

# Roman Savrai

## List of Publications by Year in descending order

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64  
papers

537  
citations

687220

13  
h-index

752573

20  
g-index

64  
all docs

64  
docs citations

64  
times ranked

202  
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of hardening friction treatment with hard-alloy indenter on microstructure, mechanical properties, and deformation and fracture features of constructional steel under static and cyclic tension. <i>Surface and Coatings Technology</i> , 2010, 205, 841-852.	2.2	36
2	Tribological aspects in nanostructuring burnishing of structural steels. <i>Physical Mesomechanics</i> , 2014, 17, 250-264.	1.0	35
3	The influence of the stress state on the plasticity of transformation induced plasticity-aided steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2002, 33, 1659-1667.	1.1	32
4	The Behavior of Gas Powder Laser Clad NiCrBSi Coatings Under Contact Loading. <i>Journal of Materials Engineering and Performance</i> , 2016, 25, 1068-1075.	1.2	31
5	Improvement of wear resistance of quenched structural steel by nanostructuring frictional treatment. <i>Journal of Friction and Wear</i> , 2012, 33, 433-442.	0.1	26
6	Mechanical properties and fracture upon static tension of the high-carbon steel with different types of pearlite structure. <i>Physics of Metals and Metallography</i> , 2007, 104, 522-534.	0.3	23
7	Structure, mechanical characteristics, and deformation and fracture features of quenched structural steel under static and cyclic loading after combined strain-heat nanostructuring treatment. <i>Physical Mesomechanics</i> , 2015, 18, 43-57.	1.0	23
8	Effect of nanostructuring frictional treatment on the properties of high-carbon pearlitic steel. Part I: microstructure and surface properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 734, 506-512.	2.6	23
9	Effect of strengthening friction treatment on the chemical composition, structure, and tribological properties of a high-carbon steel. <i>Physics of Metals and Metallography</i> , 2010, 110, 507-521.	0.3	21
10	Eddy-current testing of the hardness, wear resistance, and thickness of coatings prepared by gas-powder laser cladding. <i>Russian Journal of Nondestructive Testing</i> , 2009, 45, 797-805.	0.3	18
11	Influence of prolonged heating on thermal softening, chemical composition, and evolution of the nanocrystalline structure formed in quenched high-carbon steel upon friction treatment. <i>Physics of Metals and Metallography</i> , 2014, 115, 303-314.	0.3	16
12	Structural features of the behavior of a high-carbon pearlitic steel upon cyclic loading. <i>Physics of Metals and Metallography</i> , 2011, 111, 95-109.	0.3	15
13	Effect of friction-induced hardening on the features of magnetic and eddy-current behavior of an annealed structural steel under cyclic loading conditions. <i>Russian Journal of Nondestructive Testing</i> , 2008, 44, 496-508.	0.3	14
14	Application of an Eddy-current method for the assessment of stored plastic deformation and residual mechanical properties after cyclic loading of an annealed medium-carbon steel. <i>Russian Journal of Nondestructive Testing</i> , 2007, 43, 228-233.	0.3	12
15	Development of Methods for Steel Surface Deformation Nanostructuring. <i>Metal Science and Heat Treatment</i> , 2020, 62, 61-69.	0.2	12
16	Effect of the structure and stress state on the magnetic properties of metal in different zones of welded pipes of large diameter. <i>Physics of Metals and Metallography</i> , 2014, 115, 949-956.	0.3	10
17	Estimating the Contact Endurance of the AISI 321 Stainless Steel Under Contact Gigacycle Fatigue Tests. <i>Journal of Materials Engineering and Performance</i> , 2018, 27, 601-611.	1.2	10
18	XPS characterization of surface layers of stainless steel nitrided in electron beam plasma at low temperature. <i>Surface and Coatings Technology</i> , 2020, 386, 125492.	2.2	10

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19	Improving the strength of the AISI 321 austenitic stainless steel by frictional treatment. <i>Diagnostics Resource and Mechanics of Materials and Structures</i> , 2017, , 43-62.	0.1	10
20	Eddy-current testing of fatigue degradation under contact loading of NiCrBSi coatings obtained through gasâ€“powder laser cladding. <i>Russian Journal of Nondestructive Testing</i> , 2015, 51, 692-704.	0.3	9
21	Resistance of Laser-Clad Chromiumâ€“Nickel Coatings to Failure under Contact Fatigue Loading. <i>Physics of Metals and Metallography</i> , 2018, 119, 1013-1021.	0.3	9
22	Effect of nanostructuring frictional treatment on the properties of high-carbon pearlitic steel. Part II: mechanical properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 734, 513-518.	2.6	9
23	Effect of hardened surface layer obtained by frictional treatment on the contact endurance of the AISI 321 stainless steel under contact gigacycle fatigue tests. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 802, 140679.	2.6	9
24	Eddy-current testing of fatigue degradation upon contact fatigue loading of gas powder laser clad NiCrBSiâ€“Cr3C2 composite coating. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	8
25	Structure and Surface Properties of Metastable Austenitic Steel Subjected to Liquid Carburizing at a Reduced Temperature. <i>Physics of Metals and Metallography</i> , 2020, 121, 65-71.	0.3	8
26	Effect of Liquid Carburizing at Lowered Temperature on the Micromechanical Characteristics of Metastable Austenitic Steel. <i>Physics of Metals and Metallography</i> , 2020, 121, 1015-1020.	0.3	8
27	Effect of preliminary nanostructuring frictional treatment on the efficiency of nitriding of metastable austenitic steel in electron beam plasma. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	7
28	Structural-phase transformations and changes in the properties of AISI 321 stainless steel induced by liquid carburizing at low temperature. <i>Surface and Coatings Technology</i> , 2022, 443, 128613.	2.2	7
29	The peculiarities of magnetic and eddy-current testing of quenched structural steel hardened by nanostructuring frictional treatment. <i>Russian Journal of Nondestructive Testing</i> , 2012, 48, 615-622.	0.3	6
30	Application of magnetic and electromagnetic-acoustic methods for assessing plastic deformations under cyclic loading of annealed intermediate-carbon steel. <i>Russian Journal of Nondestructive Testing</i> , 2006, 42, 309-314.	0.3	5
31	The influence of a combined strain-heat treatment on the features of electromagnetic testing of fatigue degradation of quenched constructional steel. <i>Russian Journal of Nondestructive Testing</i> , 2013, 49, 690-704.	0.3	5
32	Wear resistance of a laser-clad NiCrBSi coating hardened by frictional finishing. <i>AIP Conference Proceedings</i> , 2016, , .	0.3	5
33	The structural characteristics and contact loading behavior of gas powder laser clad CoNiCrW coating. <i>Optics and Laser Technology</i> , 2020, 126, 106079.	2.2	5
34	Effect of a continuous and gas-cyclic plasma nitriding on the quality of nanostructured austenitic stainless steel. <i>Metal Working and Material Science</i> , 2017, , 55-66.	0.0	5
35	Effect of heat treatment on the structure and properties of a high-nitrogen austenitic corrosion-resistant O3Kh20AG11N7M2 steel. <i>Russian Metallurgy (Metally)</i> , 2010, 2010, 183-192.	0.1	4
36	Structure and mechanical and corrosion properties of new high-nitrogen Cr-Mn steels containing molybdenum. <i>Russian Metallurgy (Metally)</i> , 2012, 2012, 380-388.	0.1	4

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37	Magnetic and eddy-current testing of hardened constructional steel subjected to combined strain-thermal treatment. Russian Journal of Nondestructive Testing, 2012, 48, 673-685.	0.3	4
38	Eddy-current testing of fatigue degradation in additionally heat-treated gas powder laser clad NiCrBSi coating under contact fatigue loading. AIP Conference Proceedings, 2018, , .	0.3	4
39	A review of studies in the field of production of coatings on metals by means of mechanical alloying. Surfaces and Interfaces, 2021, 27, 101451.	1.5	4
40	Improving the scratch test properties of plasma-nitrided stainless austenitic steel by preliminary nanostructuring frictional treatment. AIP Conference Proceedings, 2018, , .	0.3	4
41	Magnetic inspection of fatigue degradation of a high-carbon pearlitic steel. Russian Journal of Nondestructive Testing, 2011, 47, 803-809.	0.3	3
42	An Approach to Eddy-Current Evaluation of the Structural State in a Cast Aluminum-Silicon Alloy Subjected to Surface Laser Heat Treatment. Journal of Nondestructive Evaluation, 2019, 38, 1.	1.1	3
43	Micromechanical Characteristics of the Surface Layer of Metastable Austenitic Steel after Frictional Treatment. Physics of Metals and Metallography, 2021, 122, 800-806.	0.3	3
44	Improving the tribological properties of austenitic 12Kh18N10T steel by nanostructuring frictional treatment. Metal Working and Material Science, 2015, , 80-92.	0.0	3
45	Use of a magnetic method for estimating the deformation stability of retained austenite in sheet high-strength economically alloyed steels used in the automotive industry. Russian Journal of Nondestructive Testing, 2006, 42, 203-207.	0.3	2
46	The influence of strain-heat nanostructuring treatment on the deformation and fracture features of quenched steel 50 under static and cyclic loading. AIP Conference Proceedings, 2016, , .	0.3	2
47	Metallurgical Processes During Plasma Remelting of a Metallized Coating of the Fe-Cr-Ti-Al System. Metallurgist, 2017, 60, 1202-1206.	0.2	2
48	Nanostructuring and surface hardening of structural steels by ultrasonic impact-frictional treatment. AIP Conference Proceedings, 2018, , .	0.3	2
49	Eddy Current Testing of Fatigue Degradation of Metastable Austenitic Steel under Gigacycle Contact-Fatigue Loading. Russian Journal of Nondestructive Testing, 2021, 57, 393-400.	0.3	2
50	EFFECT OF THE COMPOSITION OF ABSORBING COATINGS ON THE STRUCTURE AND PROPERTIES OF A CAST ALUMINUM ALLOY SUBJECTED TO SURFACE LASER HEAT TREATMENT. Diagnostics Resource and Mechanics of Materials and Structures, 2018, , 86-105.	0.1	2
51	Magnetic and electromagnetic inspection of mechanical properties of high-carbon steel with an initial fine-pearlite structure subjected to high-temperature annealing. Russian Journal of Nondestructive Testing, 2008, 44, 117-131.	0.3	1
52	Behavior of pearlite of various morphologies during cyclic tension. Russian Metallurgy (Metally), 2010, 2010, 310-315.	0.1	1
53	The effect of temperature on the mechanical characteristics of the nitrogen-containing 04Kh20N6G11M2AFB steel under static tension. AIP Conference Proceedings, 2016, , .	0.3	1
54	Evaluation of contact stresses in the surface of an elastic-plastic plate penetrated by a flat-ended rigid cylindrical punch. AIP Conference Proceedings, 2017, , .	0.3	1

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55	Effect of frictional treatment on the microstructure and surface properties of low-carbon steel. AIP Conference Proceedings, 2018, , .	0.3	1
56	Features of eddy-current testing of the fatigue degradation of laser clad cobalt-nickel-chromium coating under contact loading. Letters on Materials, 2020, 10, 315-321.	0.2	1
57	Effect of Laser Alloying with the Powder Mixtures of Cuâ€“Znâ€“Ti and Siâ€“Cu on the Structure and Properties of Cast Aluminum Alloy. Metal Working and Material Science, 2019, 21, 70-84.	0.0	1
58	Specific features of magnetic testing of the mechanical properties of high-carbon steel with the structure of lamellar pearlite. Russian Journal of Nondestructive Testing, 2007, 43, 436-445.	0.3	0
59	Relation between the structure and the pitting corrosion resistance of hypereutectoid U10 steel. Russian Metallurgy (Metally), 2014, 2014, 49-54.	0.1	0
60	Analytical and experimental assessment of ultimate tensile strength of a hardened layer on a material surface. AIP Conference Proceedings, 2018, , .	0.3	0
61	Influence of Irradiation with Ar+ Ions on the Process of the Delayed Fracture of a Maraging Steel. Physics of Metals and Metallography, 2020, 121, 291-297.	0.3	0
62	Magnetic Techniques for Estimating Elastic and Plastic Strains in Steels Under Cyclic Loading. , 2014, , 137-144.		0
63	Development of Methods for Steel Surface Deformation Nanostructuring. Metal Science and Heat Treatment, 0, , .	0.2	0
64	Approaches to the development of wear-resistant laminated metal composites. Diagnostics Resource and Mechanics of Materials and Structures, 2021, , 24-35.	0.1	0