

# PRESS RELEASE

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## **ENAB-SPOLED project targeting solution processed OLEDs for lighting**

**In the recently started European ‘ENAB-SPOLED’ project six leading companies and research institutes work closely together on solution processed Organic Light Emitting Diodes (OLEDs). The goal is to enable high performing cost competitive OLEDs for the lighting market and to develop a functional luminaire demonstrator. The cooperation project will run for 2 years with a budget of 4 Million Euro and is financially supported by Federal Ministry of Education and Research of Germany (BMBF), the Technology Strategy Board (TSB), and the Austrian Research Promotion Agency (FFG).**

For the coming two years ENAB-SPOLED will accelerate the development lighting applications based on OLED technology. Until April 2015 project partners will work on new materials (transport materials, emitters), new optical technologies for light guiding, and develop process technologies for solution processing of small molecule and polymeric OLEDs.

Concerning OLED structures and materials Novald will work on solution processable doped transport layers for optimal carrier injection and transport as good as vapour based materials. CDT is going to further develop and optimise the lighting device structure and panel using state of the art high efficiency white materials developed at CDT. The Fraunhofer IAP uses its expertise on polymer systems to develop charge transport polymers for solution processing. The material research is supported by the University of Durham employing advanced spectroscopy methods.

Furthermore, OLED module integration is targeted by TRIDONIC combining reliable electrical contacting and optical outcoupling enhancement. Finally, Zumtobel integrates the modules will into a luminaire with intelligent light control and presence detection systems.

Solution processing of organic light emitting diodes helps to reduce the production costs and enhance the material usage. This enables organic light emitting technology to become more and more competitive with established lighting technologies like LED.

“ENAB-SPOLED supports the general understanding of the project partners concerning needs of the OLED lighting market,” says Jan Blochwitz-Nimoth, consortium leader and CSO of Novald AG. “For Lighting OLED can only be successful if constant cost decrease and performance improvement is pushed and solution processed layers and polymer emitters will likely play an important role.”

The project will demonstrate the advantages and new options of OLED technology: diffusive area light, lighting elements including electrical drivers thinner than 5mm.

### ENAB-SPOLED project partners are:

Novald AG (Dresden, Germany),  
Cambridge Display Technology (Cambridgeshire, UK)  
Durham University (Durham, UK)  
Fraunhofer Institute of Applied Polymer research (Potsdam, Germany)  
Tridonic Dresden GmbH & Co. KG (Dresden, Germany)  
Zumtobel Lighting GmbH (Dornbirn, Austria)

## About OLEDs

OLEDs (organic light-emitting diode) are semiconductors made of thin organic material layers of only less than a micrometer thickness. They emit light in a diffuse way to form an area light source. In a fast growing display market OLEDs are key part of a revolution: the dream of paper-thin, highly efficient displays with brilliant colors and great flexibility in design is becoming reality. In addition, OLEDs represent the future of a vast array of completely new lighting applications. By combining color with shape, organic LEDs will create a new way of decorating and personalizing people's surroundings with light. At the same time OLEDs offer the potential to become even more efficient than energy-saving bulbs. OLEDs are currently used in smaller displays like MP3, PDAs, cameras and mobile displays, larger displays are announced by Asian TV makers. In lighting there is a huge potential for visionary applications. The warm and natural white light of OLEDs is perceived as close to daylight due to the high color rendering index (CRI=90).

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