

Jméno, příjmení, titul žadatele:

Given name, surname, academic degree of student:

Ing. Ondřej Tyc

Seznam publikovaných prací:

List of publications:

- [1] Tyc O, Heller L, Vronka M, Šittner P. Effect of temperature on fatigue of superelastic NiTi wires. *International Journal of Fatigue* 2020;134:105470. <https://doi.org/10.1016/j.ijfatigue.2020.105470>.
- [2] Tyc O, Molnárová O, Šittner P. Effect of microstructure on fatigue of superelastic NiTi wires. *International Journal of Fatigue* 2021;152:106400. <https://doi.org/10.1016/j.ijfatigue.2021.106400>.
- [3] Tyc O, Heller L, Šittner P. Lattice defects generated by cyclic thermomechanical loading of superelastic NiTi wire. *Shape Memory and Superelasticity* 2021;7:65-88. <https://doi.org/10.1007/s40830-021-00315-4>.
- [4] Tyc O, Pilch J, Šittner P, Haušild P. Investigation of the Precipitation Processes in NiTi Wires. *Proceedings of the International Conference on Martensitic Transformations: Chicago 2018*:173–7. https://doi.org/10.1007/978-3-319-76968-4_27.
- [5] Tyc O, Pilch J, Šittner P. Fatigue of superelastic NiTi wires with different plateau strain. *Procedia Structural Integrity* 2016;2:1489–96. <https://doi.org/10.1016/j.prostr.2016.06.189>.
- [6] Chen Y, Tyc O, Molnárová O, Heller L, Šittner P. Tensile Deformation of Superelastic NiTi Wires in Wide Temperature and Microstructure Ranges. *Shape Memory and Superelasticity* 2018;5:42–62. <https://doi.org/10.1007/s40830-018-00205-2>.
- [7] Heller L, Seiner H, Šittner P, Sedlák P, Tyc O, Kadeřávek L. On the plastic deformation accompanying cyclic martensitic transformation in thermomechanically loaded NiTi. *International Journal of Plasticity* 2018;111:53–71. <https://doi.org/10.1016/j.ijplas.2018.07.007>.
- [8] Heller L, Šittner P, Sedlák P, Seiner H, Tyc O, Kadeřávek L, et al. Beyond the strain recoverability of martensitic transformation in NiTi. *International Journal of Plasticity* 2019;116:232–64. <https://doi.org/10.1016/j.ijplas.2019.01.007>.
- [9] Chen Y, Molnárová O, Tyc O, Kadeřávek L, Heller L, Šittner P. Recoverability of large strains and deformation twinning in martensite during tensile deformation of NiTi shape memory alloy polycrystals. *Acta Materialia* 2019;180:243–59. <https://doi.org/10.1016/j.actamat.2019.09.012>.
- [10] Šittner P, Molnárová O, Kadeřávek L, Tyc O, Heller L. Deformation twinning in martensite affecting functional behavior of NiTi shape memory alloys. *Materialia* 2020;9:100506. <https://doi.org/10.1016/j.mtla.2019.100506>.
- [11] Chen Y, Tyc O, Kadeřávek L, Molnárová O, Heller L, Šittner P. Temperature and microstructure dependence of localized tensile deformation of superelastic NiTi wires. *Materials & Design* 2019;174:107797. <https://doi.org/10.1016/j.matdes.2019.107797>.
- [12] Šittner P, Heller L, Sedlák P, Chen Y, Tyc O, Molnárová O, et al. $B2 \Rightarrow B19' \Rightarrow B2T$

- Martensitic Transformation as a Mechanism of Plastic Deformation of NiTi. Shape Memory and Superelasticity 2019;5:383–96. <https://doi.org/10.1007/s40830-019-00250-5>.
- [13] Molnárová O, Tyc O, Heller L, Seiner H, Šittner P. Evolution of martensitic microstructures in nanocrystalline NiTi wires deformed in tension. Acta Materialia 2021;218:117166. <https://doi.org/10.1016/j.actamat.2021.117166>.
- [14] Samal S, Tyc O, Heller L, Šittner P, Malik M, Poddar P, et al. Study of Interfacial Adhesion between Nickel-Titanium Shape Memory Alloy and a Polymer Matrix by Laser Surface Pattern. Applied Sciences 2020;10:2172. <https://doi.org/10.3390/app10062172>.
- [15] Samal S, Heller L, Brajer J, Tyc O, Kadrevik L, Sittner P. Laser Annealing on the Surface Treatment of Thin Super Elastic NiTi Wire. IOP Conference Series: Materials Science and Engineering 2018;362:012007. <https://doi.org/10.1088/1757-899x/362/1/012007>.
- [16] Samal S, de Prado E, Tyc O, Sittner P. Shape Setting in super-elastic NiTi ribbon. IOP Conference Series: Materials Science and Engineering 2018;461:012075. <https://doi.org/10.1088/1757-899x/461/1/012075>.
- [17] Samal S, Tyc O, Cizek J, Klecka J, Lukáč F, Molnárová O, et al. Fabrication of Thermal Plasma Sprayed NiTi Coatings Possessing Functional Properties. Coatings 2021;11:610. <https://doi.org/10.3390/coatings11050610>.