Alexey Vereschaka

List of Publications by Year
in descending order

113	2,337	257357	276775
papers	citations	24 h-index	41 g-index

114	114	114	507
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nano-scale multilayered-composite coatings for the cutting tools. International Journal of Advanced Manufacturing Technology, 2014, 72, 303-317.	1.5	89
2	Study of cracking mechanisms in multi-layered composite nano-structured coatings. Wear, 2017, 378-379, 43-57.	1.5	87
3	Delamination and longitudinal cracking in multi-layered composite nano-structured coatings and their influence on cutting tool life. Wear, 2017, 390-391, 209-219.	1.5	79
4	Effect of adhesion and the wear-resistant layer thickness ratio on mechanical and performance properties of ZrN - (Zr,Al,Si)N coatings. Surface and Coatings Technology, 2019, 357, 218-234.	2.2	78
5	Development of Wear-resistant Complex for High-speed Steel Tool when Using Process of Combined Cathodic Vacuum Arc Deposition. Procedia CIRP, 2013, 9, 8-12.	1.0	76
6	Investigation of wear dynamics for cutting tools with multilayer composite nanostructured coatings in turning constructional steel. Wear, 2019, 420-421, 17-37.	1.5	75
7	Nano-scale Multilayered Composite Coatings for Cutting Tools Operating under Heavy Cutting Conditions. Procedia CIRP, 2014, 14, 239-244.	1.0	70
8	Improving the Efficiency of the Cutting Tool Made of Ceramic when Machining Hardened Steel by Applying Nano-Dispersed Multi-Layered Coatings . Key Engineering Materials, 0, 581, 68-73.	0.4	67
9	Comparative analysis of cutting properties and nature of wear of carbide cutting tools with multi-layered nano-structured and gradient coatings produced by using of various deposition methods. International Journal of Advanced Manufacturing Technology, 2017, 90, 3421-3435.	1.5	66
10	Working efficiency of cutting tools with multilayer nano-structured Ti-TiCN-(Ti,Al)CN and Ti-TiCN-(Ti,Al,Cr)CN coatings: Analysis of cutting properties, wear mechanism and diffusion processes. Surface and Coatings Technology, 2017, 332, 198-213.	2.2	65
11	Investigation of wear and diffusion processes on rake faces of carbide inserts with Ti-TiN-(Ti,Al,Si)N composite nanostructured coating. Wear, 2018, 416-417, 72-80.	1.5	65
12	Effect of adhesion and tribological properties of modified composite nano-structured multi-layer nitride coatings on WC-Co tools life. Tribology International, 2018, 128, 313-327.	3.0	64
13	Cutting Tools Made of Layered Composite Ceramics with Nano-Scale Multilayered Coatings. Procedia CIRP, 2012, 1, 301-306.	1.0	63
14	Investigation of multicomponent nanolayer coatings based on nitrides of Cr, Mo, Zr, Nb, and Al. Surface and Coatings Technology, 2020, 401, 126258.	2.2	62
15	Investigation of the influence of the thickness of nanolayers in wear-resistant layers of Ti-TiN-(Ti,Cr,Al)N coating on destruction in the cutting and wear of carbide cutting tools. Surface and Coatings Technology, 2020, 385, 125402.	2.2	62
16	Nano-scale multi-layered coatings for improved efficiency of ceramic cutting tools. International Journal of Advanced Manufacturing Technology, 2017, 90, 27-43.	1.5	61
17	Influence of the nanostructure of Ti-TiN-(Ti,Al,Cr)N multilayer composite coating on tribological properties and cutting tool life. Tribology International, 2020, 150, 106388.	3.0	56
18	Development and Research of Environmentally Friendly Dry Technological Machining System with Compensation of Physical Function of Cutting Fluids. Procedia CIRP, 2013, 7, 311-316.	1.0	54

#	Article	IF	Citations
19	Properties of (Cr,Al,Si)N-(DLC-Si) composite coatings deposited on a cutting ceramic substrate. Ceramics International, 2020, 46, 18241-18255.	2.3	53
20	Ecologically Friendly Dry Machining by Cutting Tool from Layered Composition Ceramic with Nano-Scale Multilayered Coatings. Key Engineering Materials, 0, 496, 67-74.	0.4	48
21	Investigation of wear mechanisms for the rake face of a cutting tool with a multilayer composite nanostructured Crâ€“CrN-(Ti,Cr,Al,Si)N coating in high-speed steel turning. Wear, 2019, 438-439, 203069.	1.5	46
22	Study of wear mechanism of hard-alloy tools during machining of refractory alloys. Journal of Friction and Wear, 2013, 34, 208-213.	0.1	41
23	Improving the Efficiency of the Cutting Tools Made of Mixed Ceramics by Applying Modifying Nanoscale Multilayered Coatings. Advanced Materials Research, 0, 712-715, 391-394.	0.3	41
24	Development and research of nanostructured multilayer composite coatings for tungsten-free carbides with extended area of technological applications. International Journal of Advanced Manufacturing Technology, 2016, 87, 3449-3457.	1.5	41
25	Specific features of the structure and properties of arc-PVD coatings depending on the spatial arrangement of the sample in the chamber. Vacuum, 2022, 200, 111047.	1.6	38
26	Improvement of Working Efficiency of Cutting Tools by Modifying its Surface Properties by Application of Wear-Resistant Complexes. Advanced Materials Research, 0, 712-715, 347-351.	0.3	37
27	Study of Properties of Nanostructured Multilayer Composite Coatings of Ti-TiN-(TiCrAl)N and Zr-ZrN-(ZrNbCrAl)N. Journal of Nano Research, 0, 40, 90-98.	0.8	37
28	Investigation of the influence of the features of the deposition process on the structural features of microparticles in PVD coatings. Vacuum, 2022, 202, 111144.	1.6	34
29	Development of Assisted Filtered Cathodic Vacuum Arc Deposition of Nano-Dispersed Multi-Layered Composite Coatings on Cutting Tools. Key Engineering Materials, 0, 581, 62-67.	0.4	32
30	Influence of nanolayer thickness on the performance properties of multilayer composite nano-structured modified coatings for metal-cutting tools. International Journal of Advanced Manufacturing Technology, 2018, 95, 2625-2640.	1.5	31
31	Control of Structure and Properties of Nanostructured Multilayer Composite Coatings Applied to Cutting Tools as a Way to Improve Efficiency of Technological Cutting Operations. Journal of Nano Research, 0, 37, 51-57.	0.8	26
32	Investigation of the tribological properties of Ti-TiN-(Ti,Al,Nb,Zr)N composite coating and its efficiency in increasing wear resistance of metal cutting tools. Tribology International, 2021, 164, 107236.	3.0	25
33	Influence of the Thickness of a Nanolayer Composite Coating on Values of Residual Stress and the Nature of Coating Wear. Coatings, 2020, 10, 63.	1.2	24
34	Investigation of the properties of the Cr,Mo-(Cr,Mo,Zr,Nb)N-(Cr,Mo,Zr,Nb,Al)N multilayer composite multicomponent coating with nanostructured wear-resistant layer. Wear, 2021, 468-469, 203597.	1.5	23
35	Nano-Scale Multi-Layered Coatings for Cutting Tools Generated Using Assisted Filtered Cathodic-Vacuum-Arc Deposition (AFCVAD). Applied Mechanics and Materials, 0, 325-326, 1454-1459.	0.2	22
36	Investigation of tribological and functional properties of Cr,Mo-(Cr,Mo)N-(Cr,Mo,Al)N multilayer composite coating. Tribology International, 2021, 155, 106804.	3.0	22

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37	Investigation of performance and cutting properties of carbide tool with nanostructured multilayer Zr-ZrN-(Zr0.5,Cr0.3,Al0.2)N coating. International Journal of Advanced Manufacturing Technology, 2019, 102, 2953-2965.	1.5	21
38	Development of wear-resistant coatings compounds for high-speed steel tool using a combined cathodic vacuum arc deposition. International Journal of Advanced Manufacturing Technology, 2016, 84, 1471.	1.5	19
39	Investigation of the tribological and operational properties of (Mex,Moy,Al1-(x+y))N (Me â€“Ti, Zr or Cr) coatings. Tribology International, 2022, 165, 107305.	3.0	19
40	Handbook of Nanomaterials and Nanocomposites for Energy and Environmental Applications. , 2020, , .		18
41	Development of Technological Means for Formation of Multilayer Composite Coatings, Providing Increased Resistance of Carbide Tools, for Different Machining Conditions. Key Engineering Materials, 2013, 581, 55-61.	0.4	14
42	A study of the cutting properties and wear mechanism of ceramic edge tools with nanostructure multilayer composite coatings. Journal of Friction and Wear, 2014, 35, 483-488.	0.1	14
43	Filtered cathodic vacuum Arc deposition of nano-layered composite coatings for machining hard-to-cut materials. International Journal of Advanced Manufacturing Technology, 2016, 84, 1647.	1.5	14
44	Improvement in Reliability of Ceramic Cutting Tool using a Damping System and Nano-structured Multi-layered Composite Coatings. Procedia CIRP, 2017, 63, 563-568.	1.0	14
45	Multilayer composition coatings for cutting tools: formation and performance properties. Mechanics and Industry, 2017, 18, 706.	0.5	14
46	Influence of Thickness of Multilayered Nano-Structured Coatings Ti-TiN-(TiCrAl)N and Zr-ZrN-(ZrCrNbAl)N on Tool Life of Metal Cutting Tools at Various Cutting Speeds. Coatings, 2018, 8, 44.	1.2	14
47	Improvement of structure and quality of nanoscale multilayered composite coatings, deposited by filtered cathodic vacuum arc deposition method. Nanomaterials and Nanotechnology, 2017, 7, 184798041668080.	1.2	13
48	Increase in Efficiency of End Milling of Titanium Alloys Due to Tools with Multilayered Composite Nano-Structured Zr-ZrN-(Zr,Al)N and Zr-ZrN-(Zr,Cr,Al)N Coatings. Coatings, 2018, 8, 395.	1.2	13
49	Study of Wear Resistance of Sintered Powder Tool Materials. Advanced Materials Research, 0, 871, 159-163.	0.3	12
50	Methodology of formation of multi-layered coatings for carbide cutting tools. Mechanics and Industry, 2016, 17, 706.	0.5	12
51	Study of Mechanism of Failure and Wear of Multi-Layered Composite Nano-Structured Coating Based on System Ti-TiN-(ZrNbTi)N Deposited on Carbide Substrates. Journal of Nano Research, 2017, 45, 110-123.	0.8	12
52	Effect produced by thickness of nanolayers of multilayer composite wear-resistant coating on tool life of metal-cutting tool in turning of steel AISI 321. Procedia CIRP, 2018, 77, 549-552.	1.0	11
53	Investigation of wear mechanisms of multilayer nanostructured wear-resistant coatings during turning of steel. Part 2: Diffusion, oxidation processes and cracking in Ti-TiN-(Ti,Cr,Mo,Al)N coating. Wear, 2021, 486-487, 204096.	1.5	11
54	Influence of thickness of multilayer composite nano-structured coating Ti-TiN-(Ti,Al,Cr)N on tool life of metal-cutting tool. Procedia CIRP, 2018, 77, 545-548.	1.0	10

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55	Increase in tool life for end milling titanium alloys using tools with multilayer composite nanostructured modified coatings. Procedia CIRP, 2019, 81, 1412-1416.	1.0	10
56	Influence of the Thickness of Multilayer Composite Nano-Structured Coating Tiâ€“TiNâ€“(Ti,Al,Si)N on the Tool Life of Metal-Cutting Tools and the Nature of Wear. Coatings, 2019, 9, 730.	1.2	10
57	Nanostructured Multilayer Composite Coatings on Ceramic Cutting Tools for Finishing Treatment of High-Hardness Quenched Steels. Metal Science and Heat Treatment, 2016, 57, 614-619.	0.2	9
58	Investigation of the Influence of Microdroplets on the Coatings Nanolayer Structure. Coatings, 2020, 10, 1204.	1.2	9
59	Development of a Model of Crack Propagation in Multilayer Hard Coatings under Conditions of Stochastic Force Impact. Materials, 2021, 14, 260.	1.3	9
60	Investigation of the structure and phase composition of the microdroplets formed during the deposition of PVD coatings. Surface and Coatings Technology, 2022, 441, 128574.	2.2	9
61	Influence of Mo content on the properties of multilayer nanostructured coatings based on the (Mo,Cr,Al)N system.. Tribology International, 2022, 174, 107741.	3.0	9
62	Two-component end mills with multilayer composite nano-structured coatings as a viable alternative to monolithic carbide end mills. Mechanics and Industry, 2017, 18, 705.	0.5	8
63	Influence of the application of wear-resistant coatings on force parameters of the cutting process and the tool life during end milling of titanium alloys. Materials Today: Proceedings, 2021, 38, 1428-1432.	0.9	8
64	Improvement of the performance properties of cutting tools using the multilayer composite wear-resistant coatings based on nitrides of Cr, Mo, Zr, Nb, and Al. Materials Today: Proceedings, 2021, 38, 1421-1427.	0.9	8
65	Investigation of the properties of Ti-TiN-(Ti,Al,Nb,Zr)N composite coating and its efficiency in increasing wear resistance of metal cutting tools. Surface and Coatings Technology, 2021, 421, 127432.	2.2	8
66	Environmentally Friendly Technological System of Cutting Using Magnetic Microcapsules and Cutting Tools with Nanoscale Composite Coating. Procedia CIRP, 2016, 41, 829-834.	1.0	7
67	The Study Wear Resistance of the Modified Surface of the Cutting Tool. Applied Mechanics and Materials, 2014, 548-549, 417-421.	0.2	6
68	Influence of the cutting speed on chip formation in turning high-temperature chromium and nickel alloys. Russian Engineering Research, 2015, 35, 298-301.	0.2	6
69	Efficiency of Application of (Mo, Al)N-Based Coatings with Inclusion of Ti, Zr or Cr during the Turning of Steel of Nickel-Based Alloy. Coatings, 2021, 11, 1271.	1.2	6
70	Carbide Tools with Nano-Dispersed Coating for High-Performance Cutting of Hard-to-Cut Materials. Advanced Materials Research, 0, 871, 164-170.	0.3	5
71	Multilayer nanostructured coatings for cutting tools. Inorganic Materials: Applied Research, 2014, 5, 522-529.	0.1	5
72	Selection and Analysis of Parameters for Composite Carbide End Mills. Applied Mechanics and Materials, 0, 703, 131-136.	0.2	5

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73	Improving the Efficiency of Carbide End Mills by Deposition of Nano-Scale Multi-Layered Composition Coatings. Applied Mechanics and Materials, 2014, 684, 264-270.	0.2	5
74	Evaluation of Efficiency of Edge Tool on the Basis of New Technique for Analyzing Parameters of Scribing Mark. Applied Mechanics and Materials, 2015, 719-720, 96-101.	0.2	5
75	Investigation of Properties of the Zr,Hf-(Zr,Hf)N-(Zr,Hf,Me,Al)N Coatings, Where Me Means Cr, Ti, or Mo. Coatings, 2021, 11, 1471.	1.2	5
76	Improvement of Working Capacity of Carbide Tools for Machining Rail Wheel Pairs. Key Engineering Materials, 2013, 581, 9-13.	0.4	4
77	High-Strength Ceramic Cutting Tools with Multipurpose Coatings for Highly Effective Processing of Tempered Steel. Advanced Materials Research, 2014, 1064, 148-153.	0.3	4
78	Increased Operating Properties of Cutting Ceramics by Application of Nanostructured Multilayer Wear-Resistant Coating. Journal of Nano Research, 0, 50, 90-104.	0.8	4
79	Investigation into Performance of Multilayer Composite Nano-Structured Cr-CrN-(Cr0.35Ti0.40Al0.25)N Coating for Metal Cutting Tools. Coatings, 2018, 8, 447.	1.2	4
80	Research of mechanical and cutting properties, wear and failure mechanisms of nano-structured multilayered composite coating Ti-TiN-(NbZrAl)N. Ã‰pÃ‡Å‘anyag: Journal of Silicate Based and Composite Materials, 2016, 68, 114-118.	0.0	4
81	Wear Resistance, Patterns of Wear and Plastic Properties of Cr,Mo-(Cr,Mo,)N-(Cr,Mo,Al)N Composite Coating with a Nanolayer Structure. Coatings, 2022, 12, 758.	1.2	4
82	Development and Research of Nanostructured Multi-Layered Composite Coatings for Tool Made of Tungsten-Free Carbides (Cermets). Applied Mechanics and Materials, 0, 457-458, 120-126.	0.2	3
83	Development of a Cutting Tool for High-performance Cutting of Railway Rolling Components. Procedia CIRP, 2016, 46, 360-363.	1.0	3
84	High-efficiency Machining of Materials Used in Heavy Power Engineering. Procedia CIRP, 2016, 46, 356-359.	1.0	3
85	Application of nanostructured Zr-ZrN-(Zr,Al)N and Zr-ZrN-(Zr,Cr,Al)N coatings for improvement of tool life and performance in end milling of carbides. IOP Conference Series: Materials Science and Engineering, 2019, 613, 012020.	0.3	3
86	Application of finite element method (FEM) to study stress-strain state and distribution of temperatures in cutting zone in turning of various structural materials by carbide tools with coatings of various composition and architecture. IOP Conference Series: Materials Science and Engineering, 2019, 613, 012019.	0.3	3
87	Investigation of the Properties of Ti-TiN-(Ti,Cr,Mo,Al)N Multilayered Composite Coating with Wear-Resistant Layer of Nanolayer Structure. Coatings, 2020, 10, 1236.	1.2	3
88	Nanoscale multilayered composite coatingâ€"applications for ecomachining. , 2021, , 377-423.		3
89	Cemented Carbides for Machining of Heat-Resistant Materials. Advanced Materials Research, 2012, 628, 37-42.	0.3	2
90	System of High-performance Cutting with Enhanced Combined Effect of Cooling and Lubrication Medium Based on Ranque-hilsch Effect. Procedia CIRP, 2016, 57, 457-460.	1.0	2

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91	Development of modifying compounds for multilayer nanostructured coatings for cutting tools. International Journal of Nanotechnology, 2017, 14, 574.	0.1	2
92	Application of carbide cutting tools with nano-structured multilayer composite coatings for turning austenitic steels, type 16Cr-10NI. Mechanics and Industry, 2017, 18, 707.	0.5	2
93	Improved efficiency of ceramic cutting tools in machining hardened steelâ€"an application with nanostructured multilayered coatings. , 2021, , 381-433.		2
94	Influence of the thickness of nanolayers in wear-resistant layer of Ti-TiN-(Ti,Cr,Al)N coating on the tool life and wear pattern of the carbide cutting tools in steel turning. Procedia CIRP, 2021, 101, 262-265.	1.0	2
95	TRIBOTECHNICAL PARAMETERS OF FRICTION BETWEEN A COATED CUTTING TOOL AND MATERIAL BEING MACHINED. , 0, , .		2
96	Filtered cathodic vacuum arc deposition (FCVAD) technology as method for creation of nanostructured multicomponent modifying coatings for wide application range. Procedia CIRP, 2020, 95, 999-1003.	1.0	2
97	Investigation of the Nature of the Interaction of Me-MeN-(Me,Mo,Al)N Coatings (Where Me = Zr, Ti, or) Tj ETQq1 1 0.784314 rgBT /Ov	1.2	2
98	Surface Modification of Broaches from the Powder High Speed Steels Applied to Processing of Aviation Products from Heat-Resistant Alloys. Advanced Materials Research, 2014, 1064, 142-147.	0.3	1
99	Research of the cutting of materials used in heavy power engineering by means of the carbide cutting tools with nanoscale wear-resistant coating. Mechanics and Industry, 2016, 17, 711.	0.5	1
100	Improvement reliability of cutting ceramic through use of damping system and nanostructured multilayered composite coatings. Mechanics and Industry, 2018, 19, 606.	0.5	1
101	Main Ways to Improve Cutting Tools for Machine Wheel Tread Profile. , 2019, , .		1
102	Nanostructured Multilayer Composite Coatings for Cutting Tools. , 0, , .		1
103	Advanced Manufacturing Processes III. Lecture Notes in Mechanical Engineering, 2022, , .	0.3	1
104	Development of nitride and DLC coatings for high performance milling of CFRP products. Procedia CIRP, 2022, 107, 417-421.	1.0	1
105	Thermodynamics of Precision Diamond Lapping of Ceramic Surfaces. Key Engineering Materials, 0, 496, 115-120.	0.4	0
106	Wear Mechanism and Failure of Carbide Cutting Tools with Nanostructured Multilayered Composite Coatings. , 0, , .		0
107	Delamination and Longitudinal Cracking in Multilayered Composite Nanostructured Coatings and Their Influence on Cutting Tool Wear Mechanism and Tool Life. , 0, , .		0
108	Specifics in formation of nanolayer structure of coatings during their deposition using filtered cathodic vacuum arc deposition (FCVAD) technology. Materials Today: Proceedings, 2019, 19, 2018-2022.	0.9	0

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109	Convectionâ€“Diffusion Model for the Synthesis of PVD Coatings and the Influence of Nanolayer Parameters on the Formation of Fractal and Hierarchical Structures. Coatings, 2020, 10, 927.	1.2	0
110	Application of Cr,Mo-(Cr,Mo,Zr,Nb)N-(Cr,Mo,Zr,Nb,Al)N multilayered composite multicomponent coating to increase the cutting tool life in turning steel. Procedia CIRP, 2021, 101, 274-277.	1.0	0
111	The Effect of Elemental Composition and Nanostructure of Multilayer Composite Coatings on Their Tribological Properties at Elevated Temperatures. , 0, , .		0
112	EFFECT OF TEMPERATURE AND OXIDATION IN CUTTING ZONE ON WEAR OF CUTTING TOOLS WITH MULTILAYER COMPOSITE NANO-STRUCTURED COATINGS AT HIGH SPEED TURNING. MM Science Journal, 2019, 2019, 3048-3052.	0.2	0
113	Comparative Analysis of Tribological and Functional Properties of Multilayer Composite Nanostructured Coatings Based on Nitrides of Cr, Mo, Zr, Nb, and Al. Lecture Notes in Mechanical Engineering, 2022, , 363-372.	0.3	0