Silver nanowires application on big scale for flexible displays and flexible electronics

Thomas Kolbusch1*, Thomas Exlager1, Dr. Klaus-Peter Crone1

1 Coatema Coating Machinery GmbH, Roseller Strasse 4, 41539 Dormagen, Germany

† Presenting author, Thomas Kolbusch, tkolbusch@coatema.de; * Corresponding author, Thomas Kolbusch, tkolbusch@coatema.de

Large area printed and hybrid electronics technology has been developed and scaled up over the past years to a huge extent. In many applications printed sensors, displays and organic photovoltaic (OPV) devices are used quite commonly. The applied manufacturing technology methods are also advancing and become more and more refined.

The Author will present equipment and machinery solutions for the R&D, pilot line and production of conductive coatings like Silver nanowires, Pedot:PSS and other replacement of ITO as conductive coating on flexible films.

Cost-efficient production requires coating Technologies, e.g. slot die and specific drying technologies for water-based and solvent-based conductive inks. Here the author will focus on slot die coating and the drying process of conductive formulations on flexible polymer film substrates.

The development from Lab2Fab is shown in some layouts and today's standard of production technology is explained. The replacement of ITO by flexible and bendable nanowires will be the needed revolution for flexible and foldable displays.