

# Applied Organic Vapor Phase Deposition<sup>®</sup> for large-area Organic Devices

N. Meyer,

M.Gersdorff, M. Schwambera, D. Keiper, M. Kunat and M. Heuken  
AIXTRON AG, Kackertstraße 15-17, 52072 Aachen, Germany

M.Heuken@AIXTRON.com

The Technology of OVPD<sup>®</sup> is developed by AIXTRON for the manufacturing of organic thin film devices. With its close coupled showerhead technology AIXTRON is scaling the OVPD technology already towards substrate size Gen 4.

The enhanced control of OLED deposition processes by Organic Vapor Phase Deposition (OVPD) is discussed. OVPD<sup>®</sup> opens a wide space of process control parameters. It allows the accurate and individual control of deposition layer properties like morphology and precise mixing of multi component layers (co-deposition) in comparison to conventional deposition manufacturing processes like e. g. VTE (vacuum thermal evaporation).

Latest results in the area of OLEDs and organic photo voltaics are presented and discussed.

A novel OVPD system for R&D is presented and discussed. Additional to the enhanced control of the deposition process this system offers highest organic material flexibility by individual evaporators and significantly reduced thermal stress for the mostly not fully characterized organic materials. Additionally the reduced organic material load facilitates the efficient screening of novel organic materials.