Tomas Polcar

List of Publications by Year
in descending order

188 papers	5,139 citations	87843 38 h-index	133188 59 g-index
189 all docs	189 docs citations	189 times ranked	4414 citing authors

#	ARTICLE	IF	CITATIONS
1	Electronic metal-support interaction enhanced oxygen reduction activity and stability of boron carbide supported platinum. Nature Communications, 2017, 8, 15802.	5.8	166
2	Review on self-lubricant transition metal dichalcogenide nanocomposite coatings alloyed with carbon. Surface and Coatings Technology, 2011, 206, 686-695.	2.2	165
3	Temperature dependence of tribological properties of MoS2 and MoSe2 coatings. Surface and Coatings Technology, 2005, 193, 230-233.	2.2	144
4	Precise control of the interlayer twist angle in large scale MoS2 homostructures. Nature Communications, 2020, 11, 2153.	5.8	142
5	Comparison of tribological behaviour of TiN, TiCN and CrN at elevated temperatures. Surface and Coatings Technology, 2005, 193, 192-199.	2.2	126
6	Ultra-low friction and edge-pinning effect in large-lattice-mismatch van der Waals heterostructures. Nature Materials, 2022, 21, 47-53.	13.3	110
7	High temperature properties of CrAlN, CrAlSiN and AlCrSiN coatings â€" Structure and oxidation. Materials Chemistry and Physics, 2011, 129, 195-201.	2.0	107
8	Sliding Properties of MoS₂ Layers: Load and Interlayer Orientation Effects. Journal of Physical Chemistry C, 2014, 118, 13809-13816.	1.5	106
9	High-temperature tribological properties of CrAlN, CrAlSiN and AlCrSiN coatings. Surface and Coatings Technology, 2011, 206, 1244-1251.	2.2	100
10	Influence of Ag content on mechanical and tribological behavior of DLC coatings. Surface and Coatings Technology, 2013, 232, 440-446.	2.2	98
11	Friction and wear behaviour of CrN coating at temperatures up to 500ÂÂ°C. Surface and Coatings Technology, 2007, 201, 5228-5235.	2.2	89
12	The tribological characteristics of TiCN coating at elevated temperatures. Wear, 2006, 260, 40-49.	1.5	79
13	High temperature tribology of CrN and multilayered Cr/CrN coatings. Surface and Coatings Technology, 2009, 203, 3254-3259.	2.2	70
14	Microstructural evolution of helium-irradiated 6Hâ€"SiC subjected to different irradiation conditions and annealing temperatures: A multiple characterization study. Acta Materialia, 2019, 181, 160-172.	3.8	70
15	Tribological characterization of tungsten nitride coatings deposited by reactive magnetron sputtering. Wear, 2007, 262, 655-665.	1.5	66
16	The structural evolution of light-ion implanted 6H-SiC single crystal: Comparison of the effect of helium and hydrogen. Acta Materialia, 2020, 188, 609-622.	3.8	66
17	Complex frictional analysis of self-lubricant W-S-C/Cr coating. Faraday Discussions, 2012, 156, 383.	1.6	63
18	Structural, mechanical and tribological properties of Moâ€"Sâ€"C solid lubricant coating. Surface and Coatings Technology, 2011, 205, 3274-3279.	2.2	60

#	Article	IF	Citations
19	Influence of Cr additions on the structure and oxidation resistance of multilayered TiAlCrN films. Surface and Coatings Technology, 2017, 313, 158-167.	2.2	60
20	Ultra-low friction Wâ€“Sâ€“N solid lubricant coating. Surface and Coatings Technology, 2013, 232, 541-548.	2.2	57
21	Bubbles formation in helium ion irradiated Cu/W multilayer nanocomposites: Effects on structure and mechanical properties. Journal of Nuclear Materials, 2016, 473, 18-27.	1.3	56
22	The effect of increasing V content on the structure, mechanical properties and oxidation resistance of Tiâ€“Siâ€“Vâ€“N films deposited by DC reactive magnetron sputtering. Applied Surface Science, 2014, 289, 114-123.	3.1	54
23	Structural and tribological characterization of tungsten nitride coatings at elevated temperature. Wear, 2008, 265, 319-326.	1.5	53
24	Self-adaptive low friction coatings based on transition metal dichalcogenides. Thin Solid Films, 2011, 519, 4037-4044.	0.8	53
25	First-principles comparative study on the interlayer adhesion and shear strength of transition-metal dichalcogenides and graphene. Physical Review B, 2015, 92, .	1.1	53
26	Combined size and texture-dependent deformation and strengthening mechanisms in Zr/Nb nano-multilayers. Acta Materialia, 2017, 124, 247-260.	3.8	53
27	Microstructure and mechanical properties of physical vapor deposited Cu/W nanoscale multilayers: Influence of layer thickness and temperature. Thin Solid Films, 2014, 571, 275-282.	0.8	51
28	Structure, mechanical and tribological properties of Mo-S-N solid lubricant coatings. Applied Surface Science, 2019, 486, 1-14.	3.1	51
29	Nanoscale triboactivity: The response of Moâ€“Seâ€“C coatings to sliding. Acta Materialia, 2008, 56, 5101-5111.	3.8	50
30	Tribological characteristics of CrCN coatings at elevated temperature. Vacuum, 2005, 80, 113-116.	1.6	48
31	Comparative study of the tribological behavior of self-lubricating Wâ€“Sâ€“C and Moâ€“Seâ€“C sputtered coatings. Wear, 2009, 266, 388-392.	1.5	47
32	Indentation and scratch testing of DLC-Zr coatings on ultrafine-grained titanium processed by high-pressure torsion. Wear, 2013, 306, 304-310.	1.5	47
33	Structure, mechanical and tribological properties of self-lubricant Wâ€“Sâ€“N coatings. Surface and Coatings Technology, 2015, 261, 7-14.	2.2	47
34	Structure, mechanical properties and tribology of Wâ€“N and Wâ€“O coatings. International Journal of Refractory Metals and Hard Materials, 2010, 28, 15-22.	1.7	46
35	Tribological and cutting performance of TiAlCrN films with different Cr contents deposited with multilayered structure. Tribology International, 2018, 119, 345-353.	3.0	45
36	Optimum high temperature strength of two-dimensional nanocomposites. APL Materials, 2013, 1, .	2.2	43

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37	Tailoring Nanoscale Friction in MX2 Transition Metal Dichalcogenides. Inorganic Chemistry, 2015, 54, 5739-5744.	1.9	40
38	Mechanisms of friction and wear reduction by h-BN nanosheet and spherical W nanoparticle additives to base oil: Experimental study and molecular dynamics simulation. Tribology International, 2020, 151, 106493.	3.0	39
39	A comparison of empirical potentials for sliding simulations of MoS2. Computational Materials Science, 2016, 115, 158-169.	1.4	38
40	Nanoscale frictional properties of ordered and disordered MoS2. Tribology International, 2019, 136, 67-74.	3.0	37
41	Friction of Self-Lubricating W-S-C Sputtered Coatings Sliding Under Increasing Load. Plasma Processes and Polymers, 2007, 4, S541-S546.	1.6	36
42	Structure and tribology of biocompatible Tiâ€“C:H coatings. Surface and Coatings Technology, 2008, 202, 5790-5793.	2.2	36
43	Length-scale-dependent mechanical behaviour of Zr/Nb multilayers as a function of individual layer thickness. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 632, 137-146.	2.6	36
44	Study on the crack resistance of CrBN composite coatings via nano-indentation and scratch tests. Journal of Alloys and Compounds, 2017, 708, 1103-1109.	2.8	35
45	The tribological behavior of Wâ€“Sâ€“C films in pin-on-disk testing at elevated temperature. Vacuum, 2007, 81, 1439-1442.	1.6	34
46	DLC-W coatings tested in combustion engine â€” Frictional and wear analysis. Surface and Coatings Technology, 2014, 260, 284-289.	2.2	34
47	Structural Ordering of Molybdenum Disulfide Studied via Reactive Molecular Dynamics Simulations. ACS Applied Materials & Interfaces, 2018, 10, 8937-8946.	4.0	34
48	Frictional behavior of self-adaptive nanostructural Moâ€“Seâ€“C coatings in different sliding conditions. Wear, 2013, 303, 286-296.	1.5	33
49	Influence of Zr alloying on the mechanical properties, thermal stability and oxidation resistance of Crâ€“Alâ€“N coatings. Applied Surface Science, 2014, 317, 269-277.	3.1	33
50	2Hâ†’1T Phase Engineering of Layered Tantalum Disulfides in Electrocatalysis: Oxygen Reduction Reaction. Chemistry - A European Journal, 2017, 23, 8082-8091.	1.7	33
51	Tungsten oxide with different oxygen contents: Sliding properties. Vacuum, 2007, 81, 1426-1429.	1.6	32
52	Selfâ€Lubricating Wâ€“Sâ€“C Nanocomposite Coatings. Plasma Processes and Polymers, 2009, 6, 417-424.	1.6	32
53	Mechanical and tribological properties of sputtered Moâ€“Seâ€“C coatings. Wear, 2009, 266, 393-397.	1.5	32
54	Sliding properties of Zr-DLC coatings: The effect of tribolayer formation. Surface and Coatings Technology, 2014, 258, 734-745.	2.2	32

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55	On the lubricity of transition metal dichalcogenides: an ab initio study. Nanoscale, 2017, 9, 5597-5607.	2.8	32
56	Mechanical properties and microstructural stability of CuTa/Cu composite coatings. Surface and Coatings Technology, 2019, 364, 22-31.	2.2	32
57	Broadband Optical Absorption Caused by the Plasmonic Response of Coalesced Au Nanoparticles Embedded in a TiO₂ Matrix. Journal of Physical Chemistry C, 2016, 120, 16931-16945.	1.5	31
58	Fluence scan: an unexplored property of a laser beam. Optics Express, 2013, 21, 26363.	1.7	30
59	High temperature behavior of nanolayered CrAlTiN coating: Thermal stability, oxidation, and tribological properties. Surface and Coatings Technology, 2014, 257, 70-77.	2.2	30
60	Selective oxidation-induced strengthening of Zr/Nb nanoscale multilayers. Acta Materialia, 2017, 122, 1-10.	3.8	30
61	Tribological analysis of thin films by pin-on-disc: Evaluation of friction and wear measurement uncertainty. Tribology International, 2014, 74, 154-163.	3.0	29
62	Synthesis and structural properties of Moâ€“Seâ€“C sputtered coatings. Surface and Coatings Technology, 2008, 202, 2418-2422.	2.2	28
63	Thin films composed of gold nanoparticles dispersed in a dielectric matrix: The influence of the host matrix on the optical and mechanical responses. Thin Solid Films, 2015, 596, 8-17.	0.8	28
64	Thin films composed of Ag nanoclusters dispersed in TiO2: Influence of composition and thermal annealing on the microstructure and physical responses. Applied Surface Science, 2015, 358, 595-604.	3.1	28
65	Tribological behaviour of nanostructured Ti-C:H coatings for biomedical applications. Solid State Sciences, 2009, 11, 1757-1761.	1.5	27
66	Tribological properties of self-lubricating TiSiVN coatings at room temperature. Surface and Coatings Technology, 2015, 267, 8-14.	2.2	27
67	Effects of carbon content on the high temperature friction and wear of chromium carbonitride coatings. Tribology International, 2010, 43, 1228-1233.	3.0	26
68	Development of new Î²/Î±â€³-Ti-Nb-Zr biocompatible coating with low Young's modulus and high toughness for medical applications. Materials and Design, 2018, 142, 44-55.	3.3	26
69	a-C(:H) and a-C(:H)_Zr coatings deposited on biomedical Ti-based substrates: Tribological properties. Thin Solid Films, 2013, 538, 89-96.	0.8	24
70	Oxidation and diffusion processes during annealing of TiSi(V)N films. Surface and Coatings Technology, 2015, 275, 120-126.	2.2	24
71	Friction Force Microscopy Analysis of Self-Adaptive Wâ€“Sâ€“C Coatings: Nanoscale Friction and Wear. ACS Applied Materials & Interfaces, 2015, 7, 21056-21064.	4.0	24
72	Structural and mechanical properties of nanocrystalline Zr co-sputtered a-C(:H) amorphous films. Applied Surface Science, 2015, 325, 64-72.	3.1	24

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73	Superlubricity achieved for commensurate sliding: MoS2 frictional anisotropy in silico. Computational Materials Science, 2019, 163, 17-23.	1.4	24
74	Structural and mechanical properties of Î³-irradiated Zr/Nb multilayer nanocomposites. Materials Letters, 2016, 163, 138-141.	1.3	23
75	Viewpoint: Atomic-Scale Design Protocols toward Energy, Electronic, Catalysis, and Sensing Applications. Inorganic Chemistry, 2019, 58, 14939-14980.	1.9	23
76	Atomic-scale design of friction and energy dissipation. Physical Review B, 2019, 99, .	1.1	23
77	Tribological Performance of CrAlSiN Coatings at High Temperatures. Plasma Processes and Polymers, 2009, 6, S935.	1.6	22
78	Examination of the tribolayer formation of a self-lubricant Wâ€“Sâ€“C sputtered coating. Tribology International, 2012, 47, 188-193.	3.0	22
79	Effect of rough surface patterning on the tribology of Wâ€“Sâ€“Câ€“Cr self-lubricant coatings. Tribology International, 2014, 69, 77-83.	3.0	22
80	Effect of the substrate dilution on the room and high temperature tribological behaviour of Ni-based coatings deposited by PTA on grey cast iron. Surface and Coatings Technology, 2015, 281, 11-19.	2.2	22
81	Tribological behavior of uncoated and DLC-coated CoCr and Ti-alloys in contact with UHMWPE and PEEK counterbodies. Tribology International, 2015, 89, 97-104.	3.0	22
82	PVD-grown antibacterial Ag-TiN films on piezoelectric PVDF substrates for sensor applications. Surface and Coatings Technology, 2015, 281, 117-124.	2.2	22
83	Competing mechanisms on the strength of ion-irradiated Zr/Nb nanoscale multilayers: Interface strength versus radiation hardening. Scripta Materialia, 2018, 152, 31-35.	2.6	22
84	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. Ceramics International, 2020, 46, 25073-25088.	2.3	22
85	Factors controlling segregation tendency of solute Ti, Ag and Ta into different symmetrical tilt grain boundaries of tungsten: First-principles and experimental study. Acta Materialia, 2021, 211, 116868.	3.8	22
86	Effect of annealing temperature on microstructure, mechanical and tribological properties of nano-SiC reinforced Ni-P coatings. Wear, 2016, 356-357, 86-93.	1.5	21
87	Vacancy-interface-helium interaction in Zr-Nb multi-layer system: A first-principles study. Journal of Nuclear Materials, 2019, 518, 11-20.	1.3	21
88	Interphase boundary layer-dominated strain mechanisms in Cu+ implanted Zr-Nb nanoscale multilayers. Acta Materialia, 2021, 202, 317-330.	3.8	21
89	Characterization of Wâ€“O coatings deposited by magnetron sputtering with reactive gas pulsing. Surface and Coatings Technology, 2007, 201, 5481-5486.	2.2	20
90	Biological behaviour of thin films consisting of Au nanoparticles dispersed in a TiO2 dielectric matrix. Vacuum, 2015, 122, 360-368.	1.6	20

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91	Evolution of structural, mechanical and tribological properties of Niâ€“P/MWCNT coatings as a function of annealing temperature. Surface and Coatings Technology, 2016, 302, 195-201.	2.2	20
92	Tribological behaviour of C-alloyed transition metal dichalcogenides (TMD) coatings in different environments. International Journal of Mechanics and Materials in Design, 2008, 4, 137-143.	1.7	19
93	Influence of Al content on the mechanical properties and thermal stability in protective and oxidation atmospheres of Zrâ€“Crâ€“Alâ€“N coatings. Surface and Coatings Technology, 2013, 236, 239-245.	2.2	19
94	Adsorption of bovine serum albumin on Zr co-sputtered a-C(:H) films: Implication on wear behaviour. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 39, 316-327.	1.5	19
95	Evolution of the functional properties of titaniumâ€“silver thin films for biomedical applications: Influence of in-vacuum annealing. Surface and Coatings Technology, 2015, 261, 262-271.	2.2	19
96	Thermal stability of reactive sputtered tungsten oxide coatings. Surface and Coatings Technology, 2007, 201, 7076-7082.	2.2	18
97	Effects of Cu on the microstructural and mechanical properties of sputter deposited Ni-Ti thin films. Surface and Coatings Technology, 2013, 237, 261-268.	2.2	18
98	Layering effects on low frequency modes in n-layered MX₂ transition metal dichalcogenides. Physical Chemistry Chemical Physics, 2016, 18, 4807-4813.	1.3	18
99	Synthesis and structural properties of Mo-S-N sputtered coatings. Applied Surface Science, 2020, 527, 146790.	3.1	18
100	Structure, mechanical and tribological properties of MoSe2 and Mo-Se-N solid lubricant coatings. Surface and Coatings Technology, 2021, 405, 126536.	2.2	18
101	Carbon-based coatings doped by copper: Tribological and mechanical behavior in olive oil lubrication. Surface and Coatings Technology, 2011, 205, S79-S83.	2.2	17
102	High temperature properties of the Cr Nb Al N coatings with increasing Al contents. Surface and Coatings Technology, 2013, 228, 187-194.	2.2	17
103	Effect of layer thickness on the mechanical behaviour of oxidation-strengthened Zr/Nb nanoscale multilayers. Journal of Materials Science, 2018, 53, 5860-5878.	1.7	17
104	Comparative Study of DC and RF Sputtered MoSe2 Coatings Containing Carbonâ€”An Approach to Optimize Stoichiometry, Microstructure, Crystallinity and Hardness. Coatings, 2020, 10, 133.	1.2	17
105	Can Wï£¿Seï£¿C Coatings Be Competitive to Wï£¿Sï£¿C Ones?. Plasma Processes and Polymers, 2009, 6, S92.	1.6	16
106	Synthesis and properties of Wâ€“Seâ€“C coatings deposited by PVD in reactive and non-reactive processes. Vacuum, 2009, 83, 1262-1265.	1.6	16
107	Synthesis, microstructure and mechanical properties of Wâ€“Sâ€“C self-lubricant thin films deposited by magnetron sputtering. Tribology International, 2020, 150, 106363.	3.0	16
108	Electro-vibrational coupling effects on â€œintrinsic frictionâ€•in transition metal dichalcogenides. RSC Advances, 2015, 5, 106809-106818.	1.7	15

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109	Fracture toughness and sliding properties of magnetron sputtered CrBC and CrBCN coatings. Applied Surface Science, 2018, 443, 635-643.	3.1	15
110	Tribological behaviour a-C and a-C:H films doped with Ti in biological solutions. Vacuum, 2011, 85, 1144-1148.	1.6	14
111	Overcoming nanoscale friction barriers in transition metal dichalcogenides. Physical Review B, 2017, 96, .	1.1	14
112	Exploring the Stability of Twisted van der Waals Heterostructures. ACS Applied Materials & Interfaces, 2020, 12, 45214-45221.	4.0	14
113	Blister formation in He-H co-implanted InP: A comprehensive atomistic study. Applied Surface Science, 2021, 552, 149426.	3.1	14
114	Structure and tribological properties of AlCrTiN coatings at elevated temperature. Surface and Coatings Technology, 2011, 205, S107-S110.	2.2	13
115	Room and High Temperature Tribological Performance of Multilayered TiSiN/TiN and TiSiN/TiN(Ag) Coatings Deposited by Sputtering. Coatings, 2020, 10, 1191.	1.2	13
116	Tribological behaviour of Mo-S-N solid lubricant coatings in vacuum, nitrogen gas and elevated temperatures. Surface and Coatings Technology, 2021, 405, 126722.	2.2	13
117	Modelling of Magnetron Sputtering of Tungsten Oxide with Reactive Gas Pulsing. Plasma Processes and Polymers, 2007, 4, S522-S526.	1.6	12
118	In situ structural evolution of arc-deposited Cr-based coatings. Surface and Coatings Technology, 2008, 202, 5550-5555.	2.2	12
119	Microstructural investigation on the grain refinement occurring in Cu-doped Niâ€“Ti thin films. Scripta Materialia, 2014, 77, 52-55.	2.6	12
120	Repetitive nano-impact tests as a new tool to measure fracture toughness in brittle materials. Journal of the European Ceramic Society, 2016, 36, 3235-3243.	2.8	12
121	Parylene C topographic micropattern as a template for patterning PDMS and Polyacrylamide hydrogel. Scientific Reports, 2017, 7, 5764.	1.6	12
122	Optical and Electrical Properties of W-O-N Coatings Deposited by DC Reactive Sputtering. Plasma Processes and Polymers, 2007, 4, S69-S75.	1.6	11
123	Properties of nanocomposite film combining hard TiN matrix with embedded fullerene-like WS2 nanoclusters. Thin Solid Films, 2011, 519, 3191-3195.	0.8	11
124	Tribological behaviour of W-alloyed carbon-based coatings in dry and lubricated sliding contact. Lubrication Science, 2014, 26, 428-439.	0.9	11
125	Frictional properties of self-adaptive chromium doped tungstenâ€“sulfurâ€“carbon coatings at nanoscale. Applied Surface Science, 2014, 303, 381-387.	3.1	11
126	Protective double-layer coatings prepared by plasma enhanced chemical vapor deposition on tool steel. Surface and Coatings Technology, 2015, 272, 229-238.	2.2	11

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127	A High-Resolution TEM/EELS Study of the Effect of Doping Elements on the Sliding Mechanisms of Sputtered WS2Coatings. Tribology Transactions, 2015, 58, 113-118.	1.1	11
128	Thermodynamic aspects of nanoscale friction. Physical Review B, 2019, 100, .	1.1	11
129	Insight into high temperature performance of magnetron sputtered Si-Ta-C-(N) coatings with an ion-implanted interlayer. Applied Surface Science, 2021, 541, 148526.	3.1	11
130	Interface-Driven Strain in Heavy Ion-Irradiated Zr/Nb Nanoscale Metallic Multilayers: Validation of Distortion Modeling via Local Strain Mapping. ACS Applied Materials & Interfaces, 2022, 14, 12777-12796.	4.0	11
131	In situ TEM observations on the structural evolution of a nanocrystalline W-Ti alloy at elevated temperatures. Journal of Alloys and Compounds, 2018, 749, 1000-1008.	2.8	10
132	Effect of the addition of Si into V2O5 coatings: Structure and tribo-mechanical properties. Surface and Coatings Technology, 2018, 349, 111-118.	2.2	10
133	Controllable Tunneling Triboelectrification of Two-Dimensional Chemical Vapor Deposited MoS2. Scientific Reports, 2019, 9, 334.	1.6	10
134	Control of energy dissipation in sliding low-dimensional materials. Physical Review B, 2020, 102, .	1.1	10
135	Ab initio description of nanodiamonds: A DFT and TDDFT benchmark. Diamond and Related Materials, 2020, 108, 107959.	1.8	10
136	The fabrication of high strength Zr/Nb nanocomposites using high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 790, 139693.	2.6	10
137	Vibrational contributions to intrinsic friction in charged transition metal dichalcogenides. Nanoscale, 2017, 9, 11488-11497.	2.8	9
138	The wettability and tribological behaviour of thin F-doped WS2 films deposited by magnetron sputtering. Surface and Coatings Technology, 2019, 378, 125033.	2.2	9
139	Nanotribological Investigation of Sliding Properties of Transition Metal Dichalcogenide Thin Film Coatings. ACS Applied Materials & Interfaces, 2020, 12, 54191-54202.	4.0	9
140	Nanotribology of transition metal dichalcogenide flakes deposited by chemical vapour deposition: The influence of chemical composition and sliding speed on nanoscale friction of monolayers. Applied Surface Science, 2021, 556, 149762.	3.1	9
141	TEM Characterization of W-O-N Coatings. Microscopy and Microanalysis, 2008, 14, 27-30.	0.2	8
142	The role of Niâ€“Tiâ€“(Cu) interlayers on the mechanical properties and nano-scratch behaviour of solid lubricant Wâ€“Sâ€“C coatings. Surface and Coatings Technology, 2014, 254, 260-269.	2.2	8
143	An insight on the MoS2 tribo-film formation to determine the friction performance of Mo-S-N sputtered coatings. Surface and Coatings Technology, 2021, 408, 126791.	2.2	8
144	Exploring Nanoscale Lubrication Mechanisms of Multilayer MoS2 During Sliding: The Effect of Humidity. Frontiers in Chemistry, 2021, 9, 684441.	1.8	8

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145	Titanium doped MoSe2 coatings â€“ Synthesis, structure, mechanical and tribological properties investigation. Applied Surface Science, 2021, 568, 150990.	3.1	8
146	The influence of nitrogen and oxygen additions on the thermal characteristics of aluminium-based thin films. Materials Chemistry and Physics, 2015, 163, 569-580.	2.0	7
147	Effect of electric fields in low-dimensional materials: Nanofrictional response as a case study. Physical Review B, 2020, 102, .	1.1	7
148	Volume and pressure of helium bubbles inside liquid Pb16Li. A molecular dynamics study. Nuclear Fusion, 2020, 60, 046018.	1.6	7
149	Revisiting the electronic nature of nanodiamonds. Diamond and Related Materials, 2021, 120, 108627.	1.8	7
150	Formation of Solid Lubricants during High Temperature Tribology of Silver-Doped Molybdenum Nitride Coatings Deposited by dcMS and HIPIMS. Coatings, 2021, 11, 1415.	1.2	7
151	Mechanical and tribological characterization of CN_x films deposited by d.c. magnetron sputtering. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 4267-4274.	0.8	6
152	Elucidating the role of TiCl₄ post-treatment on percolation of TiO₂ electron transport layer in perovskite solar cells. Journal Physics D: Applied Physics, 2020, 53, 385501.	1.3	6
153	Tribological properties of V2O5 studied via reactive molecular dynamics simulations. Tribology International, 2021, 154, 106750.	3.0	6
154	Fine control of lattice thermal conductivity in low-dimensional materials. Physical Review B, 2021, 103, .	1.1	6
155	Study of the Cathode Potential in a Sputtering Discharge by Pulsing the Reactive Gas: Case of a W Target in an Ar-O2 Atmosphere. Plasma Processes and Polymers, 2007, 4, 62-68.	1.6	5
156	Niâ€“Ti(â€“Cu) shape memory alloy interlayers supporting low friction functional coatings. Tribology International, 2015, 88, 135-142.	3.0	5
157	Deformation-Controlled Design of Metallic Nanocomposites. ACS Applied Materials & Interfaces, 2019, 11, 46296-46302.	4.0	5
158	The role of Î±â€³ orthorhombic phase content on the tenacity and fracture toughness behavior of Ti-22Nb-10Zr coating used in the design of long-term medical implants. Applied Surface Science, 2019, 464, 328-336.	3.1	5
159	Fabrication of nanocrystalline supersaturated Wâ€“Al alloys with enhanced thermal stability and high sinterability. Journal of Physics and Chemistry of Solids, 2021, 148, 109686.	1.9	5
160	A new protocol for the identification of singlet fission sensitizers through computational screening. Journal of Computational Chemistry, 2021, 42, 2241-2249.	1.5	5
161	Phototribology: Control of Friction by Light. ACS Applied Materials & Interfaces, 2021, 13, 43746-43754.	4.0	5
162	TEM investigation of MoSeC films. Microscopy and Microanalysis, 2008, 14, 7-10.	0.2	4

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163	Stress-induced martensitic transformation in Niâ€“Ti(â€“Cu) interlayers controlling stress distribution in functional coatings during sliding. Applied Surface Science, 2015, 325, 192-202.	3.1	4
164	Microstructural evolution of nanometric Ti(NiCu)2 precipitates in annealed Niâ€“Tiâ€“Cu thin films. Vacuum, 2015, 117, 1-3.	1.6	4
165	Nanomechanical characterization of alumina coatings grown on FeCrAl alloy by thermal oxidation. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 57, 310-320.	1.5	4
166	Triboelectrification of Two-Dimensional Chemical Vapor Deposited WS2 at Nanoscale. Scientific Reports, 2019, 9, 12570.	1.6	4
167	Deformation Behavior of Nanocrystalline Body-Centered Cubic Iron with Segregated, Foreign Interstitial: A Molecular Dynamics Study. Materials, 2020, 13, 5351.	1.3	4
168	Stochastic thermodynamics of nanoscale friction. Physical Review E, 2021, 103, 052104.	0.8	4
169	Analysis of hypervelocity impacts: the tungsten case. Nuclear Fusion, 2022, 62, 026034.	1.6	4
170	Nanoscale colour control: Wâ€“O graded coatings deposited by magnetron sputtering. Nanotechnology, 2008, 19, 395202.	1.3	3
171	Potential Application of a <scp><scp>Tiâ€“C:H</scp></scp> Coating in Implants. Journal of the American Ceramic Society, 2012, 95, 2741-2745.	1.9	3
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