

Radik Mulyukov

List of Publications by Year in descending order

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93
papers

1,975
citations

516561

16
h-index

254106

43
g-index

95
all docs

95
docs citations

95
times ranked

1210
citing authors

#	ARTICLE	IF	CITATIONS
1	Structure and properties of ultrafine-grained materials produced by severe plastic deformation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1993, 168, 141-148.	2.6	973
2	The effect of heat treatment on the elastic and dissipative properties of copper with the submicrocrystalline structure. <i>Acta Metallurgica Et Materialia</i> , 1993, 41, 1041-1046.	1.9	112
3	Extraordinary high-strain rate superplasticity of severely deformed Al-Mg-Zr alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 538, 386-390.	2.6	73
4	Direction of a grain-boundary phase in submicrometre-grained iron. <i>Philosophical Magazine Letters</i> , 1990, 62, 253-256.	0.5	63
5	Effects of carbon nanotube content and annealing temperature on the hardness of CNT reinforced aluminum nanocomposites processed by the high pressure torsion technique. <i>Journal of Alloys and Compounds</i> , 2014, 613, 68-73.	2.8	56
6	Discrete breather on the edge of the graphene sheet with the armchair orientation. <i>JETP Letters</i> , 2012, 96, 222-226.	0.4	43
7	Production, properties and application prospects of bulk nanostructured materials. <i>Journal of Materials Science</i> , 2008, 43, 7257-7263.	1.7	32
8	On the Decrease of Curie Temperature in Submicron-Grained Nickel. <i>Physica Status Solidi A</i> , 1990, 117, 549-553.	1.7	28
9	Localized vibrational modes in an A ₃ B two-dimensional perfect crystal. <i>Russian Physics Journal</i> , 2008, 51, 858-865.	0.2	27
10	Effect of grain boundaries on the electron work function of nanocrystalline nickel. <i>Physics of the Solid State</i> , 2013, 55, 1-4.	0.2	25
11	Influence of Constrained High-Pressure Torsion on Microstructure and Mechanical Properties of an Aluminum-Based Metal Matrix Composite. <i>Jom</i> , 2020, 72, 2898-2911.	0.9	24
12	Microstructure and mechanical behavior of UFG copper processed by ECAP following different processing regimes. <i>Philosophical Magazine</i> , 2012, 92, 690-704.	0.7	23
13	Calculation of the structure of carbon clusters based on fullerene-like C ₂₄ and C ₄₈ molecules. <i>Physics of the Solid State</i> , 2016, 58, 394-401.	0.2	22
14	Strain amplitude dependence of internal friction and strength of submicrometre-grained copper. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1993, 171, 143-149.	2.6	21
15	Effect of severe plastic deformation on the properties of the Fe-36% Ni invar alloy. <i>Physics of Metals and Metallography</i> , 2006, 102, 91-96.	0.3	17
16	Computer simulation of the effect of ultrasound and annealing on the structure of a two-dimensional severely deformed nanocrystalline material. <i>Physics of Metals and Metallography</i> , 2011, 111, 513-519.	0.3	17
17	Internal friction and shear modulus in submicrograined Cu. <i>Scripta Materialia</i> , 1995, 6, 577-580.	0.5	16
18	Damping properties of 18Cr-10Ni stainless steel with submicrocrystalline structure. <i>Materials Research Bulletin</i> , 1996, 31, 639-645.	2.7	16

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19	Deformation-induced nonequilibrium grain-boundary phase in submicrocrystalline iron. <i>Scripta Materialia</i> , 1999, 11, 1017-1029.	0.5	15
20	Annealing-induced phase transformations and hardness evolution in Al-Cu-Al composites obtained by high-pressure torsion. <i>Acta Mechanica</i> , 2021, 232, 1815-1828.	1.1	15
21	Theoretical shear strength of FCC and HCP metals. <i>Physics of the Solid State</i> , 2014, 56, 423-428.	0.2	14
22	Effect of deformation on dehydrogenation mechanisms of crumpled graphene: molecular dynamics simulation. <i>Letters on Materials</i> , 2019, 9, 81-85.	0.2	14
23	Strengthening of NiAl nanofilms by introducing internal stresses. <i>Intermetallics</i> , 2013, 43, 171-176.	1.8	13
24	Anisotropy of the Thermal Expansion of a Polycrystalline Ni-Mn-Ga Alloy Subjected to Plastic Deformation by Forging. <i>Physics of the Solid State</i> , 2018, 60, 1061-1067.	0.2	13
25	Inhomogeneous elastic deformation of nanofilms and nanowires of NiAl and FeAl alloys. <i>JETP Letters</i> , 2013, 98, 91-95.	0.4	12
26	Fine-grained structure and properties of a Ni2MnIn alloy after a settling plastic deformation. <i>Physics of the Solid State</i> , 2016, 58, 1605-1610.	0.2	12
27	Deformational methods of material nanostructuring: Premises, history, state of the art, and prospects. <i>Russian Physics Journal</i> , 2008, 51, 492-504.	0.2	11
28	Characteristics of field emission from nanocrystalline metals. <i>Physica B: Condensed Matter</i> , 2002, 324, 329-335.	1.3	10
29	Structure and damping of nanocrystalline metals and alloys prepared by high plastic deformation techniques. <i>Journal of Alloys and Compounds</i> , 2003, 355, 26-30.	2.8	10
30	Effect of formation of a nanocrystalline structure on the electron work function and ion-electron emission of nickel. <i>Technical Physics</i> , 2011, 56, 1661-1664.	0.2	10
31	Negative stiffness of the FeAl intermetallic nanofilm. <i>Physics of the Solid State</i> , 2013, 55, 1963-1967.	0.2	10
32	Changes in the microstructure and mechanical properties of nanomaterials under an ultrasonic wave effect. <i>Journal of Machinery Manufacture and Reliability</i> , 2014, 43, 153-159.	0.1	10
33	Microstructure, microhardness and magnetic susceptibility of submicrocrystalline palladium. <i>Scripta Materialia</i> , 1996, 7, 667-674.	0.5	9
34	The use of nanostructured materials and nanotechnologies for the elaboration of hollow structures. <i>Nanotechnologies in Russia</i> , 2010, 5, 108-122.	0.7	9
35	Fabrication, microstructure, and microhardness of copper composites reinforced by carbon nanotubes. <i>Physics of the Solid State</i> , 2015, 57, 1206-1212.	0.2	9
36	Development of martensitic transformation induced by severe plastic deformation and subsequent heat treatment in polycrystalline Ni52Mn24Ga24 alloy. <i>Letters on Materials</i> , 2014, 4, 265-268.	0.2	9

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37	Work function of nanocrystalline tungsten. Doklady Physics, 2004, 49, 730-731.	0.2	7
38	Influence of nanocrystalline structure on work function of tungsten. Journal of Vacuum Science & Technology B, 2006, 24, 1061.	1.3	7
39	Effect of Ultrasonic Treatment on the Microstructure and Properties of Nanostructured Nickel Processed by High Pressure Torsion. Materials Science Forum, 0, 667-669, 605-609.	0.3	7
40	Scientific fundamentals of high-efficiency roll forming technology for axially symmetrical parts of a gas-turbine engine rotor of high-temperature alloy. Journal of Machinery Manufacture and Reliability, 2013, 42, 419-426.	0.1	7
41	Nonuniform Elastic Deformation of Nanofilms Formed from NiAl and FeAl Alloys. Russian Physics Journal, 2014, 57, 69-78.	0.2	7
42	Field emission from submicron-grained tungsten. JETP Letters, 2000, 72, 257-259.	0.4	6
43	Kinetics of changes in the saturation magnetization during annealings of the Fe-36% Ni invar alloy subjected to severe plastic deformation. Physics of Metals and Metallography, 2010, 109, 234-237.	0.3	6
44	Density of phonon states in nanostructured copper. JETP Letters, 2010, 92, 238-243.	0.4	6
45	Principles of Fabrication of Bulk Ultrafine-Grained and Nanostructured Materials by Multiple Isothermal Forging. Materials Science Forum, 0, 638-642, 1702-1707.	0.3	6
46	Ni-based protective-lubricant coatings for zirconium alloys. Inorganic Materials: Applied Research, 2012, 3, 226-230.	0.1	6
47	Crystallographic texture and the preferential orientation of a martensite in the polycrystalline Ni _{2.08} Mn _{0.96} Ga _{0.96} alloy. IOP Conference Series: Materials Science and Engineering, 2015, 82, 012064.	0.3	6
48	Molecular Dynamics Study of the Deformation Processes of Metallic Materials in Structural and Phase (Martensitic) Transformations. Physics of Metals and Metallography, 2018, 119, 589-597.	0.3	6
49	Structure relaxation of nickel, processed by high pressure torsion, with the ultrasonic treatment. Letters on Materials, 2012, 2, 134-138.	0.2	6
50	Resonance interaction of an edge-dislocation wall with a traveling sound wave. Physics of the Solid State, 2010, 52, 2490-2495.	0.2	5
51	Effect of temperature on inhomogeneous elastic deformation and negative stiffness of NiAl and FeAl alloy nanofilms. Physics of the Solid State, 2014, 56, 1157-1162.	0.2	5
52	Temperature Dependence of the Magnetization of the Ni ₅₂ Mn ₂₄ Ga ₂₄ Alloy in Various Structural States. Russian Physics Journal, 2015, 58, 745-749.	0.2	5
53	Al-Cu layered composites fabricated by deformation. AIP Conference Proceedings, 2018, , .	0.3	5
54	Improvement of mechanical properties of the Ti-45Al-5Nb-1Mo-0.2B (at %) intermetallic alloy by means of microstructure controlling. Physics of Metals and Metallography, 2016, 117, 1038-1046.	0.3	4

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55	New Technologies Development and Equipment for Local Shape-Forming of the Complicated Parts Made of Heat-Resistant Alloys under Superplastic Deformation Conditions. <i>Materials Science Forum</i> , 2016, 838-839, 615-620.	0.3	4
56	Field electron emission from a copper-based composite reinforced with carbon nanotubes. <i>Letters on Materials</i> , 2019, 9, 566-570.	0.2	4
57	Effect of deformation nanostructuring of nickel and copper on ion sputtering with a focused gallium ion beam with an energy of 30 keV. <i>Letters on Materials</i> , 2019, 9, 212-217.	0.2	4
58	Surface of submicrocrystalline nickel after sputtering by Ar ions with 5 keV energy at different incidence angle of ions. <i>Letters on Materials</i> , 2020, 10, 223-226.	0.2	4
59	Mass-spectroscopic study of the diffusion and solubility of helium in submicrocrystalline palladium. <i>Technical Physics</i> , 2002, 47, 1440-1443.	0.2	3
60	Rapid change of stresses in thickness direction in long orthotropic tube under internal pressure and axial load. <i>Acta Mechanica</i> , 2010, 211, 323-336.	1.1	3
61	Effect of a crystalline structure on the ion-electron emission of the Al + 6% Mg alloy. <i>Technical Physics Letters</i> , 2013, 39, 265-267.	0.2	3
62	Special Features of Fracture of a Solid-State Titanium Alloy " Nickel " Stainless Steel Joint. <i>Russian Physics Journal</i> , 2015, 58, 822-827.	0.2	3
63	The formation of a multipeak relief on the surface on nanostructured nickel and field electron emission from it. <i>Technical Physics Letters</i> , 2015, 41, 522-525.	0.2	3
64	Promises of Low-Temperature Superplasticity for the Enhanced Production of Hollow Titanium Components. <i>Materials Science Forum</i> , 2016, 838-839, 610-614.	0.3	3
65	Effect of deformation nanostructuring on thermal expansion and phase composition of Fe - 36% Ni alloy. <i>IOP Conference Series: Materials Science and Engineering</i> , 0, 447, 012015.	0.3	3
66	Effect of magnetic field on the morphology and fine structure of low-temperature martensite phase in a ferromagnetic Ni _{2.08} Mn _{0.96} Ga _{0.96} alloy. <i>Physics of Metals and Metallography</i> , 2011, 112, 488-494.	0.3	2
67	On combining high damping capacity and high strength in nanocrystalline materials. <i>Metal Science and Heat Treatment</i> , 2012, 54, 244-248.	0.2	2
68	Technological features of a process and equipment for superplastic rolling of axially symmetric heat-resistant alloy components of rotors for modern aircraft engines. <i>Journal of Machinery Manufacture and Reliability</i> , 2014, 43, 311-318.	0.1	2
69	Effect of upsetting deformation temperature on the formation of the fine-grained cast alloy structure of the Ni-Mn-Ga system. <i>Physics of the Solid State</i> , 2017, 59, 1570-1576.	0.2	2
70	Mechanical Properties of a Metal-Matrix Composite Based on Copper and Aluminum, Obtained via Shear Deformation under Pressure. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2019, 83, 1265-1269.	0.1	2
71	Influence of the inclination angle of stiffeners on folding during superplastic forming of corrugated core panels. <i>Letters on Materials</i> , 2019, 9, 433-435.	0.2	2
72	Internal friction of submicrocrystalline metal. <i>Metal Science and Heat Treatment</i> , 1998, 40, 341-345.	0.2	1

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73	Defects in nanocrystalline Pd and submicrocrystalline Cu by EXAFS. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 448, 372-375.	0.7	1
74	Effect of submicron crystalline structure on field emission of nickel. Doklady Physics, 2000, 45, 198-200.	0.2	1
75	Temperature dependences of thermal expansion and saturation magnetization in Fe(67.0%)-Ni(32.5%)-Co(0.5%) Invar alloy with nanocrystalline structure. Technical Physics, 2002, 47, 869-872.	0.2	1
76	Identification of complex field emission spectra (total electron energy distributions) for cathodes with a nonuniform work function. Technical Physics, 2004, 49, 758-763.	0.2	1
77	Evaluation of parameters of the potential barrier at the metal/polymer interface during recovery of the structure of nanocrystalline nickel. Physics of the Solid State, 2012, 54, 446-450.	0.2	1
78	Thermal expansion of nickel subjected to intense plastic deformation. Doklady Physics, 2013, 58, 79-81.	0.2	1
79	Plastic deformation by upsetting the Ni-Fe-Mn-Ga alloy. Materials Today: Proceedings, 2017, 4, 4851-4855.	0.9	1
80	Ion sputtering rate of nanostructured FCC, BCC and HCP metals processed by severe plastic deformation. IOP Conference Series: Materials Science and Engineering, 2018, 447, 012001.	0.3	1
81	Thermal analysis and microhardness of nanostructured alloy Invar 36. Letters on Materials, 2021, 11, 382-385.	0.2	1
82	Ion-Induced Electron Emission and Surface Erosion of Nanostructured Nickel under High-Fluence Irradiation with 30-keV Argon Ions. Journal of Surface Investigation, 2021, 15, S66-S72.	0.1	1
83	Microstructure and mechanical properties of a welded joint obtained by friction stir welding of thin copper and aluminum plates. Letters on Materials, 2022, 12, 106-110.	0.2	1
84	Simultaneous measurement of thermal conductivity and specific heat of short-lived liquid. Journal of Engineering Physics, 1980, 38, 435-438.	0.0	0
85	Instrument for automatic measurement of rock thermophysical characteristics under near-natural conditions. Measurement Techniques, 1985, 28, 1019-1021.	0.2	0
86	Influence of nanocrystalline structure on work function of tungsten. , 0, , .		0
87	Influence of Nanocrystalline Structure on Work Function of Tungsten. , 2006, , .		0
88	Deformation of nanocrystalline materials in the formalism of coupled mode theory. Mechanics of Solids, 2011, 46, 123-128.	0.3	0
89	Extraordinary High Strain Rate Superplasticity of an Al-Mg-Sc-Zr Alloy Subjected to Equal Channel Angular Pressing. Materials Science Forum, 2012, 735, 295-300.	0.3	0
90	Current Status of Research and Development on Superplasticity at the Institute for Metals Superplasticity Problems. Materials Science Forum, 2012, 735, 403-408.	0.3	0

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91	Increasing the sensitivity of the X-ray testing of hollow fan blades. Russian Journal of Nondestructive Testing, 2012, 48, 104-108.	0.3	0
92	On the thermal stability of the cobalt nanostructure formed under severe plastic deformation. Physics of the Solid State, 2013, 55, 2608-2612.	0.2	0
93	The effect of holding temperature on the strength of the diffusion bond of Ti-alloy and stainless steel through the ultrafine-grained interlayers of Ni and Ni-2%Cr alloy. IOP Conference Series: Materials Science and Engineering, 2018, 447, 012051.	0.3	0