

## **Ultra-precise deposition technology for high-resolution printing of nanomaterials**

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We will demonstrate a novel ultra-precise deposition (UPD) technique for printing of nanomaterials developed by XTPL (member of Silesian Nano Cluster). The key feature of the UPD technology is that it allows maskless deposition of highly-concentrated silver and copper inks (even 85% wt. of metal content) to obtain repeatable conductive lines as narrow as 1 micrometer, which is order of magnitude less, compared to state-of-the-art methods using inks with similarly high viscosity. This unique combination of high-viscosity inks (10'000 to 1'000'000 cP) and fine printed features (1 to 10 um) allows high-resolution printing on complex topographies. We will discuss how the UPD method can be used for rapid-prototyping of novel printed electronics devices, which is particularly useful at the research and development stage.