Press Information

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OLED100.eu research consortium to spearhead the advancement of organic LED technology

Industry wide consortium of leading lighting experts to build on successes of OLLA research initiative

Aachen, Germany – OLED100.eu, an integrated research project, brings together a consortium of experts from leading industry and academic organizations to accelerate the development of organic light-emitting diode (OLED) technologies in Europe. It receives €12.5 million funding by the European Community's Seventh Framework Programme to form the technological basis for efficient OLED applications for the general lighting industry in Europe.

The OLED100.eu programme follows the successful OLLA (Organic LEDs for Lighting Applications) programme, which started in 2004 and concluded earlier this year. OLLA created the basis for organic lighting by developing white OLEDs with efficacies of 50.7 lm/W at an initial brightness of 1000 cd/m^2 and with lifetimes well above 10.000 hours. With OLED100.eu, Europe is continuing to invest in the development of organic lighting technologies and moving to specifications required for general lighting applications. The consortium will focus on five main goals:

- High power efficacy (100 lm/W)
- Long lifetime (100.000 h)
- Large area (100x100 cm^2)
- Low-cost (100 Euro/m^2)
- Measurement standardization / application research

"The European Council has agreed to cut at least 20 per cent in CO_2 emissions by 2020 and OLED100.eu is an important initiative to advance the development of energy efficient lighting solutions. Building on the success of OLLA, OLED100.eu will deliver OLEDs with twice the efficiency, 10-times the operational lifetime and 10-times the substrate size. The participation of leading lighting manufacturers like Philips and Osram ensures a rapid transfer of any result into real products.", says Dr. Stefan Grabowski of Philips Research, project manager of OLED100.eu. "

OLEDs are a new and attractive class of solid-state light sources and they are emerging as a compelling candidate to replace conventional lighting systems for large area illumination. Organic LEDs generate a diffuse, non-glaring illumination with high color rendering. They are flat, thin, and have the potential to serve as efficient large light sources. OLEDs are instant-on, can be dimmed and can be produced on substrates of basically any shape. This high level of flexibility in terms of design and application make them highly appealing for designers, manufacturers and consumers. Furthermore, as a highly efficient light source,

OLEDs have the potential to achieve substantial energy savings. This latest EU research consortium provides important support to ensure Europe plays a leading role in OLED technology.

Partners in the OLED100.eu consortium include:

- Bartenbach Lichtlabor GmbH, Austria
- European Photonics Industry Consortium (EPIC), France
- Evonik Degussa GmbH, Germany
- Fraunhofer Institute for Photonic Microsystems (IPMS), Germany
- Microsharp, Great Britain
- Novaled AG, Germany
- Océ Technologies B.V., The Netherlands
- OSRAM Opto Semiconductors GmbH, Germany
- Philips Technologie GmbH, Business Center OLED Lighting, Germany
- Philips Technologie GmbH Forschungslaboratorien, Germany
- Physikalisch-Technische Bundesanstalt (PTB), Germany
- Saint-Gobain Recherche S.A., France
- Siemens AG, Germany
- Technische Universität Dresden, Institut für Angewandte Photophysik, Germany
- Universiteit Gent, Belgium

Additional project information is available on: www.oled100.eu

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Caption: White small molecule OLED measuring 4 by 12 cm^2
(Picture by Philips Lighting)

Caption: Colored small molecule OLEDs with Novaled PIN OLED™ technology for highest efficiencies and long lifetime devices.
(Picture by Novaled)