



PILOT LINE FOR THE DEVELOPMENT OF CUSTOMIZED APPLICATIONS FOR ORGANIC ELECTRONICS

A pilot line for the processing of organic electronic devices has been installed at Fraunhofer IAP for development and pilot scale production of OLED, OPV, and OTFT based on solution/printing processes. The automation of the deposition steps together with a reliable encapsulation process in a clean atmosphere ensure a constant high device performance and a high throughput. Thus Fraunhofer IAP provides development and small scale production of organic electronic devices.

Module 1

- integrated UV-lamp for substrate pre-treatment
- two integrated vacuum oven for thermal annealing
- inkjet printer with two print-heads (for water based and for organic solutions)
- slot die coater with two slots (for water based and organic solutions)
- substrate size 150 x 150 mm²
- process control by robot

Module 2

- vacuum deposition chamber with three evaporation sources, co-evaporation is possible
- electron beam source
- laminar flow for particle reduction during load and unload
- mask change in vacuum for five masks

Module 3

- thin film encapsulation (atomic layer deposition)
- glass encapsulation with getter/dispenser
- UV-press with mask for up to nine encapsulation glasses
- heated ante-chamber for the preparation of encapsulation materials
- ante-chamber for the transfer of materials into the glove-box and for the transfer of finished devices

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