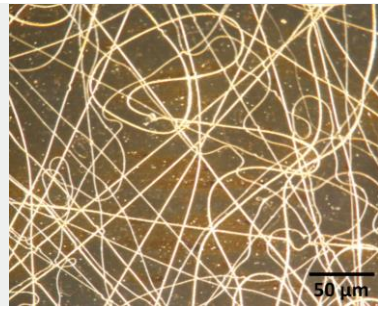
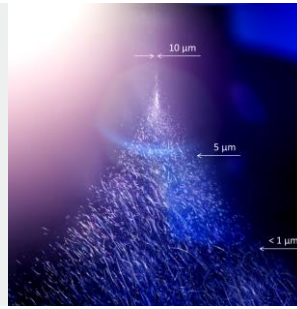




Electrospun fibers on foil



Electroless silverplated fibers



Electrospinning process

ELECTROSPUN FLEXIBLE TRANSPARENT ELECTRODES

OBJECTIVE

Development of a scalable low cost alternative to indium tin oxide (ITO) electrodes by electrospinning conductive transparent fibers on glass and polymer foils.

PRODUCT DESCRIPTION

Electrospinning allows the deposition of nanofibers with a very high aspect ratio on glass substrates or foil. The wide-meshed fiber deposition stands out for high transparency and low haze. The fibers can be spun from intrinsically conductive polymers or can be made conductive by post-treatment. These low density coatings display high conductivity.

- ▶ Flexible chemistries
- ▶ Sheet resistance $< 30 \Omega \text{ sq}^{-1}$

A needleless electrospinning mechanism was developed and implemented in a roll-to-roll plant. Thus, continuous homogenous fiber deposition on flexible foils is feasible.

- ▶ Feasibility of roll-to-roll manufacturing
- ▶ Transmission ca. 91 % on PET
- ▶ Haze ca. 1.5 % on PET

APPLICATIONS

- ▶ Flexible Displays
- ▶ Photovoltaics
- ▶ Internet of Things (IoT)
- ▶ Wearables

CONTACT

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