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Nanotechnology
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Germany



SURAGUS GmbH,
Germany



IBS Precision
Engineering, The
Netherlands



Laytec, Germany

Project Information

Call: H2020-FOF-08-2017

Type of action: Innovation action

Grant agreement no: 768707

Acronym: SmartLine

Topic: In-line measurement and control for mi-
cro/nano-enabled high-volume manufacturing for
enhanced reliability

Duration: 36 months (starting date: 1 Sep 2017)

Contact Us

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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



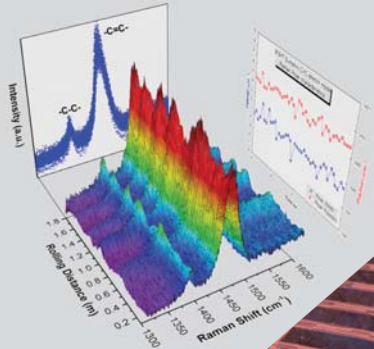
www.smartline-project.eu



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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 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 in-line 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)

Applications:

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