

Ladislav Straka

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Experimental Observations versus First-Principles Calculations for Ni-Mn-Ga Ferromagnetic Shape Memory Alloys: A Review. <i>Physica Status Solidi - Rapid Research Letters</i> , 2022, 16, .	1.2	5
2	Dependence of martensite transformation temperature on magnetic field in Ni ₂ MnGa and Ni ₂ MnGa _{0.95} In _{0.05} single crystals. <i>Journal of Alloys and Compounds</i> , 2022, 908, 164514.	2.8	2
3	Nanotwinned (inter)martensite transformation interfaces in Ni ₅₀ Mn ₂₅ Ga ₂₀ Fe ₅ magnetic shape memory single crystal foil. <i>Materials Characterization</i> , 2022, 190, 112007.	1.9	3
4	Hysteretic structural changes within five-layered modulated 10M martensite of Ni-Mn-Ga(Fe). <i>Journal of Physics Condensed Matter</i> , 2021, 33, 265404.	0.7	10
5	Effect of crystal quality on twinning stress in Ni-Mn-Ga magnetic shape memory alloys. <i>Journal of Materials Research and Technology</i> , 2021, 14, 1934-1944.	2.6	17
6	Effect of electron localization in theoretical design of Ni-Mn-Ga based magnetic shape memory alloys. <i>Materials and Design</i> , 2021, 209, 109917.	3.3	12
7	Magnetic domain structure across the austenite-martensite interface in Ni ₅₀ Mn ₂₅ Ga ₂₀ Fe ₅ single crystalline thin foil. <i>Applied Physics Letters</i> , 2021, 119, 212901.	1.5	1
8	The Effect of Local Arrangement of Excess Mn on Phase Stability in Ni-Mn-Ga Martensite: An Ab Initio Study. <i>Shape Memory and Superelasticity</i> , 2020, 6, 35-44.	1.1	5
9	Highly mobile twin boundaries in seven-layer modulated Ni-Mn-Ga-Fe martensite. <i>Scripta Materialia</i> , 2020, 178, 62-66.	2.6	18
10	Antiphase boundaries, magnetic domains, and magnetic vortices in Ni-Mn-Ga single crystals. <i>Acta Materialia</i> , 2020, 184, 179-186.	3.8	17
11	Systematic Trends of Transformation Temperatures and Crystal Structure of Ni-Mn-Ga-Fe-Cu Alloys. <i>Shape Memory and Superelasticity</i> , 2020, 6, 97-106.	1.1	12
12	First-principles study of Zn-doping effects on phase stability and magnetic anisotropy of Ni-Mn-Ga alloys. <i>Materials Research Express</i> , 2020, 7, 026101.	0.8	6
13	Origin of magnetocrystalline anisotropy in Ni-Mn-Ga-Co-Cu tetragonal martensite. <i>Journal of Magnetism and Magnetic Materials</i> , 2020, 503, 166522.	1.0	13
14	Switching the soft shearing mode orientation in Ni-Mn-Ga non-modulated martensite by Co and Cu doping. <i>Smart Materials and Structures</i> , 2020, 29, 045022.	1.8	12
15	Non-conventional twins in five-layer modulated Ni-Mn-Ga martensite. <i>Scripta Materialia</i> , 2019, 162, 497-502.	2.6	11
16	Magnetic coercivity control by heat treatment in Heusler Ni-Mn-Ga(B) single crystals. <i>Acta Materialia</i> , 2019, 169, 109-121.	3.8	19
17	2019, 171, 107703.	3.3	37
18	Ultrafast actuation of Ni-Mn-Ga micropillars by pulsed magnetic field. <i>Scripta Materialia</i> , 2019, 162, 482-485.	2.6	25

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19	Rapid floating zone growth of Ni ₂ MnGa single crystals exhibiting magnetic shape memory functionality. <i>Journal of Alloys and Compounds</i> , 2019, 775, 533-541.	2.8	11
20	Giant magnetic-field-induced strain in Ni-Mn-Ga micropillars. <i>Scripta Materialia</i> , 2018, 150, 173-176.	2.6	26
21	Composition and temperature dependence of twinning stress in non-modulated martensite of Ni-Mn-Ga-Co-Cu magnetic shape memory alloys. <i>Scripta Materialia</i> , 2018, 144, 52-55.	2.6	21
22	Magnetic properties of Ni-Mn-Ga-Co-Cu tetragonal martensites exhibiting magnetic shape memory effect. <i>Scripta Materialia</i> , 2018, 142, 61-65.	2.6	17
23	Antiphase boundaries in bulk Ni-Mn-Ga Heusler alloy observed by magnetic force microscopy. <i>Applied Physics Letters</i> , 2018, 113, 172901.	1.5	9
24	Transformation Paths from Cubic to Low-Symmetry Structures in Heusler Ni ₂ MnGa Compound. <i>Scientific Reports</i> , 2018, 8, 7275.	1.6	23
25	Low temperature a/b nanotwins in Ni ₅₀ Mn _{25+x} Ga _{25-2x} Heusler alloys. <i>Scientific Reports</i> , 2018, 8, 11943.	1.6	14
26	Mechanical Stabilization of Martensite: Comparison of Ni-Mn-Ga and Cu-Ni-Al Shape Memory Single Crystals. <i>Acta Physica Polonica A</i> , 2018, 134, 627-630.	0.2	5
27	Study of 10M' Nanotwinned Phase in the Vicinity of Martensitic Transformation in Ni-Mn-Ga Magnetic Shape Memory Alloy. <i>Acta Physica Polonica A</i> , 2018, 134, 859-862.	0.2	2
28	Temperature dependence of twinning and magnetic stresses in Ni ₄₆ Mn ₂₄ Ga ₂₂ Co ₄ Cu ₄ alloy with giant 12% magnetic field-induced strain. <i>Scripta Materialia</i> , 2017, 131, 33-36.	2.6	32
29	Branched needle microstructure in Ni-Mn-Ga 10M martensite: EBSD study. <i>Acta Materialia</i> , 2017, 128, 113-119.	3.8	14
30	Orthorhombic intermediate phase originating from {110} nanotwinning in Ni _{50.0} Mn _{28.7} Ga _{21.3} modulated martensite. <i>Acta Materialia</i> , 2017, 132, 335-344.	3.8	16
31	Effect of Magnetic Ordering on the Stability of Ni-Mn-Ga-Co-Cu Alloys Along the Tetragonal Deformation Path. <i>IEEE Transactions on Magnetics</i> , 2017, 53, 1-6.	1.2	3
32	Ab initio prediction of stable nanotwin double layers and 4O structure in Ni ₅₀ Mn _{25+x} Ga _{25-2x} magnetic shape memory alloys. <i>Physical Review B</i> , 2016, 94, .	2.1	28
33	The relation between lattice parameters and very low twinning stress in Ni ₅₀ Mn _{25+x} Ga _{25-2x} magnetic shape memory alloys. <i>Smart Materials and Structures</i> , 2016, 25, 025001.	1.8	23
34	Magnetic domains and twin microstructure of single crystal Ni-Mn-Ga exhibiting magnetic shape memory effect. , 2015, , .		0
35	Ab initio study of Ni ₂ MnGa under shear deformation. <i>MATEC Web of Conferences</i> , 2015, 33, 05006.	0.1	3
36	Ab Initio Study of Properties of Co- and Cu- Doped Ni-Mn-Ga Alloys. <i>Materials Today: Proceedings</i> , 2015, 2, S601-S604.	0.9	8

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37	Magnetic Domains and Twin Microstructure of Single Crystal Ni ^{1-x} Mn ^x Ga Exhibiting Magnetic Shape Memory Effect. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	11
38	Enhanced magnetic hysteresis in Ni-Mn-Ga single crystal and its influence on magnetic shape memory effect. Journal of Applied Physics, 2015, 117, .	1.1	10
39	Optical and magneto-optical studies of martensitic transformation in Ni-Mn-Ga magnetic shape memory alloys. Journal of Applied Physics, 2015, 117, 17A919.	1.1	9
40	Equivalence of Mechanical and Magnetic Force in Magnetic Shape Memory Effect. Acta Physica Polonica A, 2015, 128, 754-758.	0.2	4
41	First-principles study of Co- and Cu-doped $\langle \text{Ni}_{1-x}\text{Mn}_x \rangle$ the tetragonal deformation path. Physical Review B, 2014, 89, .		
42	Magneto-optical spectroscopy of ferromagnetic shape-memory Ni-Mn-Ga alloy. Journal of Applied Physics, 2014, 115, .	1.1	13
43	A microstructural model of motion of macro-twin interfaces in Ni ^{1-x} Mn ^x Ga 10M martensite. Journal of the Mechanics and Physics of Solids, 2014, 64, 198-211.	2.3	88
44	Mechanically induced demagnetization and remanent magnetization rotation in Ni ^{1-x} Mn ^x Ga (α -B) magnetic shape memory alloy. Scripta Materialia, 2014, 87, 25-28.	2.6	13
45	Differently mobile twin boundaries and magnetic shape memory effect in 10M martensite of Ni ^{1-x} Mn ^x Ga. Materials Research Bulletin, 2013, 48, 5105-5109.	2.7	19
46	Magnetic shape memory effect at 1.7%K. Applied Physics Letters, 2013, 103, .	1.5	47
47	Different microstructures of mobile twin boundaries in 10 M modulated Ni ^{1-x} Mn ^x Ga martensite. Acta Materialia, 2013, 61, 622-631.	3.8	81
48	Characterization of mobile type I and type II twin boundaries in 10M modulated Ni ^{1-x} Mn ^x Ga martensite by electron backscatter diffraction. Acta Materialia, 2013, 61, 1913-1920.	3.8	64
49	Modulation reorientation in 10M Ni ^{1-x} Mn ^x Ga martensite. Scripta Materialia, 2013, 68, 671-674.	2.6	26
50	Effect of intermartensite transformation on twinning stress in Ni-Mn-Ga 10%M martensite. Journal of Applied Physics, 2013, 114, .	1.1	42
51	Diffraction study of bending-induced polysynthetic twins in 10M modulated Ni-Mn-Ga martensite. Journal of Applied Physics, 2012, 112, .	1.1	25
52	Temperature dependence of twinning stress of Type I and Type II twins in 10M modulated Ni ^{1-x} Mn ^x Ga martensite. Scripta Materialia, 2012, 67, 25-28.	2.6	84
53	Ni-Mn-Ga single crystals with very low twinning stress. Journal of Physics: Conference Series, 2011, 303, 012079.	0.3	48
54	Twin interaction and large magnetoelasticity in Ni-Mn-Ga single crystals. Journal of Applied Physics, 2011, 109, 063504.	1.1	49

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55	Highly mobile twinned interface in 10M modulated Ni-Mn-Ga martensite: Analysis beyond the tetragonal approximation of lattice. <i>Acta Materialia</i> , 2011, 59, 7450-7463.	3.8	183
56	Temperature dependence of single twin boundary motion in Ni-Mn-Ga martensite. <i>Applied Physics Letters</i> , 2011, 98, .	1.5	57
57	Highly mobile type II twin boundary in Ni-Mn-Ga five-layered martensite. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	85
58	Twin microstructure dependent mechanical response in Ni-Mn-Ga single crystals. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	98
59	Magnetic anisotropy of nonmodulated Ni-Mn-Ga martensite revisited. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	37
60	Effect of substrate deformation on functional properties of atomic-layer-deposited TiO ₂ coatings on stainless steel. <i>Thin Solid Films</i> , 2009, 517, 3797-3805.	0.8	8
61	Strain and concurrent magnetization changes in magnetic shape memory Ni-Mn-Ga single crystals – experiment and model. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 481-482, 283-287.	2.6	14
62	Activation of magnetic shape memory effect in Ni-Mn-Ga alloys by mechanical and magnetic treatment. <i>Acta Materialia</i> , 2008, 56, 5492-5499.	3.8	81
63	Open-circuit potential as an indicator of damage of atomic layer deposited TiO ₂ on AISI 304 stainless steel. <i>Thin Solid Films</i> , 2008, 517, 641-647.	0.8	12
64	Detection of structural damage of aluminum alloy 6082 using elastic wave modulation spectroscopy. <i>NDT and E International</i> , 2008, 41, 554-563.	1.7	39
65	Photocatalytic Activity of Atomic Layer Deposited TiO ₂ Coatings on Austenitic Stainless Steels and Copper Alloys. <i>Journal of the Electrochemical Society</i> , 2008, 155, C62.	1.3	29
66	Stress dependence of magnetic shape memory effect and its model. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 438-440, 1003-1006.	2.6	14
67	Forced torsion pendulum for studies of interactions at solid-liquid interface. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 442, 538-542.	2.6	0
68	Temperature dependence of reversible field-induced strain in Ni-Mn-Ga single crystal. <i>Scripta Materialia</i> , 2006, 54, 1497-1500.	2.6	36
69	Magnetization changes in Ni-Mn-Ga magnetic shape memory single crystal during compressive stress reorientation. <i>Scripta Materialia</i> , 2006, 54, 1549-1552.	2.6	26
70	Magnetic indication of the stress-induced martensitic transformation in ferromagnetic Ni-Mn-Ga alloy. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 302, 387-390.	1.0	17
71	Reversible 6% strain of Ni-Mn-Ga martensite using opposing external stress in static and variable magnetic fields. <i>Journal of Magnetism and Magnetic Materials</i> , 2005, 290-291, 829-831.	1.0	45
72	Magnetic shape memory fatigue. , 2005, 5761, 513.		13

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73	Temperature dependence of reversible field-induced strain and magnetization changes in Ni-Mn-Ga single crystals. , 2005, , .		1
74	Compositional dependence of structure, magnetization and magnetic anisotropy in Ni-Mn-Ga magnetic shape memory alloys. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 2045-2046.	1.0	43
75	Effect of the chemical composition to martensitic transformation in Ni-Mn-Ga-Fe alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 378, 384-388.	2.6	63
76	Giant Magneto-elastic Strain-magnetic Shape Memory Effect. European Physical Journal D, 2004, 54, 611-614.	0.4	5
77	Acoustic emission of Ni-Mn-Ga magnetic shape memory alloy in different straining modes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 374, 263-269.	2.6	44
78	Tensile/compressive behaviour of non-layered tetragonal Ni _{52.8} Mn _{25.7} Ga _{21.5} alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 386, 27-33.	2.6	50
79	Investigation of magnetic anisotropy of Ni-Mn-Ga seven-layered orthorhombic martensite. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 2049-2050.	1.0	28
80	Magnetic properties of stress-induced martensite and martensitic transformation in Ni-Mn-Ga magnetic shape memory alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 378, 394-398.	2.6	26
81	Tensile/compressive behaviour of non-layered tetragonal Ni _{52.8} Mn _{25.7} Ga _{21.5} alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 386, 27-33.	2.6	12
82	Superelastic response of Ni-Mn-Ga martensite in magnetic fields and a simple model. IEEE Transactions on Magnetism, 2003, 39, 3402-3404.	1.2	86
83	Temperature dependence and temperature limits of magnetic shape memory effect. Journal of Applied Physics, 2003, 94, 7139-7143.	1.1	142
84	Magnetic anisotropy in Ni-Mn-Ga martensites. Journal of Applied Physics, 2003, 93, 8636-8638.	1.1	144
85	Relation between structure, magnetization process and magnetic shape memory effect of various martensites occurring in Ni-Mn-Ga alloys. European Physical Journal Special Topics, 2003, 112, 959-962.	0.2	54
86	Study of austenite-martensite transformation in Ni-Mn-Ga magnetic shape memory alloy. European Physical Journal Special Topics, 2003, 112, 911-915.	0.2	17
87	Behaviour of Ni-Mn-Ga alloys under mechanical stress. European Physical Journal Special Topics, 2003, 112, 943-946.	0.2	23
88	Temperature dependence of magnetic anisotropy in Ni-Mn-Ga alloys exhibiting giant field-induced strain. Journal of Applied Physics, 2002, 91, 8228.	1.1	82
89	Magnetic properties of various martensitic phases in Ni-Mn-Ga alloy. IEEE Transactions on Magnetism, 2002, 38, 2835-2837.	1.2	48
90	Magnetic properties of various martensitic phases in Ni-Mn-Ga alloy. , 0, , .		0

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91	Relation between magnetic reversal and magnetic shape memory effect. , 0, , .		0
92	Superelastic response of Ni-Mn-Ga martensite in magnetic field and simple model. , 0, , .		1
93	Analysis of Twin Boundary in Single Crystal of Ni-Mn-Ga Martensite Using Powder Laboratory Diffractometer. Solid State Phenomena, 0, 203-204, 13-16.	0.3	0
94	Transitions Between Austenite and Martensite Structures in Ni ₅₀Mn ₂₅Ga ₂₀Fe ₅ Thin Foil. SSRN Electronic Journal, 0, , .	0.4	1
95	Universality of Temperature Dependence of Twinning Stress in Ni-Mn-Ga 10M Martensite and Effect of Crystal Quality. SSRN Electronic Journal, 0, , .	0.4	1