List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	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
2	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
3	Effect of Silicon, Titanium, and Zirconium Ion Implantation on NiTi Biocompatibility. Advances in Materials Science and Engineering, 2012, 2012, 1-16.	1.8	25
4	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
5	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
6	Electron properties anomalies on the stage preceding rhombohedral phase in TiNi. Solid State Communications, 1982, 41, 15-17.	1.9	21
7	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
8	Valence band evolution and structural instability nature of intermetallic compounds of TiNiî—,TiPd system. Solid State Communications, 1987, 62, 93-95.	1.9	15
9	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
10	Electron phase transition in TiNi?. Solid State Communications, 1979, 32, 735-738.	1.9	14
11	Titanium nickelide. Crystalline structure and phase transformations. Soviet Physics Journal (English) Tj ETQq1 1 ().784314 0.0	rgBT_/Overloc
12	The structure of titanium nickelide surface layers formed by pulsed electron-beam melting. Technical Physics, 2008, 53, 934-942.	0.7	14
13	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
14	Surface morphology and plastic deformation of the ion-implanted TiNi alloy. Physica B: Condensed Matter, 2001, 307, 251-257.	2.7	13
15	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
16	Evolution of Structural-Phase States in TiNi Surface Layers Synthesized by Electron Beam Treatment. Journal of Nanotechnology, 2010, 2010, 1-8.	3.4	13
17	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
18	Short-wavelength atomic-displacement modulation preceding the B2 → B19′ martensitic transformation in a TiNi-based alloy. Physics of the Solid State, 2004, 46, 1386-1393.	0.6	12

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19	Effect of Ultrasonic Plastic Treatment on the Surface Structure and Phase State of Nickel Titanium. Technical Physics Letters, 2005, 31, 912.	0.7	10
20	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
21	Effect of True Strains in Isothermal abc Pressing on Mechanical Properties of Ti49.8Ni50.2 Alloy. Metals, 2020, 10, 1313.	2.3	10
22	The influence of palladium on the martensitic transformation of the intermetallic compound TiNi. Physica Status Solidi A, 1982, 70, 513-517.	1.7	9
23	TiNi aging and its effect on the start temperature of the martensitic transformation. Physica Status Solidi A, 1983, 75, 373-377.	1.7	9
24	Ultrafine structure and martensitic transformation in titanium nickelide after warm abc pressing. Inorganic Materials: Applied Research, 2011, 2, 548-555.	0.5	9
25	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
26	Physical nature of martensite transformations in B2-type Ti compounds and TiNi-based alloys. Physical Mesomechanics, 2011, 14, 261-274.	1.9	8
27	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
28	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
29	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
30	Surface modification of titanium nickelide after bombardment by silicon ions. Steel in Translation, 2015, 45, 258-261.	0.3	7
31	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
32	Fracture features of anisotropic materials at different impact velocities. European Journal of Computational Mechanics, 2017, 26, 609-621.	0.6	7
33	Superelasticity and shape memory effect after warm abc-pressing of TiNi-based alloy. Materials Today: Proceedings, 2017, 4, 4814-4818.	1.8	7
34	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
35	Structure and Multistage Martensite Transformation in Nanocrystalline Ti-50.9Ni Alloy. Metals, 2021, 11, 1262.	2.3	6
36	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

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37	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
38	Interaction of human endothelial cells and nickel-titanium materials modified with silicon ions. AIP Conference Proceedings, 2015, , .	0.4	5
39	Formation of vacancy-type defects in titanium nickelide. MATEC Web of Conferences, 2015, 33, 03017.	0.2	5
40	Structural phase states in nickel-titanium surface layers doped with silicon by plasma immersion ion implantation. AIP Conference Proceedings, 2015, , .	0.4	5
41	Extremes of the elasticity characteristics of TiFe and TiNi single crystals. AIP Conference Proceedings, 2018, , .	0.4	5
42	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
43	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
44	Structure and Phase State of Ti49.4Ni50.6 (at%) Hydrogenated in Normal Saline. Materials, 2021, 14, 7046.	2.9	5
45	Plastic deformation and fracture of polycrystalline Ni–Ti with stress concentrators of different scales. Theoretical and Applied Fracture Mechanics, 1998, 30, 19-26.	4.7	4
46	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
47	Effect of hydrogen on superelasticity of the titanium nickelide-based alloy. AIP Conference Proceedings, 2015, , .	0.4	4
48	Temperature dependence of inelastic strain recovery in TiNi-based alloys under torsion. AIP Conference Proceedings, 2015, , .	0.4	4
49	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
50	The Evolution of the Microstructure and System of Ti3Ni4 Particles upon Heat Treatments of a Tiâ^'50.9 at % Ni Nanocrystalline Alloy. Technical Physics, 2019, 64, 490-496.	0.7	4
51	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
52	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
53	Symmetry of pretransition structures in alloys with a B2-type superstructure. Physics of Metals and Metallography, 2012, 113, 438-447.	1.0	3
54	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

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55	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
56	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
57	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
58	Structure and properties of self-expanding intravascular NiTi stents doped with Si ions. Materials Today: Proceedings, 2017, 4, 4647-4651.	1.8	3
59	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
60	Influence of friction stir processing on the structure and phase state of TiNi alloys. AIP Conference Proceedings, 2019, , .	0.4	3
61	Structural Defects in TiNi-Based Alloys after Warm ECAP. Metals, 2020, 10, 1154.	2.3	3
62	Nanostructured Coatings (Ti,Zr)N as a Barrier to Hydrogen Diffusion into Ti0.16Pd (wt.%) Alloy. Metals, 2021, 11, 1332.	2.3	3
63	On Certain Anharmonic Characteristics of B2-Phase Ti(Ni, Fe) Alloys under Hydrostatic Pressure. Russian Physics Journal, 2000, 43, 999-1002.	0.4	2
64	Structure of domains formed upon martensitic transformations B2 → B19 and B2 → B19′ in alloys with a B2 superstructure. Physics of Metals and Metallography, 2011, 111, 431-440.	1.0	2
65	Chemical composition and structure of the TiNi alloy surface layer formed after electron-beam melting and crystallization. AIP Conference Proceedings, 2016, , .	0.4	2
66	Effect of recrystallization annealing on the inelastic properties of TiNi alloy under bending. AIP Conference Proceedings, 2016, , .	0.4	2
67	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
68	Hydrogen-induced failure of TiNi based alloy with coarse-grained and ultrafine-grained structure. Procedia Structural Integrity, 2016, 2, 1481-1488.	0.8	2
69	In vitro biocompatibility of the surface ion modified NiTi alloy. AIP Conference Proceedings, 2016, , .	0.4	2
70	Effect of plasma immersion ion beam processing on the structure–phase state and the properties of the surface layers in titanium nickelide samples. Russian Metallurgy (Metally), 2017, 2017, 250-254.	0.5	2
71	Mechanical behavior of deformed intravascular NiTi stents differing in design. Numerical simulation. AlP Conference Proceedings, 2017, , .	0.4	2
72	Poisson's ratio of hard tissues of tooth. AIP Conference Proceedings, 2018, , .	0.4	2

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73	Features of recrystallization during annealing of nanocrystalline Ti–50.9 at. % Ni alloy. AIP Conference Proceedings, 2018, , .	0.4	2
74	Yield Stress and Reversible Strain in Titanium Nickelide Alloys after Warm Abc Pressing. Materials, 2019, 12, 3258.	2.9	2
75	Plasma immersion ion implantation for surface treatment of complex branched structures. AIP Conference Proceedings, 2016, , .	0.4	2
76	Crystal Structure Defects in Titanium Nickelide after Abc Pressing at Lowered Temperature. Materials, 2022, 15, 4298.	2.9	2
77	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 (). 780 314	rgBT /Overlo
78	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 rgB	Г /@verloc	k 10 Tf 50 53
79	Martensitic transformations in Ti (Ni, Fe) alloys. Soviet Physics Journal (English Translation of) Tj ETQq1 1 0.7843	14 rgBT /C 0.0	Overlock 10 T
80	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
81	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
82	Structural instability in metals and alloys. Russian Physics Journal, 1998, 41, 743-753.	0.4	1
83	Adhesion strength and physicochemical properties of molybdenum and tantalum coatings on titanium nickelide. Russian Metallurgy (Metally), 2010, 2010, 340-345.	0.5	1
84	THE INCREASE OF THE MARTENSITIC DEFORMATION DURING SHAPE MEMORY EFFECT IN DEFORMED TINI. Functional Materials Letters, 2012, 05, 1250011.	1.2	1
85	Effect of warm multipass caliber rolling on superelasticity and shape memory of Ti49.2Ni50.8 at.% alloy. , 2014, , .		1
86	Effect of heat treatment on superelasticity of NiTi-based intravascular implants. , 2014, , .		1
87	The influence of warm deformation on the structure and martensitic transformations in TiNi-based alloys. , 2014, , .		1
88	Formation of a SMC Structure Upon Warm Isothermal Deformation and its Influence on Martensitic Transformations in Titanium–Nickelide Based Alloys. Russian Physics Journal, 2015, 58, 750-755.	0.4	1
89	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
90	Structural-phase state of Ti–0.16Pd alloy after equal channel angular pressing. AIP Conference Proceedings, 2017, , .	0.4	1

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91	Structural and phase transformations in TiNi treated in ion plasma. AIP Conference Proceedings, 2017, ,	0.4	1
92	Substructural-Phase Transformations during Heat Treatments of the Ti–50.9 at % Ni Nanocrystalline Alloy. Technical Physics Letters, 2018, 44, 1120-1123.	0.7	1
93	Structure and properties of coatings obtained by plasma-immersion treatment with silicon ions of TiNi alloy. AIP Conference Proceedings, 2018, , .	0.4	1
94	Blood plasma cytokines releasing after implantation of self-expanding nitinol stents modified with silicon in experimental animals. AIP Conference Proceedings, 2018, , .	0.4	1
95	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
96	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
97	Calculation of Poisson's ratios of TiNi shape memory crystals through their elastic constants. AIP Conference Proceedings, 2020, , .	0.4	1
98	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
99	Acceleration of ordering in iron-, cobalt-, and chromium-doped Ni3Mn. Soviet Physics Journal (English) Tj ETQq1	0,784314	4 rgBT /Overl
100	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 rgB1	/ Ove rlock	₂ 1⁄00 Tf 50 37
101	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
102	Kinetics of ordering in Ni3Mn alloy with additions of copper. Soviet Physics Journal (English) Tj ETQq0 0 0 rgBT /C	overlack 10	0 Tf 50 302 T
103	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
104	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
105	Physical nature of the anomalies in the temperature dependence of the probability of the M�ssbauer effect near phase transitions. Soviet Physics Journal (English Translation of Izvestiia Vysshykh) Tj ETQq1 1 0.7843	14orgBT/(Dverlock 101
106	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
107	Neutron diffraction studies of the premartensitic transformation B2 ? B19? in Ti49Ni51 single crystals. Russian Physics Journal, 1995, 38, 46-50.	0.4	0
108	Premartensitic and martensitic transformations in Ti49Ni51 single crystal: Ageing effect. Russian Physics Journal, 1999, 42, 646-652.	0.4	0

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109	Model of the B2 → R martensitic transformation in alloys with a B2 superstructure. Physics of Metals and Metallography, 2012, 113, 541-549.	1.0	Ο
110	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
111	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
112	Gradient changes in structural condition of the B2 phase of NiTi surface layers after electron-beam treatments. , 2014, , .		0
113	Structural phase states in NiTi near-surface layers modified by electron and ion beams. , 2014, , .		Ο
114	Phase composition in NiTi near-surface layers after electron beam treatment and its variation depending on beam energy density. , 2014, , .		0
115	Nonequilibrium structural condition in the medical TiNi-based alloy surface layer treated by electron beam. , 2014, , .		Ο
116	Improving the corrosion resistance of nitinol by plasma-immersion ion implantation with silicon for biomedical applications. AIP Conference Proceedings, 2015, , .	0.4	0
117	Neurohumoral indicators of efficacy radiofrequency cardiac denervation. AIP Conference Proceedings, 2015, , .	0.4	Ο
118	In-situ X-ray diffraction studies of the phase transformations and structural states of B2, R and B19′ phases in Ti49.5Ni50.5 alloy. AIP Conference Proceedings, 2015, , .	0.4	0
119	Modeling of microdamage accumulation in anisotropic metals and alloys. AIP Conference Proceedings, 2015, , .	0.4	0
120	Transmission electron microscopy studying of structural features of NiTi B2 phase formed under pulsed electron-beam impact. AlP Conference Proceedings, 2015, , .	0.4	0
121	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	Ο
122	The development of self-expanding peripheral stent with ion-modified surface layer. AIP Conference Proceedings, 2016, , .	0.4	0
123	Effect of plasma immersion ion implantation in TiNi implants on its interaction with animal subcutaneous tissues. AIP Conference Proceedings, 2016, , .	0.4	Ο
124	Effect of isothermal loading temperature on reversible inelastic strain in coarse-grained Ti49.7Ni50.7. AIP Conference Proceedings, 2017, , .	0.4	0
125	Influence of silicon doping of titanium nickelide near-surface layers on alloy cytocompatibility. AIP Conference Proceedings, 2017, , .	0.4	0
126	Distribution of nickel after modified nitinol stent implantation in animals. AIP Conference Proceedings, 2017, , .	0.4	0

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127	Hydrogen diffusion in ultrafine-grained titanium alloy with palladium. AIP Conference Proceedings, 2018, , .	0.4	0
128	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
129	Development of shape memory and superelasticity in binary TiNi-based alloys under torsion of samples with B19′ structure. AlP Conference Proceedings, 2018, , .	0.4	0
130	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
131	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
132	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
133	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
134	FIRST TIME EXPERIMENTAL IMPLANTING OF LOCALLY DEVELOPED LEFT ATRIUM OCCLUDERS. Russian Journal of Cardiology, 2016, , 70-74.	1.4	0
135	Effect of abc pressing temperature on the mechanical properties in Ti49.8Ni50.2 alloy. AIP Conference Proceedings, 2022, , .	0.4	0
136	Mechanical Properties of the Ti49.8Ni50.2 Alloy after Multi-Axial Forging at 573 K. Metals, 2022, 12, 1043.	2.3	0