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VABILO NA PREDAVANJE
V OKVIRU DOKTORSKEGA ŠTUDIJA
KEMIJSKE ZNANOSTI / INVITATION TO THE
LECTURE WITHIN DOCTORAL PROGRAMME IN
CHEMICAL SCIENCES

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z naslovom / title:

Towards the detection of microplastics in model organisms through laser-based spectroscopy methods

v sredo, 2. 2. 2022 ob 15. uri / on Wednesday, 2. 2. 2022 at 15.00

v predavalnici 1 v 1. nadstropju Fakultete za kemijo in kemijsko tehnologijo, Večna pot 113 **/ in lecture room 1,** 1st floor at the Faculty of Chemistry and Chemical Technology, Večna pot 113

Vljudno vabljeni! / Kindly invited!

Abstract:

Laser-Induced Breakdown Spectroscopy (LIBS) and Raman spectroscopy are established methods of analytical chemistry. Their joint utilization provides complete chemical information (elemental and molecular respectively) of the sample under investigation [1]. They have been repeatedly used in various applications including the classification of polymers and the diagnostics of biological tissues (e.g., plants, soft and hard/calcified tissues). However, benefits of their joint performance in the detection and characterization of microplastics within model organisms remains to be manifested. This talk will cover four topics with one vision. First, laser-tissue interaction will be dissected. Second, polymers' classification through LIBS and Raman will be summarized. Third, the feasibility of sole microplastic (pristine and aged) characterization will be demonstrated. And finally, fourth, the pipeline for the sample processing and characterization of exogeneous microplastics in the biopsy of juvenile tonsils will be shown.

References
[1]   D. Prochazka *et al.*, "Combination of laser-induced breakdown spectroscopy and Raman spectroscopy for multivariate classification of bacteria," *Spectrochimica Acta - Part B Atomic Spectroscopy*, vol. 139. pp. 6–12, 2018, doi: 10.1016/j.sab.2017.11.004.