Maksim Antonov

List of Publications by Year
in descending order

126	2,163	236833	315616
papers	citations	25 h-index	38 g-index

126	126	126	1429
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Friction and wear of fiber reinforced polyimide composites. Wear, 2013, 301, 122-129.	1.5	118
2	Assessment of gradient and nanogradient PVD coatings behaviour under erosive, abrasive and impact wear conditions. Wear, 2009, 267, 898-906.	1.5	70
3	Solid Lubrication at High-Temperaturesâ€"A Review. Materials, 2022, 15, 1695.	1.3	60
4	Effect of temperature and load on three-body abrasion of cermets and steel. Tribology International, 2012, 46, 261-268.	3.0	57
5	The effect of temperature and sliding speed on friction and wear of Si3N4, Al2O3, and ZrO2 balls tested against AlCrN PVD coating. Tribology International, 2018, 118, 500-514.	3.0	55
6	Micromechanical properties and erosive wear performance of chromium carbide based cermets. Wear, 2009, 267, 152-159.	1.5	52
7	Mapping of impact-abrasive wear performance of WCâ€"Co cemented carbides. Wear, 2015, 332-333, 971-978.	1.5	52
8	Effect of WC grain size and content on low stress abrasive wear of manual arc welded hardfacings with low-carbon or stainless steel matrix. Wear, 2015, 328-329, 378-390.	1.5	52
9	Effect of temperature on sliding and erosive wear of fiber reinforced polyimide hybrids. Tribology International, 2015, 82, 525-533.	3.0	52
10	Assessment of mechanically mixed layer developed during high temperature erosion of cermets. Wear, 2007, 263, 878-886.	1.5	51
11	Erosion and abrasion of chromium carbide based cermets produced by different methods. Wear, 2007, 263, 905-911.	1.5	49
12	Cermets surface transformation under erosive and abrasive wear. Tribology International, 2010, 43, 1566-1575.	3.0	47
13	High temperature wear of cermet particle reinforced NiCrBSi hardfacings. Tribology International, 2013, 68, 45-55.	3.0	46
14	Mechanical Behavior of Ti6Al4V Scaffolds Filled with CaSiO3 for Implant Applications. Applied Sciences (Switzerland), 2019, 9, 3844.	1.3	41
15	Performance of polyimide and PTFE based composites under sliding, erosive and high stress abrasive conditions. Tribology International, 2020, 147, 106282.	3.0	41
16	Perspectives of metal-diamond composites additive manufacturing using SLM-SPS and other techniques for increased wear-impact resistance. International Journal of Refractory Metals and Hard Materials, 2020, 88, 105192.	1.7	40
17	Ultra high-pressure spark plasma sintered ZrC-Mo and ZrC-TiC composites. International Journal of Refractory Metals and Hard Materials, 2016, 61, 201-206.	1.7	38
18	Self-lubricating materials for extreme temperature tribo-applications. Materials Today: Proceedings, 2021, 44, 4583-4589.	0.9	37

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19	Effect of SiO2 and PTFE additives on dry sliding of NiP electroless coating. Tribology International, 2013, 65, 295-302.	3.0	35
20	Role of laser remelting and heat treatment in mechanical and tribological properties of selective laser melted Ti6Al4V alloy. Journal of Alloys and Compounds, 2022, 897, 163207.	2.8	35
21	Regression Models and Fuzzy Logic Prediction of TBM Penetration Rate. Open Engineering, 2017, 7, 60-68.	0.7	33
22	Oxidation of spark plasma sintered ZrC-Mo and ZrC-TiC composites. International Journal of Refractory Metals and Hard Materials, 2017, 66, 244-251.	1.7	31
23	Effect of oxidation on erosive wear behaviour of boiler steels. Tribology International, 2013, 68, 35-44.	3.0	30
24	Assessment of cermets performance in erosive media. International Journal of Materials and Product Technology, 2007, 28, 361.	0.1	29
25	Hybrid Syntactic Foams of Metal â€“ Fly Ash Cenosphere â€“ Clay. Key Engineering Materials, 0, 674, 35-40.	0.4	27
26	Assessment of 3D printed steels and composites intended for wear applications in abrasive, dry or slurry erosive conditions. International Journal of Refractory Metals and Hard Materials, 2020, 86, 105126.	1.7	27
27	Lightweight 3D printed Ti6Al4V-AlSi10Mg hybrid composite for impact resistance and armor piercing shielding. Journal of Materials Research and Technology, 2020, 9, 13842-13854.	2.6	27
28	The effect of fine erodent retained on the surface during erosion of metals, ceramics, plastic, rubber and hardmetal. Wear, 2016, 354-355, 53-68.	1.5	25
29	Influence of particle impact conditions and temperature on erosionâ€“oxidation of steels at elevated temperatures. Wear, 2011, 272, 159-175.	1.5	24
30	Wear performance of hierarchically structured alumina reinforced by hybrid graphene encapsulated alumina nanofibers. Wear, 2016, 368-369, 287-295.	1.5	24
31	Friction studies of metal surfaces with various 3D printed patterns tested in dry sliding conditions. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2018, 232, 43-53.	1.0	24
32	Effect of Oxidation on Sliding Wear Behavior of NiCrSiB-TiB₂Plasma Sprayed Coatings. Key Engineering Materials, 0, 604, 16-19.	0.4	23
33	Structure, Phase Composition, and Wear Mechanisms of Plasma-Sprayed NiCrSiBâ€“20 wt.% TiB2 Coating. Powder Metallurgy and Metal Ceramics, 2015, 53, 663-671.	0.4	23
34	Assessment of zirconia doped hardmetals as tribomaterials. Wear, 2011, 271, 1909-1915.	1.5	22
35	Experimental setup for testing and mapping of high temperature abrasion and oxidation synergy. Wear, 2009, 267, 1798-1803.	1.5	21
36	High temperature erosion of Ti(Mo)Câ€“Ni cermets. Wear, 2009, 267, 1894-1899.	1.5	21

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37	Erosive wear of advanced composites based on WC. Tribology International, 2012, 46, 254-260.	3.0	21
38	Spark plasma sintered ZrC-Mo cermets: Influence of temperature and compaction pressure. Ceramics International, 2016, 42, 12907-12913.	2.3	21
39	Sliding wear performance of in-situ spark plasma sintered Ti-TiBw composite at temperatures up to 900ÂÂ°C. Wear, 2021, 476, 203663.	1.5	21
40	Effect of loading system inertia on tribological behaviour of ceramicâ€“ceramic, ceramicâ€“metal and metalâ€“metal dry sliding contacts. Tribology International, 2013, 65, 207-214.	3.0	20
41	Wetting and interfacial behaviour in the TiB2-NiCrBSiC system. Journal of Alloys and Compounds, 2019, 778, 15-22.	2.8	20
42	Some views on the erosionâ€“corrosion response of bulk chromium carbide based cermets. Journal Physics D: Applied Physics, 2006, 39, 3165-3174.	1.3	19
43	Behaviour of tungsten alloy with iron and nickel under repeated high temperature plasma pulses. Fusion Engineering and Design, 2020, 151, 111408.	1.0	19
44	Rippling on Wear Scar Surfaces of Nanocrystalline Diamond Films After Reciprocating Sliding Against Ceramic Balls. Tribology Letters, 2014, 55, 493-501.	1.2	18
45	Wear behaviour of doped WCâ€“NI based hardmetals tested by four methods. Wear, 2016, 352-353, 171-179.	1.5	18
46	Effect of lattice surface treatment on performance of hardmetal - titanium interpenetrating phase composites. International Journal of Refractory Metals and Hard Materials, 2020, 86, 105087.	1.7	18
47	Erosive wear of boiler steels by sand and ash. Wear, 2014, 317, 213-224.	1.5	17
48	Wear Resistance of (Diamond-Ni)-Ti6Al4V Gradient Materials Prepared by Combined Selective Laser Melting and Spark Plasma Sintering Techniques. Advances in Tribology, 2019, 2019, 1-12.	2.1	17
49	The experimental and theoretical investigations of damage development and distribution in double-forged tungsten under plasma irradiation-initiated extreme heat loads. Nukleonika, 2016, 61, 169-177.	0.3	16
50	Effect of erodent particle impact energy on wear of cemented carbides. Wear, 2017, 376-377, 507-515.	1.5	15
51	Raman Spectroscopy for Reliability Assessment of Multilayered AlCrN Coating in Tribo-Corrosive Conditions. Coatings, 2018, 8, 229.	1.2	15
52	Circular economy approach to recycling technologies of post-consumer textile waste in Estonia: a review. Proceedings of the Estonian Academy of Sciences, 2021, 70, 80.	0.9	15
53	Electrochemical Behaviour of TiCN and TiAlN Gradient Coatings Prepared by Lateral Rotating Cathode Arc PVD Technology. Key Engineering Materials, 0, 721, 414-418.	0.4	14
54	Mathematical models for erosion and corrosion in power plants. A review of applicable modelling optimization techniques. , 2016, , .		14

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55	Modelling of impact-abrasive wear of ceramic, metallic, and composite materials. Proceedings of the Estonian Academy of Sciences, 2019, 68, 191.	0.9	14
56	Erosive Wear Resistance of Nature-inspired Flexible Materials. Tribology Letters, 2020, 68, 1.	1.2	14
57	Hot Sliding Wear of 88 wt.% TiBâ€“Ti Composite from SHS Produced Powders. Materials, 2021, 14, 1242.	1.3	14
58	Comparison of the wear and frictional properties of Cu matrix composites prepared by pulsed electric current sintering. Proceedings of the Estonian Academy of Sciences, 2014, 63, 62.	0.9	13
59	Selective Laser Melting of Diamond-Containing or Postnitrided Materials Intended for Impact-Abrasive Conditions: Experimental and Analytical Study. Advances in Materials Science and Engineering, 2019, 2019, 1-11.	1.0	13
60	The Impact Resistance of Highly Densified Metal Alloys Manufactured from Gas-Atomized Pre-Alloyed Powders. Coatings, 2021, 11, 216.	1.2	13
61	Hybrid metal-ceramic biomaterials fabricated through powder bed fusion and powder metallurgy for improved impact resistance of craniofacial implants. Materialia, 2022, 24, 101465.	1.3	13
62	Sliding wear of TiC-NiMo and Cr₃C₂-Ni cermet particles reinforced FeCrSiB matrix HVOF sprayed coatings. Estonian Journal of Engineering, 2013, 19, 203.	0.3	12
63	Thermophysical properties and thermal shock resistance of chromium carbide based cermets. , 2006, 12, 358.		12
64	The Rolling Contact Fatigue of PVD Coated Spur Gears. Key Engineering Materials, 2012, 527, 77-82.	0.4	11
65	Wear behavior of Co-free hardmetals doped by zirconia and produced by conventional PM and SPS routines. Wear, 2014, 312, 83-90.	1.5	11
66	High-temperature erosion of Fe-based coatings reinforced with cermet particles. Surface Engineering, 2016, 32, 624-630.	1.1	11
67	Effect of Thermal Spraying Method on the Microstructure and Wear Behaviour of FeNiCrBSiC-CrB₂ Coating. Key Engineering Materials, 0, 799, 37-42.	0.4	10
68	Effect of cBN content and additives on sliding and surface fatigue wear of spark plasma sintered Al2O3-cBN composites. Wear, 2022, 494-495, 204250.	1.5	10
69	Correlation between surface fatigue and microstructural defects of cemented carbides. Wear, 2008, 264, 770-774.	1.5	9
70	Oxidation-abrasion of TiC-based cermets in SiC medium. Wear, 2011, 273, 23-31.	1.5	9
71	Investigation of the high temperature dry sliding wear behavior of graphene nanoplatelets reinforced aluminum matrix composites. Journal of Composite Materials, 2021, 55, 1769-1782.	1.2	9
72	High-Temperature Wear Performance of hBN-Added Ni-W Composites Produced from Combustion-Synthesized Powders. Materials, 2022, 15, 1252.	1.3	9

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73	Generation and development of damage in double forged tungsten in different combined regimes of irradiation with extreme heat loads. Journal of Nuclear Materials, 2017, 495, 91-102.	1.3	8
74	Axial and torsional buckling analysis of single- and multi-walled carbon nanotubes: finite element comparison between armchair and zigzag types. SN Applied Sciences, 2019, 1, 1.	1.5	8
75	Solid particle erosion of refractories: A critical discussion of two test standards. Wear, 2019, 426-427, 552-561.	1.5	8
76	Wear behaviour and wear mechanisms of different hardmetal grades in comparison with polycrystalline diamond in a new impact-abrasion test. International Journal of Refractory Metals and Hard Materials, 2020, 92, 105286.	1.7	8
77	Wear behaviour of Cr3C2â€“Ni cermet reinforced hardfacings. Journal of Materials Research and Technology, 2020, 9, 7068-7078.	2.6	7
78	TiAlN coatings tribology for textile machinery parts. Proceedings of the Estonian Academy of Sciences, 2021, 70, 163.	0.9	7
79	Mechanical Characterization and Wear Performance of WC â€“ ZrO₂ â€“ Ni Cermets Produced by Hot Isostatic Pressing. Advanced Materials Research, 0, 214, 344-348.	0.3	6
80	Influence of Cr, Ti and Zr Oxides Formation on High Temperature Sliding of NiAl-Based Plasma Spray Coatings. Key Engineering Materials, 2016, 674, 308-312.	0.4	6
81	3D Printing of Plain and Gradient Cermets with Efficient Use of Raw Materials. Key Engineering Materials, 0, 799, 239-245.	0.4	6
82	Impact of pulsed deuterium plasma irradiation on dual-phase tungsten alloys. Fusion Engineering and Design, 2021, 164, 112215.	1.0	6
83	TiCN coating tribology for the circular economy of textile industries. Journal of Industrial Textiles, 2022, 51, 8947S-8959S.	1.1	6
84	Abrasive-Erosive Wear of Thermally Sprayed Coatings from Experimental and Commercial Cr3C2-Based Powders. Journal of Thermal Spray Technology, 2017, 26, 2020-2029.	1.6	5
85	Adaptation of Laboratory tests for the assessment of wear resistance of drill-bit inserts for rotary-percussive drilling of hard rocks. Wear, 2020, 456-457, 203366.	1.5	5
86	Tailoring the microstructure and tribological properties in commercially pure aluminium processed by High Pressure Torsion Extrusion. Proceedings of the Estonian Academy of Sciences, 2021, 70, 540.	0.9	5
87	Microstructural Aspects of Ceramic-Metal Composites Performance in Erosive Media. Advances in Science and Technology, 2006, 45, 132-141.	0.2	4
88	Effect of oxidation on abrasive wear behaviour of titanium carbide based composites in silica medium. Estonian Journal of Engineering, 2010, 16, 264.	0.3	4
89	Characterisation of microstructure and mechanical properties of cermets at micro- and nanoscales. International Journal of Materials and Product Technology, 2011, 40, 58.	0.1	4
90	Coatings and surface engineering. Industry oriented research. Estonian Journal of Engineering, 2012, 18, 176.	0.3	4

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91	Assessment of the reliability of hardfacings for soil rippers. Journal of Friction and Wear, 2015, 36, 89-95.	0.1	4
92	Modeling of Microstructures and Analysis of Abrasive Wear of Arc-Welded Hadfield Steel. Journal of Friction and Wear, 2018, 39, 78-84.	0.1	4
93	Selective Laser Melting of Ti/cBN Composite. Key Engineering Materials, 0, 799, 257-262.	0.4	4
94	Tribology of alumina materials for the circular economy of manufacturing textile industries. Proceedings of the Estonian Academy of Sciences, 2021, 70, 215.	0.9	4
95	Wear Rate of Nanocrystalline Diamond Coating under High Temperature Sliding Conditions. Solid State Phenomena, 0, 267, 219-223.	0.3	4
96	Performance of Al2O3-cBN materials and the perspective of using hyperspectral imaging during cutting tests. Proceedings of the Estonian Academy of Sciences, 2021, 70, 524.	0.9	4
97	Mild Steel Tribology for Circular Economy of Textile Industries. Tribology in Industry, 2021, 43, 552-560.	0.5	4
98	Comparison of a tribological model and real component test methods for lubricated contacts. Estonian Journal of Engineering, 2009, 15, 349.	0.3	3
99	Effect of basalt addition on tribological performance of FeCrSiB HVOF coatings. Estonian Journal of Engineering, 2012, 18, 211.	0.3	3
100	Influence of Laser Hardening to the Sliding Wear Resistance of the PVD (Al,Ti)N-G and nACoÂ® Coatings. Key Engineering Materials, 0, 604, 28-31.	0.4	3
101	Effect of basalt and silica additives on erosive wear resistance of cast ceramics. Proceedings of the Estonian Academy of Sciences, 2016, 65, 144.	0.9	3
102	The Effect of Spark Plasma Sintering Thermal Cycle on Behaviour of Fe-Based Hardfacings Reinforced with WC and WC-Based Hardmetal. Key Engineering Materials, 0, 799, 3-8.	0.4	3
103	Raman Spectroscopy of Multilayered AlCrN Coating under High Temperature Sliding/Oxidation. Key Engineering Materials, 0, 799, 9-14.	0.4	3
104	Assessment of abrasive powder behaviour during impact-abrasive wear of PCD elements. Wear, 2019, 426-427, 151-161.	1.5	3
105	High Temperature Erosion-Corrosion of Wear Protection Materials. Journal of Bio- and Tribo-Corrosion, 2021, 7, 1.	1.2	3
106	Adhesion of AlCrN coating deposited on TiB₂/Ti composites sintered by SPS dedicated for high temperature tribological applications. IOP Conference Series: Materials Science and Engineering, 2021, 1140, 012010.	0.3	3
107	Multifractal analysis of high-temperature plasma irradiated tungsten surfaces. Surface Topography: Metrology and Properties, 2021, 9, 035030.	0.9	3
108	Thermal Shock Resistance of Chromium Carbide-Based Cermets. , 2014, , 5128-5135.		3

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109	The wear of PVD coated elements in oscillation motion at high temperature. Proceedings of the Estonian Academy of Sciences, 2021, 70, 500.	0.9	3
110	Impact and Sliding Wear Properties of Single Layer, Multilayer and Nanocomposite Physical Vapour Deposited (PVD) Coatings on the Plasma Nitrided Low-Alloy 42CrMo4 Steel. Key Engineering Materials, 0, 527, 223-228.	0.4	2
111	Fracture Toughness of Ceramics Fired at Different Temperatures. Medziagotyra, 2012, 18, .	0.1	2
112	Determination of Resistance to Wear of Particulate Composite. Key Engineering Materials, 2014, 604, 188-191.	0.4	2
113	Effect of TiB2 Additives on Wear Behavior of NiCrBSi-Based Plasma-Sprayed Coatings. Medziagotyra, 2016, 22, .	0.1	2
114	Effect of alloying additives on impact-abrasive wear of manual arc welded hadfield steel hardfacings. Journal of Friction and Wear, 2016, 37, 170-178.	0.1	2
115	Effect of Basalt Reinforcement Type and Content on the Abrasive Wear Behaviour of Polymer Composites. Key Engineering Materials, 0, 674, 181-188.	0.4	2
116	Effect of WC Grain Size and Content on Erosive Wear of Manual Arc Welded Hardfacings with Low-Carbon Ferritic-Pearlitic Steel or Stainless Steel Matrix. Key Engineering Materials, 0, 674, 213-218.	0.4	2
117	Study of submerged and plasma arc welded composite hardfacings with a novel Cr3C2â€“Ni reinforcement. Proceedings of the Estonian Academy of Sciences, 2019, 68, 150.	0.9	2
118	HVOF Sprayed Fe-Based Wear-Resistant Coatings with Carbide Reinforcement, Synthesized In Situ and by Mechanically Activated Synthesis. Coatings, 2020, 10, 1092.	1.2	2
119	Functionally Gradient Ti6Al4V-TiB Composite Produced by Spark Plasma Sintering. IOP Conference Series: Materials Science and Engineering, 2021, 1140, 012004.	0.3	2
120	Sliding Wear Performance of AlCrN Coating on TiB2/Ti Composites at High Temperatures. Materials, 2021, 14, 6771.	1.3	2
121	EFFECT OF HBN ON WEAR OF AlCrN-COATED SPARK PLASMA - SINTERED TiB2/Ti COMPOSITES AT TEMPERATURES UP TO 900Â°C. Tribologia, 2022, 299, 43-55.	0.0	2
122	High Temperature Cyclic Impact/Abrasion Testing of Boiler Steels. Key Engineering Materials, 0, 604, 289-292.	0.4	1
123	Covalent coupling of ionic liquid to carbon nanotubes: preparation and tribological properties. Materials Research Society Symposia Proceedings, 2014, 1707, 1.	0.1	1
124	Effect of Electrode Covering Composition on the Microstructure, Wear, and Economic Feasibility of Fe-C-Cr Manual Arc-Welded Hardfacings. Coatings, 2020, 10, 294.	1.2	1
125	Tungsten carbide material tribology and circular economy relationship in polymer and composites industries. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 0, , 146442072210969.	0.7	1
126	Erosive Wear Failures. , 2021, , 755-763.		0