

Demonstrator Fact Sheet

Thin-Film Batteries

This collaboration channels the efforts of Europe's top-tiers in the field, each of whom have set the ground with respect to design, materials, or processing. The fabrication processes are characterised by a high yield and reproducibility.

In 2010, this project is dedicated to Thin-Film Batteries made with zinc and bio-compatible laccase electrodes by the means of printing techniques. This approach focuses the expertise on ZnMn systems independently gained at TUC and ACREO as well as of VTT on laccase-based systems. The aim is to present the general printability of chosen electrodes and current collector materials. Also, the influence of manufacturing parameters on the morphology of produced layers and the performance of the manufactured hybrid cells are shown.



A typical flexible thin film battery

The displayed demonstrator represents a printed battery based on a lab-based modular manufacturing technique for thin-film batteries. It has been developed by TUC as well as Fraunhofer ENAS and Menippos GmbH (now Printechnologies GmbH), which all are located in Chemnitz, Germany.

Contact: Thomas Blaudeck, Technische Universität Chemnitz (TUC) (thomas.blaudeck@physik.tu-chemnitz.de) & Ulrike Geyer (TUC) (ulrike.geyer@mb.tu-chemnitz.de)

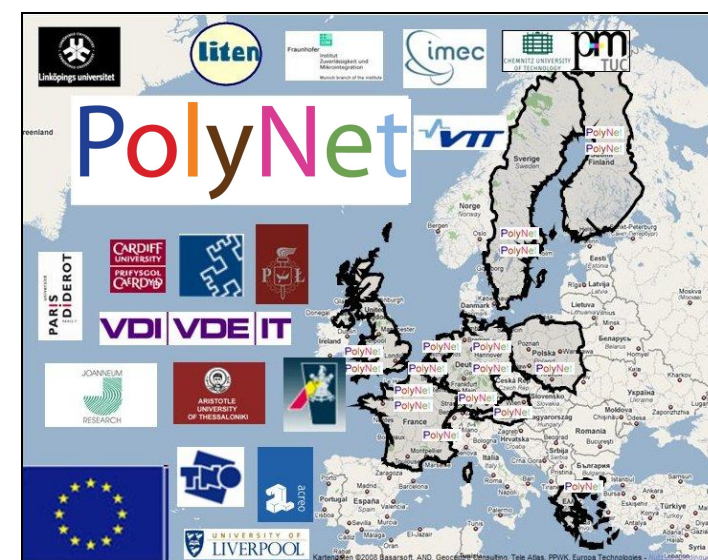
Partners: Technische Universität Chemnitz (TUC), Acreo AB (ACREO) CEA, VTT, TNO, Oulun Yliopisto (UOULU)

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.



Contact:

Constantin von Dewitz VDI/VDE Innovation + Technik GmbH
 Constantin.vonDewitz@vdivde-it.de Steinplatz 1
 phone (fax) +49 30 310078 -328 (-223) 10623 Berlin / Germany



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