Aleksander Lotkov

List of Publications by Year
in descending order

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136	609	687363 13	839539 18
papers	citations	h-index	g-index

136	136	136	289
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of abc pressing temperature on the mechanical properties in Ti49.8Ni50.2 alloy. AIP Conference Proceedings, 2022, , .	0.4	0
2	Crystal Structure Defects in Titanium Nickelide after Abc Pressing at Lowered Temperature. Materials, 2022, 15, 4298.	2.9	2
3	Mechanical Properties of the Ti49.8Ni50.2 Alloy after Multi-Axial Forging at 573 K. Metals, 2022, 12, 1043.	2.3	0
4	Behavior of Inelastic and Plastic Strains in Coarse-Grained Ti49.3Ni50.7(at%) Alloy Deformed in B2 States. Metals, 2021, 11, 741.	2.3	5
5	Effect of abc Pressing at 573 K on the Microstructure and Martensite Transformation Temperatures in Ti49.8Ni50.2 (at%). Metals, 2021, 11, 1145.	2.3	4
6	Nanostructured Coatings (Ti,Zr)N as a Barrier to Hydrogen Diffusion into Ti0.16Pd (wt.%) Alloy. Metals, 2021, 11, 1332.	2.3	3
7	Structure and Multistage Martensite Transformation in Nanocrystalline Ti-50.9Ni Alloy. Metals, 2021, 11, 1262.	2.3	6
8	Structure and Phase State of Ti49.4Ni50.6 (at%) Hydrogenated in Normal Saline. Materials, 2021, 14, 7046.	2.9	5
9	Structural Defects in TiNi-Based Alloys after Warm ECAP. Metals, 2020, 10, 1154.	2.3	3
10	Effect of True Strains in Isothermal abc Pressing on Mechanical Properties of Ti49.8Ni50.2 Alloy. Metals, 2020, 10, 1313.	2.3	10
11	Calculation of Poissonâ€™s ratios of TiNi shape memory crystals through their elastic constants. AIP Conference Proceedings, 2020, , .	0.4	1
12	Yield Stress and Reversible Strain in Titanium Nickelide Alloys after Warm Abc Pressing. Materials, 2019, 12, 3258.	2.9	2
13	Hydrogen diffusion and the effect of hydrogen on structural transformations in binary TiNi based alloys. International Journal of Hydrogen Energy, 2019, 44, 29371-29379.	7.1	8
14	The Evolution of the Microstructure and System of Ti3Ni4 Particles upon Heat Treatments of a Tiâˆ’50.9 at % Ni Nanocrystalline Alloy. Technical Physics, 2019, 64, 490-496.	0.7	4
15	Calculation of Third-Order Elastic Constants of the Crystals of a TiNi-Based Alloy with Shape Memory. Inorganic Materials: Applied Research, 2019, 10, 256-259.	0.5	1
16	Development of reversible inelastic deformation in a binary TiNi alloy under isothermal mechanical cycling of specimens in the B2 phase by bending. AIP Conference Proceedings, 2019, , .	0.4	0
17	Effect of warm equal channel angular pressing on the structure and mechanical properties of Ti0.16Pd0.14Fe (wt%) alloy. Reviews on Advanced Materials Science, 2019, 58, 22-31.	3.3	6
18	Influence of annealing on temperature and sequence of martensitic transformations in hydrogenated samples of nickel titanium with nanocrystalline structure. AIP Conference Proceedings, 2019, , .	0.4	0

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19	The Effect of Hydrogen on Martensite Transformations and the State of Hydrogen Atoms in Binary TiNi-Based Alloy with Different Grain Sizes. Materials, 2019, 12, 3956.	2.9	8
20	Influence of friction stir processing on the structure and phase state of TiNi alloys. AIP Conference Proceedings, 2019, , .	0.4	3
21	The formation of porous structure in silicon by the methods of metal-assisted chemical etching and electrochemical etching. AIP Conference Proceedings, 2019, , .	0.4	0
22	Temperature dependence of inelastic recoverable strain and degree of shape recovery in coarse-grained samples of Ti49.3Ni50.7 (at%) in the absence of plastic deformation. AIP Conference Proceedings, 2019, , .	0.4	1
23	Yield stress in titanium nickelide-based alloys with thermoelastic martensitic transformations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 744, 74-78.	5.6	23
24	Effect of hydrogen redistribution during aging on the structure and phase state of nanocrystalline and coarse-grained TiNi alloys. Journal of Alloys and Compounds, 2018, 751, 359-363.	5.5	13
25	Hydrogen diffusion in ultrafine-grained titanium alloy with palladium. AIP Conference Proceedings, 2018, , .	0.4	0
26	Substructural-Phase Transformations during Heat Treatments of the Tiâ€“50.9 at % Ni Nanocrystalline Alloy. Technical Physics Letters, 2018, 44, 1120-1123.	0.7	1
27	Structure and properties of coatings obtained by plasma-immersion treatment with silicon ions of TiNi alloy. AIP Conference Proceedings, 2018, , .	0.4	1
28	Opportunities and prospects for the use of porous silicon to create a polymer-free drug coating on intravascular stents. AIP Conference Proceedings, 2018, , .	0.4	3
29	Post-implantation endothelization of self-expanding stents from titanium nickelide with the ion-immersion silicon-modified surface in experimental animals. AIP Conference Proceedings, 2018, , .	0.4	0
30	Development of shape memory and superelasticity in binary TiNi-based alloys under torsion of samples with B19â€² structure. AIP Conference Proceedings, 2018, , .	0.4	0
31	Poissonâ€™s ratio of hard tissues of tooth. AIP Conference Proceedings, 2018, , .	0.4	2
32	Features of recrystallization during annealing of nanocrystalline Tiâ€“50.9 at. % Ni alloy. AIP Conference Proceedings, 2018, , .	0.4	2
33	Effect of plasma ion immersion treatment on the structure and phase state of the TiNi alloy for medical implantants. Journal of Physics: Conference Series, 2018, 1115, 032027.	0.4	0
34	Blood plasma cytokines releasing after implantation of self-expanding nitinol stents modified with silicon in experimental animals. AIP Conference Proceedings, 2018, , .	0.4	1
35	Extremes of the elasticity characteristics of TiFe and TiNi single crystals. AIP Conference Proceedings, 2018, , .	0.4	5
36	Impact of Plastic Straining in the Martensitic State on the Development of the Superelasticity and Shape Memory Effects in Titanium-Nickelide-Based Alloys. Technical Physics Letters, 2018, 44, 995-998.	0.7	5

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37	Fracture features of anisotropic materials at different impact velocities. European Journal of Computational Mechanics, 2017, 26, 609-621.	0.6	7
38	Structure and properties of self-expanding intravascular NiTi stents doped with Si ions. Materials Today: Proceedings, 2017, 4, 4647-4651.	1.8	3
39	Superelasticity and shape memory effect after warm abc-pressing of TiNi-based alloy. Materials Today: Proceedings, 2017, 4, 4814-4818.	1.8	7
40	Effect of plasma immersion ion beam processing on the structureâ€“phase state and the properties of the surface layers in titanium nickelide samples. Russian Metallurgy (Metally), 2017, 2017, 250-254.	0.5	2
41	Structural-phase state of Tiâ€“0.16Pd alloy after equal channel angular pressing. AIP Conference Proceedings, 2017, , .	0.4	1
42	Effect of isothermal loading temperature on reversible inelastic strain in coarse-grained Ti49.7Ni50.7. AIP Conference Proceedings, 2017, , .	0.4	0
43	Structural and phase transformations in TiNi treated in ion plasma. AIP Conference Proceedings, 2017, , .	0.4	1
44	Mechanical behavior of deformed intravascular NiTi stents differing in design. Numerical simulation. AIP Conference Proceedings, 2017, , .	0.4	2
45	Influence of silicon doping of titanium nickelide near-surface layers on alloy cytocompatibility. AIP Conference Proceedings, 2017, , .	0.4	0
46	Distribution of nickel after modified nitinol stent implantation in animals. AIP Conference Proceedings, 2017, , .	0.4	0
47	The development of self-expanding peripheral stent with ion-modified surface layer. AIP Conference Proceedings, 2016, , .	0.4	0
48	Chemical composition and structure of the TiNi alloy surface layer formed after electron-beam melting and crystallization. AIP Conference Proceedings, 2016, , .	0.4	2
49	Effect of recrystallization annealing on the inelastic properties of TiNi alloy under bending. AIP Conference Proceedings, 2016, , .	0.4	2
50	Effect of plasma immersion ion implantation in TiNi implants on its interaction with animal subcutaneous tissues. AIP Conference Proceedings, 2016, , .	0.4	0
51	Dimensional stability of coarse-grained and submicrocrystalline TiNi shape memory alloy for medical use under quasistatic and cyclic bending. Procedia Structural Integrity, 2016, 2, 1514-1521.	0.8	2
52	Hydrogen-induced failure of TiNi based alloy with coarse-grained and ultrafine-grained structure. Procedia Structural Integrity, 2016, 2, 1481-1488.	0.8	2
53	Effect of warm rolling on the martensite transformation temperatures, shape memory effect, and superelasticity in Ti49.2Ni50.8 alloy. AIP Conference Proceedings, 2016, , .	0.4	3
54	In vitro biocompatibility of the surface ion modified NiTi alloy. AIP Conference Proceedings, 2016, , .	0.4	2

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55	Plasma immersion ion implantation for surface treatment of complex branched structures. AIP Conference Proceedings, 2016, , .	0.4	2
56	FIRST TIME EXPERIMENTAL IMPLANTING OF LOCALLY DEVELOPED LEFT ATRIUM OCCLUDERS. Russian Journal of Cardiology, 2016, , 70-74.	1.4	0
57	Influence of surface modification of nitinol with silicon using plasma-immersion ion implantation on the alloy corrosion resistance in artificial physiological solutions. AIP Conference Proceedings, 2015, , .	0.4	3
58	Improving the corrosion resistance of nitinol by plasma-immersion ion implantation with silicon for biomedical applications. AIP Conference Proceedings, 2015, , .	0.4	0
59	Neurohumoral indicators of efficacy radiofrequency cardiac denervation. AIP Conference Proceedings, 2015, , .	0.4	0
60	Interaction of human endothelial cells and nickel-titanium materials modified with silicon ions. AIP Conference Proceedings, 2015, , .	0.4	5
61	Formation of vacancy-type defects in titanium nickelide. MATEC Web of Conferences, 2015, 33, 03017.	0.2	5
62	Effect of hydrogen on superelasticity of the titanium nickelide-based alloy. AIP Conference Proceedings, 2015, , .	0.4	4
63	In-situ X-ray diffraction studies of the phase transformations and structural states of B2, R and B19â€² phases in Ti49.5Ni50.5 alloy. AIP Conference Proceedings, 2015, , .	0.4	0
64	Modeling of microdamage accumulation in anisotropic metals and alloys. AIP Conference Proceedings, 2015, , .	0.4	0
65	Influence of deformation during warm rolling on martensitic transformation temperatures and the value of superelasticity and shape memory effects in Ti49.2Ni50.8 (at %) alloy. Inorganic Materials: Applied Research, 2015, 6, 498-505.	0.5	3
66	Comparative analysis of inelastic strain recovery and plastic deformation in a Ti49.1Ni50.9 (at %) alloy under torsion and bending. AIP Conference Proceedings, 2015, , .	0.4	10
67	Transmission electron microscopy studying of structural features of NiTi B2 phase formed under pulsed electron-beam impact. AIP Conference Proceedings, 2015, , .	0.4	0
68	Temperature dependence of inelastic strain recovery in TiNi-based alloys under torsion. AIP Conference Proceedings, 2015, , .	0.4	4
69	Phase and structural states in the NiTi-based alloy surface layer formed by electron-ion-plasma methods using tantalum. AIP Conference Proceedings, 2015, , .	0.4	0
70	Structural phase states in nickel-titanium surface layers doped with silicon by plasma immersion ion implantation. AIP Conference Proceedings, 2015, , .	0.4	5
71	Surface modification of titanium nickelide after bombardment by silicon ions. Steel in Translation, 2015, 45, 258-261.	0.3	7
72	Formation of a SMC Structure Upon Warm Isothermal Deformation and its Influence on Martensitic Transformations in Titaniumâ€“Nickelide Based Alloys. Russian Physics Journal, 2015, 58, 750-755.	0.4	1

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73	Cross-sectional TEM analysis of structural phase states in TiNi alloy treated by a low-energy high-current pulsed electron beam. Applied Surface Science, 2015, 327, 321-326.	6.1	15
74	The influence of degree of deformation under isothermal abc pressing on evolution of structure and temperature of phase transformations of alloy based on titanium nickelide. Inorganic Materials: Applied Research, 2015, 6, 96-104.	0.5	7
75	Phase and Structural States Formed in Titanium Nickelide Subsurface Layers Exposed to High-Current Pulsed Electron Beams. Russian Physics Journal, 2015, 58, 255-265.	0.4	4
76	The Special Features of the Phase Formation and Distribution in the Titanium Nickelide Surface Layers Treated by Electron Beams. Russian Physics Journal, 2015, 58, 670-677.	0.4	1
77	Surface microstructure and B2 phase structural state induced in NiTi alloy by a high-current pulsed electron beam. Applied Surface Science, 2015, 324, 44-52.	6.1	14
78	Structural changes of the B2 phase in the surface layer of titanium nickelide after pulsed electron-beam treatment. Steel in Translation, 2014, 44, 583-587.	0.3	0
79	Structural change in the surface layers of titanium nickelide under the impact of pulsed electron beams. Steel in Translation, 2014, 44, 646-651.	0.3	0
80	Effect of warm multipass caliber rolling on superelasticity and shape memory of Ti49.2Ni50.8 at.% alloy. , 2014, , .		1
81	Effect of heat treatment on superelasticity of NiTi-based intravascular implants. , 2014, , .		1
82	Gradient changes in structural condition of the B2 phase of NiTi surface layers after electron-beam treatments. , 2014, , .		0
83	Structural phase states in NiTi near-surface layers modified by electron and ion beams. , 2014, , .		0
84	Phase composition in NiTi near-surface layers after electron beam treatment and its variation depending on beam energy density. , 2014, , .		0
85	The influence of warm deformation on the structure and martensitic transformations in TiNi-based alloys. , 2014, , .		1
86	Nonequilibrium structural condition in the medical TiNi-based alloy surface layer treated by electron beam. , 2014, , .		0
87	Effect of Surface Alloying by Silicon on the Corrosion Resistance and Biocompatibility of the Binary NiTi. Journal of Materials Engineering and Performance, 2014, 23, 2620-2629.	2.5	4
88	Reactivity of submicrocrystalline titanium: II. Electrochemical properties and corrosion stability in sulfuric acid solutions. Inorganic Materials: Applied Research, 2013, 4, 85-91.	0.5	5
89	The surface alloying effect of silicon in a binary NiTi-base alloy on the corrosion resistance and biocompatibility of the material. Russian Physics Journal, 2013, 55, 1063-1073.	0.4	9
90	X-ray diffraction study of residual elastic stress and microstructure of near-surface layers in nickel-titanium alloy irradiated with low-energy high-current electron beams. Applied Surface Science, 2013, 280, 398-404.	6.1	23

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91	Effect of surface modification by silicon ion beam on microstructure and chemical composition of near-surface layers of titanium nickelide. Inorganic Materials: Applied Research, 2013, 4, 457-463.	0.5	5
92	Effect of Silicon, Titanium, and Zirconium Ion Implantation on NiTi Biocompatibility. Advances in Materials Science and Engineering, 2012, 2012, 1-16.	1.8	25
93	THE INCREASE OF THE MARTENSITIC DEFORMATION DURING SHAPE MEMORY EFFECT IN DEFORMED TiNi. Functional Materials Letters, 2012, 05, 1250011.	1.2	1
94	Regularities of the formation of the near-surface gradient structures after magnetron sputtering of molybdenum on a titanium nickelide surface. Inorganic Materials: Applied Research, 2012, 3, 401-407.	0.5	7
95	Symmetry of pretransition structures in alloys with a B2-type superstructure. Physics of Metals and Metallography, 2012, 113, 438-447.	1.0	3
96	Model of the B2 â† R martensitic transformation in alloys with a B2 superstructure. Physics of Metals and Metallography, 2012, 113, 541-549.	1.0	0
97	The effect of chemical composition and roughness of titanium nickelide surface on proliferative properties of mesenchymal stem cells. Inorganic Materials: Applied Research, 2012, 3, 135-144.	0.5	3
98	Physical nature of martensite transformations in B2-type Ti compounds and TiNi-based alloys. Physical Mesomechanics, 2011, 14, 261-274.	1.9	8
99	Ultrafine structure and martensitic transformation in titanium nickelide after warm abc pressing. Inorganic Materials: Applied Research, 2011, 2, 548-555.	0.5	9
100	Structure of domains formed upon martensitic transformations B2 â† B19 and B2 â† B19â€² in alloys with a B2 superstructure. Physics of Metals and Metallography, 2011, 111, 431-440.	1.0	2
101	Adhesion strength and physicochemical properties of molybdenum and tantalum coatings on titanium nickelide. Russian Metallurgy (Metally), 2010, 2010, 340-345.	0.5	1
102	Evolution of Structural-Phase States in TiNi Surface Layers Synthesized by Electron Beam Treatment. Journal of Nanotechnology, 2010, 2010, 1-8.	3.4	13
103	On the nature of anomalously high plasticity of high-strength titanium nickelide alloys with shape-memory effects: II. Mechanisms of plastic deformation upon isothermal loading. Physics of Metals and Metallography, 2009, 107, 298-311.	1.0	20
104	On the nature of anomalously high plasticity of high-strength titanium nickelide alloys with shape-memory effects: I. Initial structure and mechanical properties. Physics of Metals and Metallography, 2008, 106, 520-530.	1.0	28
105	The structure of titanium nickelide surface layers formed by pulsed electron-beam melting. Technical Physics, 2008, 53, 934-942.	0.7	14
106	Possible role of crystal structure defects in grain structure nanofragmentation under severe cold plastic deformation of metals and alloys. Physical Mesomechanics, 2007, 10, 179-189.	1.9	27
107	Structural-phase condition, unelastic and plastic behavior and nanohardness of the TiNi surface layers modified by an ion- and electron irradiation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 438-440, 558-562.	5.6	13
108	Effect of Ultrasonic Plastic Treatment on the Surface Structure and Phase State of Nickel Titanium. Technical Physics Letters, 2005, 31, 912.	0.7	10

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109	Short-wavelength atomic-displacement modulation preceding the B2 â† B19â€² martensitic transformation in a TiNi-based alloy. Physics of the Solid State, 2004, 46, 1386-1393.	0.6	12
110	Surface morphology and plastic deformation of the ion-implanted TiNi alloy. Physica B: Condensed Matter, 2001, 307, 251-257.	2.7	13
111	On Certain Anharmonic Characteristics of B2-Phase Ti(Ni, Fe) Alloys under Hydrostatic Pressure. Russian Physics Journal, 2000, 43, 999-1002.	0.4	2
112	Premartensitic and martensitic transformations in Ti49Ni51 single crystal: Ageing effect. Russian Physics Journal, 1999, 42, 646-652.	0.4	0
113	Structural instability in metals and alloys. Russian Physics Journal, 1998, 41, 743-753.	0.4	1
114	Plastic deformation and fracture of polycrystalline Niâ€“Ti with stress concentrators of different scales. Theoretical and Applied Fracture Mechanics, 1998, 30, 19-26.	4.7	4
115	Experimental equation of state of the shape memory alloy Ti50Ni48Fe2 AT 0-8 GPa and 298 K. Russian Physics Journal, 1997, 40, 751-754.	0.4	1
116	Anisotropy of Young's modulus, shear modulus, and Poisson's ratio for the B2-phase of a Ti50Ni48Fe2 single crystal under hydrostatic compression conditions up to 0.6 GPa. Russian Physics Journal, 1995, 38, 258-262.	0.4	1
117	Neutron diffraction studies of the premartensitic transformation B2 ? B19? in Ti49Ni51 single crystals. Russian Physics Journal, 1995, 38, 46-50.	0.4	0
118	Physical nature of the anomalies in the temperature dependence of the probability of the Mï¿½ssbauer effect near phase transitions. Soviet Physics Journal (English Translation of Izvestiia Vysshykh) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 377	0.0	0
119	Martensite transformations in Ti-Ni alloys after long-term annealing at 773?K. Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika), 1991, 34, 172-178.	0.0	0
120	Change in the structural state of the ?-phase of TiNi with active precipitation of Ti11Ni14. Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika), 1989, 32, 323-327.	0.0	0
121	Martensitic transformations in Ti (Ni, Fe) alloys. Soviet Physics Journal (English Translation of) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	0.0	1
122	Valence band evolution and structural instability nature of intermetallic compounds of TiNiî—¸TiPd system. Solid State Communications, 1987, 62, 93-95.	1.9	15
123	Structural defects in Ni-Ti alloys in the region of B2-phase homogeneity. Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika), 1987, 30, 941-945.	0.0	3
124	Titanium nickelide. Crystalline structure and phase transformations. Soviet Physics Journal (English) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.0	14
125	TiNi aging and its effect on the start temperature of the martensitic transformation. Physica Status Solidi A, 1983, 75, 373-377.	1.7	9
126	Influence of aging on the temperature of the beginning of a martensitic transformation in the intermetallide TiNi. Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 57	0.0	0

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127	Observation of an extraordinary sequence of martensite transformations in TiNi. Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika), 1982, 25, 882-885.	0.0	0
128	Electron properties anomalies on the stage preceding rhombohedral phase in TiNi. Solid State Communications, 1982, 41, 15-17.	1.9	21
129	The influence of palladium on the martensitic transformation of the intermetallic compound TiNi. Physica Status Solidi A, 1982, 70, 513-517.	1.7	9
130	Electron phase transition in TiNi?. Solid State Communications, 1979, 32, 735-738.	1.9	14
131	Order-disorder transformation mechanism in aluminum-doped Ni3Mn alloy. Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika), 1977, 20, 436-440.	0.0	0
132	Kinetics of ordering in Ni3Mn alloy with additions of copper. Soviet Physics Journal (English) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542 T	0.0	0
133	Neutronographic investigation of the characteristics of phase transition in the alloy Ni3Mn, alloyed with small additions of aluminum and copper. Soviet Physics Journal (English Translation of Izvestiia) Tj ETQq1 1 0.784314 rgBT /Over	0.0	0
134	The nature of distribution of atoms, and its connection with electron structure in a number of ternary alloys on Ni3Mn basis. Soviet Physics Journal (English Translation of Izvestiia Vysshykh) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 457	0.0	0
135	Acceleration of ordering in iron-, cobalt-, and chromium-doped Ni3Mn. Soviet Physics Journal (English) Tj ETQq1 1 0.784314 rgBT /Overl	0.0	0
136	Sensitivity of ordering kinetics to the doping of Ni3Mn by iron, cobalt, and chromium. Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika), 1969, 12, 1327-1332.	0.0	0