

Development of mechanoluminescent thin films for real time stress detectors

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I N V E S T I N G I N Y O U R F U T U R E

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Project partner: Sidrabe Vacuum Ltd, B.A.Sc. Matiss Piesins.

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About project implementation (31.03.2022 – 30.06.2022)

During the research period of the project No.1.1.1.1 / 20 / A / 138 “Development of mechanoluminescent thin films for real-time stress detectors”, the adaption of laboratory equipment for planned technological research was continued.

Based on the feedback from the LU CFI on the parameters of the coated samples, the coatings were applied onto different metal materials using a target doped with Eu and Dy.

Experimental studies with variable coating process parameters were performed to improve the crystallinity of functional mechanical luminescent thin films. Coating series were produced with increased coating thickness by changing the process pressure, keeping the distance between the sample substrate and the sputtering source target ca 55 mm, and by providing a substrate pre-treating before the technological process.