Ing. Petr Veřtát: Attachment to the application for dissertation defence

List of author's publications related to the doctoral thesis

Presented list contains author's works related to the doctoral thesis published in the indexed journals during the years of his doctoral studies. List is sorted by the year of publication in descending order.

[i] P. Veřtát, H. Seiner, L. Straka, M. Klicpera, A. Sozinov, O. Fabelo, O. Heczko, Hysteretic structural changes within five-layered modulated 10M martensite of Ni-Mn-Ga(-Fe), J. Phys. Condens. Matter. 33 (2021) 265404. https://doi.org/10.1088/1361-648x/abfb8f. [FNSPE affiliation] [IF 2.3] [7 citations]

[ii] V. Kopecký, M. Rameš, P. Veřtát, R.H. Colman, O. Heczko, Full Variation of Site Substitution in Ni-Mn-Ga by Ferromagnetic Transition Metals, Metals (Basel). 11 (2021) 850. https://doi.org/10.3390/met11060850. [FNSPE affiliation] [IF 2.4] [9 citations]

[iii] D. Musiienko, F. Nilsén, A. Armstrong, M. Rameš, P. Veřtát, R.H. Colman, J. Čapek, P. Müllner, O. Heczko, L. Straka, Effect of crystal quality on twinning stress in Ni-Mn-Ga magnetic shape memory alloys, J. Mater. Res. Technol. 14 (2021) 1934–1944. https://doi.org/10.1016/j.jmrt.2021.07.081. [IF 5.0] [10 citations]

[iv] P. Veřtát, L. Straka, H. Seiner, A. Sozinov, M. Klicpera, O. Fabelo, O. Heczko, Hysteretic structural changes within five-layered modulated 10M martensites of Ni–Mn–Ga(–Fe), Acta Crystallogr. Sect. A Found. Adv. 77 (2021) C399–C399. https://doi.org/10.1107/S0108767321092874. (conference abstract) [FNSPE affiliation] [IF 2.3] [0 citations]

[v] O. Heczko, P. Veřtát, M. Klicpera, O. Fabelo, L. Straka, Intermartensitic transformation between modulated structures in Heusler Ni–Mn–Ga(–Fe) single crystals, Acta Crystallogr. Sect. A Found. Adv. 77 (2021) C274–C274. https://doi.org/10.1107/s0108767321094083. (conference abstract) [FNSPE affiliation] [IF 2.3] [0 citations]

[vi] M. Zelený, P. Sedlák, O. Heczko, H. Seiner, P. Veřtát, M. Obata, T. Kotani, T. Oda, L. Straka, Effect of electron localization in theoretical design of Ni-Mn-Ga based magnetic shape memory alloys, Mater. Des. 209 (2021). https://doi.org/10.1016/j.matdes.2021.109917. [IF 9.4] [5 citations]

[vii] A. Sozinov, D. Musiienko, A. Saren, P. Veřtát, L. Straka, O. Heczko, M. Zelený, R. Chulist, K. Ullakko, Highly mobile twin boundaries in seven-layer modulated Ni–Mn–Ga–Fe martensite, Scr. Mater. 178 (2020) 62–66. https://doi.org/10.1016/j.scriptamat.2019.10.042. [IF 5.6] [12 citations]

[viii] A. Armstrong, F. Nilsén, M. Rameš, R.H. Colman, P. Veřtát, T. Kmječ, L. Straka, P. Müllner, O. Heczko, Systematic Trends of Transformation Temperatures and Crystal Structure of Ni–Mn–Ga–Fe–Cu Alloys, Shape Mem. Superelasticity. 6 (2020) 97–106. https://doi.org/10.1007/s40830-020-00273-3. [7 citations]

[ix] P. Veřtát, L. Straka, J. Drahokoupil, O. Heczko, Study of 10M' nanotwinned phase in the vicinity of martensitic transformation in Ni–Mn–Ga magnetic shape memory alloy, Acta Phys. Pol. A. 134 (2018) 859–862. https://doi.org/10.12693/APhysPolA.134.859. [FNSPE affiliation] [IF 0.6] [2 citations]

[x] L. Straka, J. Drahokoupil, P. Veřtát, M. Zelený, J. Kopeček, A. Sozinov, O. Heczko, Low temperature a/b nanotwins in $Ni_{50}Mn_{25+x}Ga_{25-x}$ Heusler alloys, Sci. Rep. 8 (2018) 11943. https://doi.org/10.1038/s41598-018-30388-8. [IF 5.0] [9 citations]

[xi] P. Veřtát, J. Drahokoupil, Fitexc – Diffraction Profile Fitting Program Run in MS Excel, Acta Polytech. CTU Proc. 17 (2018) 20. https://doi.org/10.14311/app.2018.17.0020. [FNSPE affiliation] [1 citation]

[xii] L. Straka, J. Drahokoupil, P. Veřtát, J. Kopeček, M. Zelený, H. Seiner, O. Heczko, Orthorhombic intermediate phase originating from {110} nanotwinning in $Ni_{50.0}Mn_{28.7}Ga_{21.3}$ modulated martensite, Acta Mater. 132 (2017) 335–344. https://doi.org/10.1016/j.actamat.2017.04.048. [IF 9.2] [13 citations]

List of additional author's publications not related to the doctoral thesis

Presented list contains remaining author's publications in indexed journals, including those related to the topic of the doctoral thesis but published earlier and publications unrelated to the doctoral thesis. List is sorted by the year of publication in descending order.

[i] M.M. Solovan, A.I. Mostovyi, H.P. Parkhomenko, M. Kaikanov, N. Schopp, E.A. Asare, T. Kovaliuk, P. Veřtát, K.S. Ulyanytsky, D. V. Korbutyak, V. V. Brus, A High-Detectivity, Fast-Response, and Radiation-Resistant TiN/CdZnTe Heterojunction Photodiode, Adv. Opt. Mater. (2022) 2202028. https://doi.org/10.1002/adom.202202028. [IF 10.0] [0 citations]

[ii] Y. Ge, M. Vronka, P. Veřtát, M. Karlik, S.P. Hannula, O. Heczko, Deformation twinning with different twin-boundary mobility in 2H martensite in Cu–Ni–Al shape memory alloy, Acta Mater. 226 (2022). https://doi.org/10.1016/j.actamat.2021.117598. [IF 9.2] [1 citations]

[iii] J. Pinc, M. Španko, L. Lacina, J. Kubásek, P. Ashcheulov, P. Veřtát, A. Školáková, O. Kvítek, D. Vojtěch, J. Čapek, Influence of the pre-exposure of a Zn-0.8Mg-0.2Sr absorbable alloy in bovine serum albumin containing media on its surface changes and their impact on the cytocompatibility of the material, Mater. Today Commun. 28 (2021) 102556. https://doi.org/10.1016/j.mtcomm.2021.102556. [IF 3.4] [2 citations]

[iv] J. Pinc, A. Školáková, P. Veřtát, J. Duchoň, J. Kubásek, P. Lejček, D. Vojtěch, J. Čapek, Microstructure evolution and mechanical performance of ternary Zn-0.8Mg-0.2Sr (wt. %) alloy processed by equal-channel angular pressing, Mater. Sci. Eng. A. 824 (2021). https://doi.org/10.1016/j.msea.2021.141809. [IF 6.0] [4 citations]

[v] K. Hosová, J. Pinc, A. Školáková, V. Bartůněk, P. Veřtát, T. Školáková, F. Průša, D. Vojtěch, J. Čapek, Influence of ceramic particles character on resulted properties of zinc-hydroxyapatite/monetite composites, Metals (Basel). 11 (2021) 1–16. https://doi.org/10.3390/met11030499. [IF 2.4] [3 citations]

[vi] M. Lebeda, P. Vlčák, P. Veřtát, J. Drahokoupil, Ab-initio study of surface energies and structural influece of vacancies in titanium nitride nanolayer, NANOCON Conf. Proc. - Int. Conf. Nanomater. 2021-October (2021) 214–220. https://doi.org/10.37904/nanocon.2020.3706. [0 citations]

[vii] J. Čapek, J. Pinc, Š. Msallamová, E. Jablonská, P. Veřtát, J. Kubásek, D. Vojtěch, Thermal Plasma Spraying as a New Approach for Preparation of Zinc Biodegradable Scaffolds: A Complex Material Characterization, J. Therm. Spray Technol. 28 (2019) 826–841. https://doi.org/10.1007/s11666-019-00849-1. [IF 2.9] [8 citations]

[viii] J. Pinc, J. Čapek, J. Kubásek, P. Veřtát, K. Hosová, Microstructure and mechanical properties of the potentially biodegradable ternary system Zn-Mg0.8-Ca0.2, Procedia Struct. Integr. 23 (2019) 21–26. https://doi.org/10.1016/j.prostr.2020.01.057. [5 citations]

[ix] O. Heczko, M. Vronka, P. Veřtát, M. Rameš, K. Onderková, V. Kopecký, P. Krátká, Y. Ge, Mechanical Stabilization of Martensite in Cu–Ni–Al Single Crystal and Unconventional Way to Detect It, Shape Mem. Superelasticity. 4 (2018) 77–84. https://doi.org/10.1007/s40830-018-0164-1. [3 citations]

[x] P. Vlčák, J. Drahokoupil, P. Veřtát, J. Šepitka, J. Duchoň, Hardness response to the stability of a Ti(+N) solid solution in an annealed TiN/Ti(+N)/Ti mixture layer formed by nitrogen ion implantation into titanium, J. Alloys Compd. 746 (2018) 490–495. https://doi.org/10.1016/j.jallcom.2018.02.301. [IF 6.4] [14 citations]

[xi] P. Veřtát, J. Drahokoupil, P. Vlčák, Surface Characterization of Titanium Alloys for Nitrogen Ion Implantation, Acta Polytech. CTU Proc. 9 (2017) 39. https://doi.org/10.14311/app.2017.9.0039. [0 citations]

[xii] P. Veřtát, J. Drahokoupil, O. Perevertov, O. Heczko, Phase transition in a multiferroic Ni-Mn-Ga single crystal, Phase Transitions. 89 (2016) 752–760. https://doi.org/10.1080/01411594.2016.1199803. [IF 1.5] [2 citations]

[xiii] O. Heczko, P. Veřtát, M. Vronka, V. Kopecky, O. Perevertov, Ni–Mn–Ga Single Crystal Exhibiting Multiple Magnetic Shape Memory Effects, Shape Mem. Superelasticity. 2 (2016) 272–280. https://doi.org/10.1007/s40830-016-0077-9. [10 citations]