

## Given name, surname, degree of student:

Lukáš Kadeřávek, Ing.

## List of publications of the author

- [1] KADEŘÁVEK, L., ŠITTNER, P., MOLNÁROVÁ, O., KLIMŠA, L., & L. HELLER. Localized Plastic Deformation of Superelastic NiTi Wires in Tension. *Shape Memory and Superelasticity*, (2023), 1-19. [IF= 2.5; Number of citations= 0] \*
- [2] SITTNER, P., IAPAROVA, E., KADERAVEK, L., CHEN, Y., & TYC, O. Tensile deformation of NiTi shape memory alloy thermally loaded under applied stress. *Materials & Design*, (2023), 111638. [IF= 9.4; Number of citations= 1]
- [3] BIAN, X., HELLER, L., TYC, O., KADEŘÁVEK, L., & ŠITTNER, P. In-situ synchrotron x-ray diffraction texture analysis of tensile deformation of nanocrystalline superelastic NiTi wire at various temperatures. *Materials Science and Engineering: A*, 853, (2022), 143725. [IF= 6; Number of citations= 5]
- [4] BIAN, X., HELLER, L., KADEŘÁVEK, L., & ŠITTNER, P. In-situ synchrotron X-ray diffraction texture analysis of tensile deformation of nanocrystalline NiTi wire in martensite state. *Applied Materials Today*, 26, (2022), 101378. [IF= 8.6; Number of citations= 13]
- [5] BENEŠOVÁ, B., FROST, M., KADEŘÁVEK, L., ROUBÍČEK, T., & SEDLÁK, P. An experimentally-fitted thermodynamical constitutive model for polycrystalline shape memory alloys. *Discrete and Continuous Dynamical Systems-S*, 14(11), (2021), 3925-3952. [IF= 2.4 ; Number of citations= 2] \*
- [6] VOKOUN, D., PILCH, J., KADEŘÁVEK, L., & ŠITTNER, P. Strength of superelastic NiTi velcro-like fasteners. *Metals*, 11(6), (2021), 909. [IF= 2.7; Number of citations= 1] \*
- [7] ČAPEK, J., KADEŘÁVEK, L., PINC, J., KOPEČEK, J., & KLIMŠA, L. Influence of the Microstructure of the Initial Material on the Zn Wires Prepared by Direct Extrusion with a Huge Extrusion Ratio. *Metals*, 11(5), (2021), 787. [IF= 2.7 ; Number of citations= 2] \*
- [8] FROST, M., ŠEVČÍK, M., KADEŘÁVEK, L., ŠITTNER, P., & SEDLÁK, P. Reconstruction of phase distributions in NiTi helical spring: comparison of diffraction/scattering computed tomography and computational modeling. *Smart Materials and Structures*, 29(7), (2020), 075036. [IF= 4.1 ; Number of citations= 4] \*
- [9] ŠITTNER, P., MOLNÁROVÁ, O., KADEŘÁVEK, L., TYC, O., & HELLER, L. Deformation twinning in martensite affecting functional behavior of NiTi shape memory alloys. *Materialia*, 9, (2020), 100506. [IF= 3.4; Number of citations= 34] \*
- [10] ŠITTNER, P., HELLER, L., SEDLÁK, P., CHEN, Y., TYC, O., MOLNÁROVÁ, O., ... & SEINER, H.  $B2 \Rightarrow B19' \Rightarrow B2$  T Martensitic Transformation as a Mechanism of Plastic Deformation of NiTi. *Shape Memory and Superelasticity*, 5, (2019), 383-396. [IF= 2.5; Number of citations= 10] \*

- [11] VOKOUN, D., KADERÁVEK, L., BALOGOVÁ, J., FEKETE, L., LANDA, M., DRAHOKOUPIL, J., ... & HELLER, L. Effect of FIB milling on NiTi films and NiTi/Si micro-bridge sensor. *Smart Materials and Structures*, 29(1), (2019), 015001. [IF= 4.1; Number of citations= 2] \*
- [12] CHEN, Y., MOLNÁROVÁ, O., TYC, O., KADERÁVEK, 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*, 180, (2019), 243-259. [IF= 8.2 ; Number of citations= 57 ] \*
- [13] CHEN, Y., TYC, O., KADERÁVEK, L., MOLNAROVA, O., HELLER, L., & ŠITTNER, P. Temperature and microstructure dependence of localized tensile deformation of superelastic NiTi wires. *Materials & Design*, 174, (2019), 107797. [IF= 9.4; Number of citations= 41] \*
- [14] HELLER, L., SEINER, H., ŠITTNER, P., SEDLÁK, P., TYC, O., & KADERÁVEK, L. On the plastic deformation accompanying cyclic martensitic transformation in thermomechanically loaded NiTi. *International Journal of Plasticity*, 111, (2018), 53-71. [IF= 8.5; Number of citations= 63] \*
- [15] ŠITTNER, P., SEDLÁK, P., SEINER, H., SEDMÁK, P., PILCH, J., DELVILLE, R., ... & L. KADERÁVEK. On the coupling between martensitic transformation and plasticity in NiTi: Experiments and continuum based modelling. *Progress in Materials Science*, 98, (2018), 249-298. [IF= 48.1; Number of citations= 94] \*
- [16] FROST, M., SEDLÁK, P., HELLER, L., KADERÁVEK, L., & ŠITTNER, P. Experimental and computational study on phase transformations in superelastic NiTi snake-like spring. *Smart Materials and Structures*, 27(9), (2018), 095005. [IF= 4.1; Number of citations= 12] \*
- [17] VOKOUN, D., RACEK, J., KADERÁVEK, L., KEI, C. C., YU, Y. S., KLIMŠA, L., & ŠITTNER, P. Atomic layer-deposited TiO<sub>2</sub> coatings on NiTi surface. *Journal of Materials Engineering and Performance*, 27, (2018), 572-579. [IF= 2; Number of citations= 7] \*
- [18] HELLER, L., ŠITTNER, P., SEDLÁK, P., SEINER, H., TYC, O., KADERÁVEK, L., ... & VRONKA, M. Beyond the strain recoverability of martensitic transformation in NiTi. *International Journal of Plasticity*, 116, (2019), 232-264. [IF= 8.5; Number of citations= 78] \*
- [19] DOSTÁLOVÁ, D., KAFKA, V., VOKOUN, D., HELLER, L., MATĚJKA, L., KADERÁVEK, L., & PĚNČÍK, J. Thermomechanical Properties of Polypropylene-Based Lightweight Composites Modeled on the Mesoscale. *Journal of Materials Engineering and Performance*, 26, (2017), 5166-5172. [IF= 2; Number of citations= 2] \*
- [20] FENSKE, J., ROUIJAA, M., ŠAROUN, J., KAMPMANN, R., STARON, P., NOWAK, G., ... & SCHREYER, A. BEER-The Beamline for European Materials Engineering Research at the ESS. In *Journal of Physics: Conference Series* (Vol. 746, No. 1, p. 012009). (2016, September), IOP Publishing. [IF= 0.5 ; Number of citations= 6]
- [21] FROST, M., SEDLÁK, P., KADERÁVEK, L., HELLER, L., & ŠITTNER, P. Modeling of mechanical response of NiTi shape memory alloy subjected to combined thermal and non-proportional mechanical loading: a case study on helical spring actuator. *Journal*

*of Intelligent Material Systems and Structures*, 27(14), (2016),1927-1938. [IF= 2.7 ; Number of citations= 24]

- [22] VOKOUN, D., SYSEL, P., HELLER, L., KADEŘÁVEK, L., SVATUŠKA, M., GORYCZKA, T., ... & ŠITTNER, P. NiTi-polyimide composites prepared using thermal imidization process. *Journal of Materials Engineering and Performance*, 25, (2016), 1993-1999. [IF= 2; Number of citations= 5] \*
- [23] KEI, C. C., YU, Y. H., RACEK, J., VOKOUN, D., & KADEŘÁVEK, L. Corrosion and mechanical properties of atomic layer deposited TiO<sub>2</sub> coatings on NiTi implants. In *2016 IEEE International Conference on Industrial Technology (ICIT)*, (2016), 1328-1332. IEEE. [IF= 1; Number of citations= 2]
- [24] RACEK, J., ŠITTNER, P., HELLER, L., PILCH, J., SEDLÁK, P., & KADEŘÁVEK, L. Electrochemistry of NiTi wires/springs subjected to static/cyclic loadings. *Materials Today: Proceedings*, 2, (2015), S965-S969. [IF= 1.4 ; Number of citations= 7]