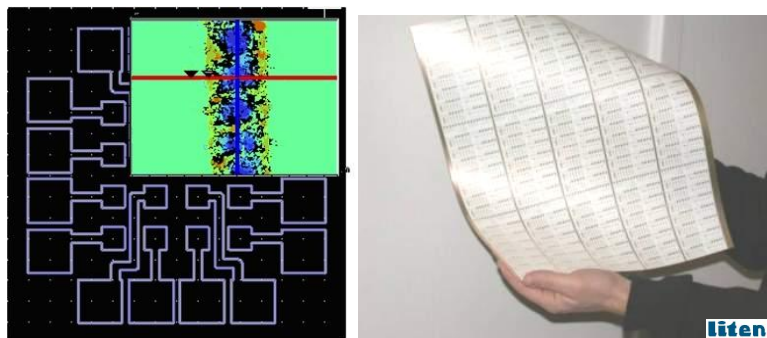


Demonstrator Fact Sheet

Laser Ablation

This research collaboration within PolyNet is dedicated to the opportunities of laser microstructuring processes for organic and large-area electronics (e. g. anode structures for OLED/OPV applications). A special focus is set upon the integration into roll-to-roll or printing techniques.

In 2010, the project has been dedicated to flat-profile excimer laser ablation for a structuring of ITOs as transparent conductive oxides (TCO) electrodes with a precision down to several micrometers.



Left: A typical layout for microstructuring with lasers (inset: depth profile)
Right: Au patterned on PEN by high-throughput excimer laser for Organic CMOS

The demonstrators represent a preliminary anode layout specifically designed for an effective testing of process parameter windows for ablation. This has been performed at the industrial excimer laser plant of CEA, St. Etienne, France. After having characterised the structure at CARDIFF and VTT, the successful manufacturing of an OLED prototype could be proven by VTT.

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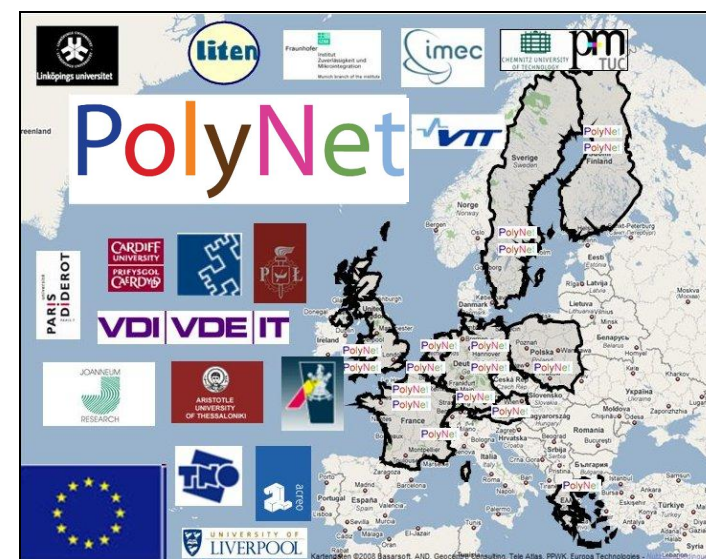
Partners: Technische Universität Chemnitz (TUC), Acreo AB, CEA, VTT, Cardiff University, Linköping Universitet (LIU)

About PolyNet

The NoE PolyNet (Network of Excellence for the Exploitation of Organic and Large Area Electronics / OLAE) aims at establishing Europe in the field of OLAE as the world leader in science, technology development and subsequent commercial exploitation of printing and large area technologies for heterointegration of flexible electronics. It has been designed to

- Overcome the fragmentation of the European research landscape in order to foster transfer from science to industry within the EU
- Develop concepts for the continuation of research cooperation and service offers for a long-term integration of the European research landscape

Impact is expected not only on the research landscape of Organic and Large Area Electronics but also indirectly on European industry by long-term stimulation of innovative technologies and new business development.



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The NoE PolyNet receives funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 214006.



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