Partners



Nanotechnology Lab LTFN - Aristotle University of Thessaloniki (AUTh), Greece

Centro Ricerche FIAT (CRF), Italy



Organic Electronics Technologies P.C., Greece

APEVA SE, Germany

SURAGUS Sensors & Instruments SURAGUS GmbH, Germany

IBS Precision Engineering IBS Precision Engineering, The Netherlands

Laytec, Germany

Project Project Information Call: H2020-F0F-08-2017 Type of action: Innovation action Grant agreement no: 768707 Acronym: SmartLine

Topic: In-line measurement and control for micro/nano-enabled high-volume manufacturing for enhanced reliability **Duration:** 36 months (starting date: 1 Sep 2017)

Contact Us

Prof. Stergios Logothetidis Nanotechnology Lab LTFN - Aristotle University of Thessaloniki 54124 Thessaloniki, Greece Tel.: +30 2310 998174 Fax: +30 2310 998390 email: info@smartline-project.eu Smart In-line metrology and control for boosting the yield and quality of high-volume Manufacturing of Organic Electronics (Smartline) H2020 Factories of the Future



www.smartline-project.eu



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About

SmartLine will create the Factory of Future in Organic Electronics (e.g. OPVs, OLEDs, functional surfaces) by developing intelligent and zero-defect Manufacturing processes (Roll-to-Roll Printing, Organic Vapour Phase Deposition-OVPD). It will develop robust robust and non-destructive in-line Metrology tools (optical, electrical, structural) and process control platform for the closed-loop and reliable manufacturing of Organic Electronic devices (OPVs and OLEDs for lighting) by R2R and OVPD pilot lines.



Objectives • Develop robust, non-destructive, and in-line optical (Spectroscopic Ellipsometry, Raman, Wavelength Scanning Interferometry, Reflectometry), and electrical metrology (Eddy Current measurement) tools and methodologies

• Integrate in-line metrology tools in strategic parts of unique R2R printing and OVPD Pilot to Production Lines

• Develop a Unique Platform for feedback from the inline metrology tools to control the processes through non-destructive and traceable in-line measurements and algorithms, combined with contribution to standardization & reference materials

• Optimize the R2R printing and OVPD manufacturing processes reliability in pilot lines, fabrication of homogeneous OPV and OLEDs and demonstration of their reliability and homogeneity to industrial applications (e.g. automotive)

Smartline will digitize and transform the Manufacturing processes for Organic Electronics Industry and Thin Films (e.g. functional films, antimicrobial and decoration coatings, barriers)

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Applications:

- Automotive
- Electronics
- Energy
- Wearables
- Agriculture & Greenhouses
- Buildings
- Transport & Space
- Health & Medicine