

## 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

Project No: 1.1.1.1/20/A/138

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

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About project implementation (01.07.2022 – 30.09.2022)

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

Samples were prepared with variable primary parameters of the coating process, searching for parameters at which the crystallinity of the applied layers would be better and, accordingly, their mechanoluminescent functionality would be stronger. A new series of coating samples on metal substrates using a target with new configuration of additions doped with rare earth metals has been started.

Guided by the trends of the analysis results of the previous series of samples obtained by the LU CFI, the samples coated with the new material under study are again prepared both with varied coating thickness and by changing the process pressure and the distance between the sample substrate and the target of the sputtering source. Before the technological process, pre-treatment of the substrate is used.