

PRESS RELEASE

Dresden, Germany and Eindhoven, The Netherlands, 24th March 2009

Novalled and Holst Centre to cooperate on Organic Electronics

Novalled AG announces that it will work together with Holst Centre on Organic Thin Film Transistors (OTFT) using the Novalled PIN OLED® technology and materials.

Novalled AG, leading provider of technology and materials for energy saving and long living Organic Light Emitting Diodes (OLEDs) for a new generation of lighting and display products, and Holst Centre, an independent open-innovation R&D centre developing generic technologies for Wireless Autonomous Transducer Solutions and for Systems-in-Foil, have decided to collaborate under a joint development agreement.

Target is to investigate the feasibility and benefits of Novalled's dopants in Holst Centre's organic thin film transistor technologies qualified for displays and circuits.

Novalled's doping technology contributes to very high power efficiencies and long lifetimes in OLEDs by improving charge carrier injection and transport in the organic layers. Novalled has shown that these effects are also relevant for organic TFT as the carrier injection from drain and source into the organic material has a major influence on the device performance. Novalled currently develops dopant and host materials which can be processed both in vacuum and in solution.

"We are quite pleased to work closely together with Holst Centre on organic TFTs based on the Novalled dopants", says Jan Blochwitz-Nimoth, CSO of Novalled AG. "In future OTFTs can be integrated in display backplanes and other driving electronics like organic RFID (radio-frequency identity tags). They will change the way we use electronics today through several advantages of organic electronic devices such as large area compatibility, reduced costs, easy manufacturability and environmental sustainability.

Gerwin Gelinck, Program Manager Organic Circuitry at Holst Centre, says: "Our mission is to work together with leading companies like Novalled to combine their unique materials with our know-how in process integration. It is our strong believe that only through this type of collaboration, cutting edge processes and prototypes are developed that will accelerate introduction of organic transistor products to the market place. For the other Holst Centre partners in our Shared Program the joint development project with Novalled offers a unique opportunity to evaluate the potential of this approach at first hand.

About OTFTs

Organic Transistors (OTFT's) are semiconductor devices that use organic materials to conduct charges between source and drain electrodes which are controlled by a third gate electrode. The production costs of OTFTs for large areas are expected to be low enough to address broad fields of applications for which simple electronics are appropriate. Thus OTFTs are perfectly suited for applications like flexible displays, intelligent food packaging and paper identification (ID) documents. To pave the way for a broad deployment of OTFTs there are major challenges to be overcome. Two key challenges are to push the transistor performance using state of the art semiconductor materials that can be processed at low temperatures and to integrate the transistors in increasingly complex organic circuitries.

About OLEDs

OLEDs (organic light-emitting diode) are semiconductors made of thin organic material layers of only a few nanometers 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. 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.

About Novalled

Novalled AG is a world leading company in the OLED field specialized in high efficiency long lifetime OLED structures and an expert in synthetic and analytical chemistry. The company offers complete solutions to the organic electronic markets, commercializing its Novalled PIN OLED^R technology along with its proprietary OLED materials. Novalled has developed long term partnerships with major OLED players worldwide. Based on more than 440 patents granted or pending, Novalled has a strong IP position in OLED technology, and was named No. 1 on a list of coming world market leaders by the German newspapers Handelsblatt and Wirtschaftswoche. Main investors are eCAPITAL, Crédit Agricole Private Equity, TechnoStart, TechFund and CDC Innovation. www.novalled.com, anke.lemke@novalled.com

About Holst Centre:

Holst Centre is an independent open-innovation R&D centre that develops generic technologies for Wireless Autonomous Transducer Solutions and for Systems-in-Foil. A key feature of Holst Centre is its partnership model with industry and academia around shared roadmaps and programs. It is this kind of cross-fertilization that enables Holst Centre to tune its scientific strategy to industrial needs. Holst Centre was set up in 2005 by IMEC (Flanders, Belgium) and TNO (The Netherlands) with support from the Dutch Ministry of Economic Affairs and the Government of Flanders. It is named after Gilles Holst, a Dutch pioneer in Research and Development and first director of Philips Research. Located at High Tech Campus in Eindhoven, Holst Centre benefits from the state-of-the-art on-site facilities. Holst Centre has over 145 employees from around 25 nationalities and a commitment from close to 20 industrial partners. <http://www.holstcentre.com/>