

## Large area deposition technologies of multifunctional antibacterial and antiviral nanocoatings



Project No: 1.1.1.1/21/A/050

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Project partners: Sidrabe Vacuum SIA, Dr.Phys. Andris Fedotovs  
Latvian Biomedical Research and Study Centre (LBMC)

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About project implementation (01.04.2022 – 30.06.2022)

During the past research period of the project No.1.1.1.1/21/A/050 “Large area deposition technologies of multifunctional antibacterial and antiviral nanocoatings” the preparation of roll-to-roll (R2R) equipment for the production of large area coatings was continued.

- Drying of PET substrate has been realized in the device.
- The supply of gases required for magnetron sputtering processes has been realized.
- The operation of the device in the metallic mode of Cu and W coatings (Ar atmosphere) has been established.
- The operation of the device in the tungsten oxide (WO<sub>x</sub>) sputtering mode (Ar and O<sub>2</sub> atmosphere) has been established.
- The equipment was calibrated for the thicknesses of the metallic and oxide layers depending on the amount of oxygen supplied to the process, the power of the magnetrons and the pressure in the chamber.
- The first series of 8 pilot samples has been produced and submitted to the project partners for further research in order to further optimize the parameters of coating production.