

# Valery E Rubtsov

## List of Publications by Year in descending order

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106  
papers

1,115  
citations

430754

18  
h-index

454834

30  
g-index

107  
all docs

107  
docs citations

107  
times ranked

480  
citing authors

#	ARTICLE	IF	CITATIONS
1	A proposed diffusion-controlled wear mechanism of alloy steel friction stir welding (FSW) tools used on an aluminum alloy. <i>Wear</i> , 2014, 318, 130-134.	1.5	75
2	Effect of heat input on phase content, crystalline lattice parameter, and residual strain in wire-feed electron beam additive manufactured 304 stainless steel. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 99, 2353-2363.	1.5	74
3	Ultrasonic-assisted aging in friction stir welding on Al-Cu-Li-Mg aluminum alloy. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2017, 61, 679-690.	1.3	68
4	Gradient transition zone structure in "copper" sample produced by double wire-feed electron beam additive manufacturing. <i>Journal of Materials Science</i> , 2020, 55, 9258-9272.	1.7	62
5	Vibration and acoustic emission monitoring the stability of peakless tool turning: Experiment and modeling. <i>Journal of Materials Processing Technology</i> , 2017, 246, 224-234.	3.1	55
6	Subsurface shear instability and nanostructuring of metals in sliding. <i>Wear</i> , 2010, 268, 59-66.	1.5	50
7	Microstructure and grain growth inhomogeneity in austenitic steel produced by wire-feed electron beam melting: the effect of post-building solid-solution treatment. <i>Journal of Materials Science</i> , 2020, 55, 9211-9224.	1.7	41
8	Acoustic emission study of surface deterioration in tribocontacting. <i>Applied Acoustics</i> , 2017, 117, 106-112.	1.7	37
9	General regularities of the microstructure formation during friction stir welding and sliding friction. <i>Journal of Friction and Wear</i> , 2015, 36, 127-131.	0.1	33
10	Using acoustic emission for the analysis of wear processes during sliding friction. <i>Technical Physics Letters</i> , 2013, 39, 223-225.	0.2	31
11	Microstructural, mechanical and acoustic emission-assisted wear characterization of equal channel angular pressed (ECAP) low stacking fault energy brass. <i>Tribology International</i> , 2018, 123, 273-285.	3.0	28
12	Ultrasonic-assisted laser welding on AISI 321 stainless steel. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2019, 63, 875-886.	1.3	27
13	Shear instability in the subsurface layer of a material in friction. <i>Physics of the Solid State</i> , 2011, 53, 358-362.	0.2	26
14	One-dimensional model of inhomogeneous shear in sliding. <i>Physical Mesomechanics</i> , 2012, 15, 337-341.	1.0	25
15	Characterization of AA7075/AA5356 gradient transition zone in an electron beam wire-feed additive manufactured sample. <i>Materials Characterization</i> , 2021, 172, 110867.	1.9	25
16	Effect of friction stir welding parameters on defect formation. <i>AIP Conference Proceedings</i> , 2015, , .	0.3	22
17	Detecting transition to chatter mode in peakless tool turning by monitoring vibration and acoustic emission signals. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 95, 157-169.	1.5	22
18	Peculiarities of Structure Formation in Copper/Steel Bimetal Fabricated by Electron-Beam Additive Technology. <i>Russian Physics Journal</i> , 2019, 62, 1486-1494.	0.2	20

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19	High-strength friction stir processed dispersion hardened Al-Cu-Mg alloy. AIP Conference Proceedings, 2017, , .	0.3	18
20	Plastic deformation and quasi-periodic vibrations in a tribological system. Technical Physics, 2004, 49, 1457-1463.	0.2	17
21	Thermography inspection of friction stir welding. , 2014, , .		17
22	Structure and tensile fracture of 1570C aluminum alloy. AIP Conference Proceedings, 2016, , .	0.3	17
23	Effect of Ultrasonic Application during Friction Stir Welding on Microstructure and Properties of AA2024 Fixed Joints. Key Engineering Materials, 2016, 683, 227-231.	0.4	17
24	Structural evolution of multiple friction stir processed AA2024. AIP Conference Proceedings, 2017, , .	0.3	16
25	Investigating vibration characteristics of magnetostrictive transducers for air-coupled ultrasonic NDT of composites. NDT and E International, 2019, 107, 102151.	1.7	16
26	Study of the formation of contact between rough surfaces based on the particle method. Technical Physics Letters, 1998, 24, 178-179.	0.2	15
27	Friction-stir processed ultrafine grain high-strength Al-Mg alloy material. AIP Conference Proceedings, 2017, , .	0.3	15
28	Anisotropy of the tensile properties in austenitic stainless steel obtained by wire-feed electron beam additive growth. Letters on Materials, 2019, 9, 460-464.	0.2	15
29	Wear of ZhS6U Nickel Superalloy Tool in Friction Stir Processing on Commercially Pure Titanium. Metals, 2020, 10, 799.	1.0	13
30	Electron-beam additive manufacturing of high-nitrogen steel: Microstructure and tensile properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 826, 141951.	2.6	13
31	Diffusion-controlled wear of steel friction stir welding tools used on aluminum alloys. AIP Conference Proceedings, 2015, , .	0.3	12
32	Radioscopy of remnant joint line in a friction stir welded seam. Russian Journal of Nondestructive Testing, 2015, 51, 573-579.	0.3	11
33	Ultrasonic assisted second phase transformations under severe plastic deformation in friction stir welding of AA2024. Materials Today Communications, 2019, 21, 100660.	0.9	10
34	Advanced high-strength AA5083 welds by high-speed hybrid laser-arc welding. Materials Letters, 2021, 291, 129594.	1.3	10
35	Ultrasonic impact treatment of the welded joint of aluminum-magnesium alloy produced by friction stir welding. AIP Conference Proceedings, 2014, , .	0.3	9
36	Structure and properties of fixed joints formed by ultrasonic-assisted friction-stir welding. AIP Conference Proceedings, 2015, , .	0.3	9

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37	Mechanical Properties of Ultrafine-Grained Al-Mg Alloy Produced by Severe Plastic Deformation. Key Engineering Materials, 0, 743, 203-206.	0.4	9
38	Features of Microstructure and Texture Formation of Large-Sized Blocks of C11000 Copper Produced by Electron Beam Wire-Feed Additive Technology. Materials, 2022, 15, 814.	1.3	9
39	Effect of heat generation due to plastic deformation on behavior of surface-layer material during sliding. Journal of Friction and Wear, 2009, 30, 324-328.	0.1	8
40	Wear Resistance of Friction Pair of Metal Composite/Copper under Electric Current. IOP Conference Series: Materials Science and Engineering, 2016, 156, 012027.	0.3	7
41	Structure and Mechanical Properties of Cu-Al-Mn System-Based Copper Alloy Obtained by Additive Manufacturing. Russian Physics Journal, 2021, 64, 333-339.	0.2	7
42	Regularities of Friction Stir Processing Hardening of Aluminum Alloy Products Made by Wire-Feed Electron Beam Additive Manufacturing. Metals, 2022, 12, 183.	1.0	7
43	Radiographic detection of defects in friction stir welding on aluminum alloy AMg5M. AIP Conference Proceedings, 2014, , .	0.3	6
44	Microstructure and Corrosion Resistance of AA4047/AA7075 Transition Zone Formed Using Electron Beam Wire-Feed Additive Manufacturing. Materials, 2021, 14, 6931.	1.3	6
45	The effect of friction stir welding tool wear on the weld quality of aluminum alloy AMg5M. AIP Conference Proceedings, 2014, , .	0.3	5
46	Ultrasonic-assisted friction stir welding on V95AT1 (7075) aluminum alloy. AIP Conference Proceedings, 2015, , .	0.3	5
47	Structure and Phase Composition of Ti-6Al-4V Alloy Obtained by Electron-Beam Additive Manufacturing. Russian Physics Journal, 2019, 62, 1461-1468.	0.2	5
48	Structural Heredity of the Aluminum Alloy Obtained by the Additive Method and Modified Under Severe Thermomechanical Action on Its Final Structure and Properties. Russian Physics Journal, 2020, 62, 1565-1572.	0.2	5
49	Microstructure of Fixed Butt Joints Formed by Friction Stir Welding on 2024T3 Aluminum Alloy. Key Engineering Materials, 2016, 683, 203-208.	0.4	4
50	AA2024 microstructural evolution after bidirectional friction stir processing. AIP Conference Proceedings, 2017, , .	0.3	4
51	Microstructural inhomogeneity of phase composition and grain structure in electron beam wire-feed additive manufactured AISI 304 stainless steel. AIP Conference Proceedings, 2019, , .	0.3	4
52	In Situ Investigation of Strain Localization in Sintered, Porous Segmented Alumina. Materials, 2021, 14, 3720.	1.3	4
53	THE EFFECT OF NIOBIUM ON MICROSTRUCTURE AND MECHANICAL PROPERTIES OF AUSTENITIC CrNi STEEL PRODUCED BY WIRE-FEED ELECTRON BEAM ADDITIVE MANUFACTURING. Nanoscience and Technology, 2020, 11, 109-118.	0.6	4
54	Morphological features of the copper surface layer under sliding with high density electric current. AIP Conference Proceedings, 2015, , .	0.3	3

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55	Microstructure of AA 2024 fixed joints formed by friction stir welding. AIP Conference Proceedings, 2015, , .	0.3	3
56	About wear and average surface temperature of copper or steel contacts at sliding current collection. AIP Conference Proceedings, 2015, , .	0.3	3
57	The Use of Laser-Doppler Vibrometry for Modal Analysis of Carbon-Fiber Reinforced Composite. Key Engineering Materials, 0, 712, 313-318.	0.4	3
58	Features of the Structural-Phase State of the Alloy Ti-6Al-4V in the Formation of Products using Wire-Feed Electron Beam Additive Manufacturing. Metal Working and Material Science, 2018, 20, 60-71.	0.0	3
59	Ultrasonic phase array and eddy current methods for diagnostics of flaws in friction stir welds. , 2014, , .		2
60	Friction stir processing on carbon steel. , 2014, , .		2
61	Application of 3D Computed Microtomography for Investigating the Microstructural Defects of Carbon Fiber Reinforced Composite Made by 3D-Printing. Key Engineering Materials, 2016, 712, 324-327.	0.4	2
62	Structure and Worn Surface Morphology on Copper Containing Composites under Dry Sliding with High Contact Current Density. Key Engineering Materials, 2016, 712, 137-142.	0.4	2
63	Flux-cored wire for additive manufacturing of parts with gradient structure. AIP Conference Proceedings, 2019, , .	0.3	2
64	A comparative study of the macroscopical and microscopical fracture mechanisms in cast and additively manufactured austenitic stainless steels. AIP Conference Proceedings, 2019, , .	0.3	2
65	The Influence of Phase Composition and Phase Distribution on Crack Formation and Fracture Mechanisms of Cr-Ni Steels Produced by the Method of 3D Electron-Beam Printing. Russian Physics Journal, 2020, 63, 917-925.	0.2	2
66	Microstructure and phase composition of vanadium-alloyed high-nitrogen steel fabricated by additive manufacturing. AIP Conference Proceedings, 2020, , .	0.3	2
67	The Effect of Phase Transformations During Electron-Beam 3D-Printing and Post-Built Heat Treatment on Plastic Deformation and Fracture of Additively Manufactured High Nitrogen Cr-Mn Steel. Russian Physics Journal, 2021, 64, 1183-1190.	0.2	2
68	The microstructure of aluminum-magnesium alloy friction stir weld. , 2014, , .		1
69	Surface layer structure of AISI 1020 steel at different stages of dry sliding under electric current of high density. IOP Conference Series: Materials Science and Engineering, 2016, 116, 012022.	0.3	1
70	Quality Estimation of Dry Grinding of Skiving Cutters With Organic Bonding Diamond Wheels. IOP Conference Series: Materials Science and Engineering, 2016, 142, 012099.	0.3	1
71	Modal analysis of additive manufactured carbon fiber reinforced polymer composite framework: Experiment and modeling. AIP Conference Proceedings, 2016, , .	0.3	1
72	Tensile strength on friction stir processed AMg5 (5083) aluminum alloy. AIP Conference Proceedings, 2016, , .	0.3	1

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73	Mechanical strength of multicomponent reinforced composite structures at different temperatures. AIP Conference Proceedings, 2017, , .	0.3	1
74	Corrosion resistance of Fe-Cr-Ni-Mn-Mo-Ti steel produced by electron beam additive manufacturing with powder-cored wire and ferritic steel substrate. AIP Conference Proceedings, 2019, , .	0.3	1
75	Effect of feed speed on the quality of titanium-aluminum bimetal produced by friction stir welding. AIP Conference Proceedings, 2019, , .	0.3	1
76	On the influence of post-built heat treatment on strength and ductility of AISI 304 steel produced by electron-beam additive technology. AIP Conference Proceedings, 2019, , .	0.3	1
77	Structural Features of Laser Welded 13Mn6 Constructional Steel. Metal Working and Material Science, 2018, 20, 123-133.	0.0	1
78	Microstructure and phase composition of high-nitrogen steel fabricated by electron beam additive manufacturing. AIP Conference Proceedings, 2020, , .	0.3	1
79	Mechanical properties and structure formation of aluminum-silicon alloys after friction stir processing. Diagnostics Resource and Mechanics of Materials and Structures, 2021, , 44-59.	0.1	1
80	Features of the microstructure development under conditions, reproducing the process of friction stir welding. Molecular-dynamics study. , 2014, , .		0
81	Friction stir processing on high carbon steel U12. AIP Conference Proceedings, 2015, , .	0.3	0
82	Friction-Burnishing Treatment of Medium-Carbon Steel. Metal Science and Heat Treatment, 2015, 57, 334-338.	0.2	0
83	Surface layer structure and average contact temperature of copper-containing materials under dry sliding with high electric current density. AIP Conference Proceedings, 2016, , .	0.3	0
84	Energy of surface layer deterioration of copper-based materials under dry sliding with high electric current density. AIP Conference Proceedings, 2016, , .	0.3	0
85	Energy of the surface layer deterioration of 1020 steel and copper at dry sliding against 1045 steel with a high electric current density. AIP Conference Proceedings, 2016, , .	0.3	0
86	Mechanical strength characterization of three-component composite structural components. AIP Conference Proceedings, 2016, , .	0.3	0
87	Mechanical properties of three-component additive manufactured composites at elevated and cool temperatures. AIP Conference Proceedings, 2016, , .	0.3	0
88	Tribological dry sliding behavior of chopped carbon fiber reinforced polyetheretherketone. AIP Conference Proceedings, 2017, , .	0.3	0
89	Dry slipping steelâ€“steel contact at high current density. Steel in Translation, 2017, 47, 17-20.	0.1	0
90	Modal analysis of additive manufactured carbon fiber reinforced polymer composite: Experiment and modeling. AIP Conference Proceedings, 2017, , .	0.3	0

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91	Manufacture of aluminum-steel bimetal by friction stir welding. AIP Conference Proceedings, 2019, , .	0.3	0
92	Features of structure formation processes in AA2024 alloy joints formed by the friction stir welding with bobbin tool. Metal Working and Material Science, 2021, 23, 98-115.	0.0	0
93	On the problem of tool destruction when obtaining fixed joints of thick-walled aluminum alloy blanks by friction welding with mixing. Metal Working and Material Science, 2021, 23, 72-83.	0.0	0
94	Effect of Main Parameters of the Friction Stir Welding on Structure Imperfections of Welded Joint. Metal Working and Material Science, 2017, , 19-29.	0.0	0
95	Application for the Way of Ultrasonic Assistance Input and Estimation of its Efficiency for Friction Stir Welding of Aluminum Alloys. Metal Working and Material Science, 2019, 21, 40-52.	0.0	0
96	Structure and Mechanical Properties of Weld Metal Formed by Hybrid Laser-Arc Welding of 13Mn6 Steel. Metal Working and Material Science, 2019, 21, 84-96.	0.0	0
97	Distribution of Temperature along Axis of the Steel Sample at Sliding under Electric Current against Steel Counterbody. Metal Working and Material Science, 2019, 21, 136-144.	0.0	0
98	The Influence of the Rolling Direction of AA5056 on the Microstructure and Properties of Weld Joints obtained by Friction Stir Welding. Metal Working and Material Science, 2020, 22, 124-136.	0.0	0
99	Effect of Friction Stir Welding Mode and its Direction Relative to the Rolling Direction of 2024 Alloy on the Structure and Mechanical Properties of its Weld Joints. Metal Working and Material Science, 2020, 22, 110-123.	0.0	0
100	The influence of samples production parameters on the structure and mechanical properties of wrought aluminum alloys of the Al-Cu-Mg system. AIP Conference Proceedings, 2020, , .	0.3	0
101	The change in solidification mode and phase composition in "321 stainless Steel/NiCr Alloy" joint produced by Wire-feed electron beam melting. AIP Conference Proceedings, 2020, , .	0.3	0
102	The peculiarities of hydrogen embrittlement of Nb-alloyed stainless steel fabricated by electron-beam additive manufacturing. AIP Conference Proceedings, 2020, , .	0.3	0
103	Peculiarities of tensile deformation and fracture of high-nitrogen steel obtained by electron beam additive manufacturing. AIP Conference Proceedings, 2020, , .	0.3	0
104	The influence of the rolling direction of aluminum alloy AA2024 sheets on mechanical properties of welded joints produced at different friction stir welding modes. AIP Conference Proceedings, 2020, , .	0.3	0
105	Microstructure/mechanical properties relationship in high-nitrogen steel obtained by electron beam additive manufacturing and conventional casting. AIP Conference Proceedings, 2020, , .	0.3	0
106	Fabrication of Conically Shaped CuCr1 Chrome Bronze Products by Wire-Feed Electron Beam Additive Manufacturing. Materials Science Forum, 0, 1049, 24-30.	0.3	0