

Large-scale equipment put into operation

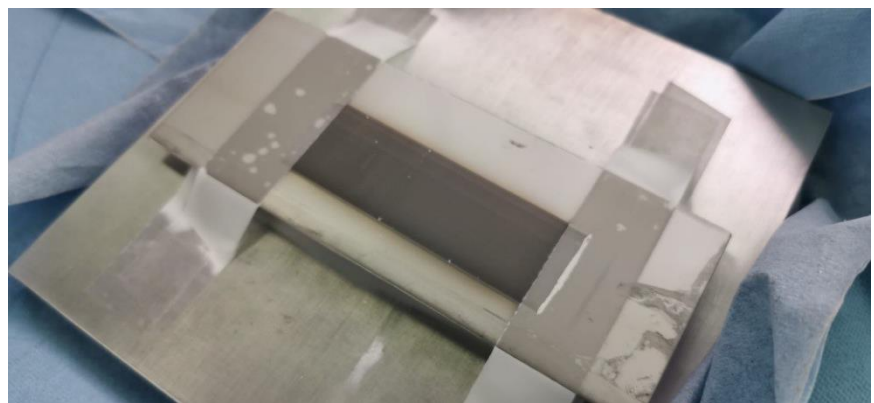
New pilot plant facility for powder aerosol deposition at the Department of Functional Materials

In August 2023, the Department of Functional Materials launched its largest and most powerful powder aerosol deposition (PAD) deposition machine to date.

The deposition machine is located in the experimental hall in building FAN A. It has a cube-shaped vacuum chamber with an edge length of 74 cm. This allows coating of an area of 37 cm x 37 cm, many times the maximum area of the previous laboratory systems.

A powerful two-stage pumping station allows operation even at high volume flows and, in combination with the large installation space, permits deposition experiments with very wide nozzles. The use of commercial aerosol generators ensures homogeneous coatings.

The new coating system also enables tests with more complex substrate geometries due to the larger installation space in the vacuum and can advance the transfer of powder aerosol deposition from university research to industry.



Figures: Daniel Paulus showing the first successfully deposited films.