structure, mechanical properties and oxidation resistance of TiSiCN films deposited by DC reactive magnetron sputtering. <i>Applied Surface Science</i> , 2014 , 289, 114-123	6.7	42
69	Influence of Zr alloying on the mechanical properties, thermal stability and oxidation resistance of CrAlN coatings. <i>Applied Surface Science</i> , 2014 , 317, 269-277	6.7	27
68	Sliding properties of Zr-DLC coatings: The effect of tribolayer formation. <i>Surface and Coatings Technology</i> , 2014 , 258, 734-745	4.4	27
67	The role of NiTi(Cu) interlayers on the mechanical properties and nano-scratch behaviour of solid lubricant WSiC coatings. <i>Surface and Coatings Technology</i> , 2014 , 254, 260-269	4.4	8
66	Adsorption of bovine serum albumin on Zr co-sputtered a-C(:H) films: Implication on wear behaviour. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014 , 39, 316-27	4.1	16
65	Sliding Properties of MoS ₂ Layers: Load and Interlayer Orientation Effects. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 13809-13816	3.8	88
64	Frictional properties of self-adaptive chromium doped tungsten sulfur carbon coatings at nanoscale. <i>Applied Surface Science</i> , 2014 , 303, 381-387	6.7	10
63	Microstructural investigation on the grain refinement occurring in Cu-doped NiTi thin films. <i>Scripta Materialia</i> , 2014 , 77, 52-55	5.6	10
62	Microstructure and mechanical properties of physical vapor deposited Cu/W nanoscale multilayers: Influence of layer thickness and temperature. <i>Thin Solid Films</i> , 2014 , 571, 275-282	2.2	43
61	High temperature behavior of nanolayered CrAlTiN coating: Thermal stability, oxidation, and tribological properties. <i>Surface and Coatings Technology</i> , 2014 , 257, 70-77	4.4	23
60	DLC-W coatings tested in combustion engine [Frictional and wear analysis. <i>Surface and Coatings Technology</i> , 2014 , 260, 284-289	4.4	25
59	Tribological behaviour of W-alloyed carbon-based coatings in dry and lubricated sliding contact. <i>Lubrication Science</i> , 2014 , 26, 428-439	1.3	5
58	High temperature properties of the CrNbAlN coatings with increasing Al contents. <i>Surface and Coatings Technology</i> , 2013 , 228, 187-194	4.4	16
57	Effects of Cu on the microstructural and mechanical properties of sputter deposited Ni-Ti thin films. <i>Surface and Coatings Technology</i> , 2013 , 237, 261-268	4.4	15

56	Influence of Al content on the mechanical properties and thermal stability in protective and oxidation atmospheres of ZrAlN coatings. <i>Surface and Coatings Technology</i> , 2013 , 236, 239-245	4.4	13
55	Ultra-low friction WBN solid lubricant coating. <i>Surface and Coatings Technology</i> , 2013 , 232, 541-548	4.4	49
54	a-C(:H) and a-C(:H)-Zr coatings deposited on biomedical Ti-based substrates: Tribological properties. <i>Thin Solid Films</i> , 2013 , 538, 89-96	2.2	21
53	Influence of Ag content on mechanical and tribological behavior of DLC coatings. <i>Surface and Coatings Technology</i> , 2013 , 232, 440-446	4.4	77
52	Tribological properties of the two-step thermally deposited chromium films. <i>Applied Surface Science</i> , 2013 , 283, 1089-1095	6.7	2
51	Indentation and scratch testing of DLC-Zr coatings on ultrafine-grained titanium processed by high-pressure torsion. <i>Wear</i> , 2013 , 306, 304-310	3.5	40
50	Frictional behavior of self-adaptive nanostructural MoSe ₂ coatings in different sliding conditions. <i>Wear</i> , 2013 , 303, 286-296	3.5	29
49	Fluence scan: an unexplored property of a laser beam. <i>Optics Express</i> , 2013 , 21, 26363-75	3.3	27
48	Optimum high temperature strength of two-dimensional nanocomposites. <i>APL Materials</i> , 2013 , 1, 052103	3.7	38
47	Examination of the tribolayer formation of a self-lubricant W ₂ C sputtered coating. <i>Tribology International</i> , 2012 , 47, 188-193	4.9	20
46	Complex frictional analysis of self-lubricant W-S-C/Cr coating. <i>Faraday Discussions</i> , 2012 , 156, 383-401; discussion 413-34	3.6	57
45	Potential Application of a Ti ₃ C ₂ MX ₂ Coating in Implants. <i>Journal of the American Ceramic Society</i> , 2012 , 95, 2741-2745	3.8	3
44	Carbon-based coatings doped by copper: Tribological and mechanical behavior in olive oil lubrication. <i>Surface and Coatings Technology</i> , 2011 , 205, S79-S83	4.4	10
43	Review on self-lubricant transition metal dichalcogenide nanocomposite coatings alloyed with carbon. <i>Surface and Coatings Technology</i> , 2011 , 206, 686-695	4.4	143
42	Structure and tribological properties of AlCrTiN coatings at elevated temperature. <i>Surface and Coatings Technology</i> , 2011 , 205, S107-S110	4.4	11
41	High-temperature tribological properties of CrAlN, CrAlSiN and AlCrSiN coatings. <i>Surface and Coatings Technology</i> , 2011 , 206, 1244-1251	4.4	84
40	High temperature properties of CrAlN, CrAlSiN and AlCrSiN coatings: Structure and oxidation. <i>Materials Chemistry and Physics</i> , 2011 , 129, 195-201	4.4	90
39	Tribological behaviour a-C and a-C:H films doped with Ti in biological solutions. <i>Vacuum</i> , 2011 , 85, 1144-1148	3.7	12

38	Structural, mechanical and tribological properties of MoS ₂ solid lubricant coating. <i>Surface and Coatings Technology</i> , 2011 , 205, 3274-3279	4.4	50
37	Properties of nanocomposite film combining hard TiN matrix with embedded fullerene-like WS ₂ nanoclusters. <i>Thin Solid Films</i> , 2011 , 519, 3191-3195	2.2	10
36	Self-adaptive low friction coatings based on transition metal dichalcogenides. <i>Thin Solid Films</i> , 2011 , 519, 4037-4044	2.2	49
35	Structure, mechanical properties and tribology of W ₂ N and W ₂ O coatings. <i>International Journal of Refractory Metals and Hard Materials</i> , 2010 , 28, 15-22	4.1	41
34	Effects of carbon content on the high temperature friction and wear of chromium carbonitride coatings. <i>Tribology International</i> , 2010 , 43, 1228-1233	4.9	22
33	Tribological behaviour of nanostructured Ti-C:H coatings for biomedical applications. <i>Solid State Sciences</i> , 2009 , 11, 1757-1761	3.4	24
32	Self-Lubricating WS ₂ Nanocomposite Coatings. <i>Plasma Processes and Polymers</i> , 2009 , 6, 417-424	3.4	32
31	Can W ₂ Se ₂ C Coatings Be Competitive to W ₂ S ₂ C Ones?. <i>Plasma Processes and Polymers</i> , 2009 , 6, S92-S95	3.4	14
30	Tribological Performance of CrAlSiN Coatings at High Temperatures. <i>Plasma Processes and Polymers</i> , 2009 , 6, S935-S940	3.4	21
29	Comparative study of the tribological behavior of self-lubricating WS ₂ and MoSe ₂ sputtered coatings. <i>Wear</i> , 2009 , 266, 388-392	3.5	43
28	High temperature tribology of CrN and multilayered Cr/CrN coatings. <i>Surface and Coatings Technology</i> , 2009 , 203, 3254-3259	4.4	58
27	Synthesis and properties of WBe ₂ coatings deposited by PVD in reactive and non-reactive processes. <i>Vacuum</i> , 2009 , 83, 1262-1265	3.7	15
26	Mechanical and tribological properties of sputtered MoSe ₂ coatings. <i>Wear</i> , 2009 , 266, 393-397	3.5	30
25	Nanoscale colour control: W-O graded coatings deposited by magnetron sputtering. <i>Nanotechnology</i> , 2008 , 19, 395202	3.4	1
24	TEM investigation of MoSeC films. <i>Microscopy and Microanalysis</i> , 2008 , 14, 7-10	0.5	4
23	TEM Characterization of W-O-N Coatings. <i>Microscopy and Microanalysis</i> , 2008 , 14, 27-30	0.5	8
22	A simple model for the deposition of W-O coatings by reactive gas pulsing process. <i>EPJ Applied Physics</i> , 2008 , 43, 321-325	1.1	1
21	Synthesis and structural properties of MoBe ₂ sputtered coatings. <i>Surface and Coatings Technology</i> , 2008 , 202, 2418-2422	4.4	26

20	In situ structural evolution of arc-deposited Cr-based coatings. <i>Surface and Coatings Technology</i> , 2008 , 202, 5550-5555	4.4	9
19	Tribological behaviour of C-alloyed transition metal dichalcogenides (TMD) coatings in different environments. <i>International Journal of Mechanics and Materials in Design</i> , 2008 , 4, 137-143	2.5	15
18	Nanoscale triboactivity: The response of MoSe ₂ coatings to sliding. <i>Acta Materialia</i> , 2008 , 56, 5101-5111	4.4	47
17	Structure and tribology of biocompatible TiO ₂ /H coatings. <i>Surface and Coatings Technology</i> , 2008 , 202, 5790-5793	4.4	33
16	Structural and tribological characterization of tungsten nitride coatings at elevated temperature. <i>Wear</i> , 2008 , 265, 319-326	3.5	42
15	Characterization of W ₂ O coatings deposited by magnetron sputtering with reactive gas pulsing. <i>Surface and Coatings Technology</i> , 2007 , 201, 5481-5486	4.4	17
14	Friction and wear behaviour of CrN coating at temperatures up to 500 °C. <i>Surface and Coatings Technology</i> , 2007 , 201, 5228-5235	4.4	78
13	Thermal stability of reactive sputtered tungsten oxide coatings. <i>Surface and Coatings Technology</i> , 2007 , 201, 7076-7082	4.4	16
12	Tungsten oxide with different oxygen contents: Sliding properties. <i>Vacuum</i> , 2007 , 81, 1426-1429	3.7	24
11	The tribological behavior of W ₂ O films in pin-on-disk testing at elevated temperature. <i>Vacuum</i> , 2007 , 81, 1439-1442	3.7	31
10	Tribological characterization of tungsten nitride coatings deposited by reactive magnetron sputtering. <i>Wear</i> , 2007 , 262, 655-665	3.5	54
9	Mechanical and tribological characterization of CN _x films deposited by d.c. magnetron sputtering. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007 , 4, 4267-4274		6
8	Study of the Cathode Potential in a Sputtering Discharge by Pulsing the Reactive Gas: Case of a W Target in an Ar-O ₂ Atmosphere. <i>Plasma Processes and Polymers</i> , 2007 , 4, 62-68	3.4	5
7	Optical and Electrical Properties of W-O-N Coatings Deposited by DC Reactive Sputtering. <i>Plasma Processes and Polymers</i> , 2007 , 4, S69-S75	3.4	10
6	Modelling of Magnetron Sputtering of Tungsten Oxide with Reactive Gas Pulsing. <i>Plasma Processes and Polymers</i> , 2007 , 4, S522-S526	3.4	10
5	Friction of Self-Lubricating W-S-C Sputtered Coatings Sliding Under Increasing Load. <i>Plasma Processes and Polymers</i> , 2007 , 4, S541-S546	3.4	34
4	The tribological characteristics of TiCN coating at elevated temperatures. <i>Wear</i> , 2006 , 260, 40-49	3.5	66
3	Tribological characteristics of CrCN coatings at elevated temperature. <i>Vacuum</i> , 2005 , 80, 113-116	3.7	45

2	Comparison of tribological behaviour of TiN, TiCN and CrN at elevated temperatures. <i>Surface and Coatings Technology</i> , 2005 , 193, 192-199	4.4	115
1	Temperature dependence of tribological properties of MoS ₂ and MoSe ₂ coatings. <i>Surface and Coatings Technology</i> , 2005 , 193, 230-233	4.4	113