

Joint press release

of PolyIC, BASF, Evonik Industries, ELANTAS Beck and Siemens

Printed electronics: Joint research project MaDriX accomplishes a cross-company uniform material characterization in components
This in turn facilitates the development of a new generation of printed tags

Fürth, Germany (September 3, 09) – ‘The market for organic and printed electronics will grow to become a multi-billion market over the next ten years,’ says Wolfgang Mildner, Chairman of the Organic Electronics Association (OE-A) and Managing Director of PolyIC GmbH & Co. KG.

This market can only be opened up via the development of new, more efficient materials that are suitable for implementation in roll-to-roll processes. For this reason, more efficient materials are being specifically developed in the BMBF (Federal Ministry of Education and Research)-funded project MaDriX. These are suitable for processing in printing processes and thus facilitate mass production.

A fundamental key to success is a uniform understanding with regard to the requirements of these new materials. This has been defined by the determination of material parameters and through the introduction of a unvarying test environment for new materials. New materials can thus be developed in a targeted manner, meaning that a faster and more efficient market introduction of these materials can be achieved for printed electronics. The cross-company standardization of test conditions facilitates the comparability of results that are generated at various sites by the project partners.

The companies PolyIC, BASF, Evonik Industries, ELANTAS Beck and Siemens are participating in the MaDriX project. In addition to the process parameters for the production of samples, a uniform process for characterization has been defined. The simplification of the measurement environment and the measurement parameters is done by a statistical measurement system that has been developed by Jacobs University Bremen which is available to all project partners and supplies a meaningful data basis through reproducible measurement values.

‘The participating partners PolyIC, BASF, Evonik Industries, ELANTAS Beck and Siemens have thus reached an important interim goal,’ says project coordinator Dr Jasmin Wörle of PolyIC: ‘Reproducible components that have been produced on the basis of a state-of-the-art

system, in the same quality and performance for all project partners at different sites – that is an innovation in this young industry.'

The measurement values received for new materials now permit a statement about whether a material that has been developed at the chemicals partners BASF, Evonik Industries and ELANTAS Beck is suitable for use in the sector of printed electronics and results in components with enhanced functionality at PolyIC. The successful development of an inspection system by the company Siemens also permits a detailed and prompt characterization of the roll-to-roll printed materials.

It is thus possible to make a pre-selection of new materials at the chemicals partners. This in turn permits a detailed examination of only selected materials, therefore enabling a substantially faster and more targeted development of components and circuits with considerably enhanced functionality on the basis of new materials.

PolyIC leads the consortium engaged in the three-year joint project. The total investment sum amounts to some €15 million, with the BMBF contributing approximately €8 million. The project is funded as part of the BMBF's 5th Framework Program "Key Technologies – Research for Innovations, Communications Technology Sector." The German Aerospace Center, DLR, is acting as project sponsor. With MaDriX, the companies involved in the alliance and the federal ministry will secure Germany's current leadership as a research base in the printable electronics sector.

Alliance partners:

PolyIC GmbH & Co. KG

PolyIC GmbH & Co. KG was set up in November 2003 as a joint venture between Leonhard Kurz (51%, hot stamping and coating) and Siemens (49%, electronics) for the development and production of printed polymer electronics. PolyIC is headquartered within the Nuremberg Metropolitan Region in Fuerth on the premises of Leonhard Kurz Stiftung & Co. KG.

PolyIC's webpage is accessible at www.polyic.com.

BASF SE

BASF is the world's leading chemical company: The Chemical Company. Its portfolio ranges from chemicals, plastics and performance products to agricultural products, fine chemicals as well as oil and gas. As a reliable partner BASF helps its customers in virtually all industries to be more successful. With its high-value products and intelligent solutions, BASF plays an important role in finding answers to global challenges such as climate protection, energy efficiency, nutrition and mobility. BASF posted sales of more than €62 billion in 2008 and had approximately 97,000 employees as of the end of the year. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (AN). Further information on BASF is available on the Internet at www.basf.com.

Evonik Industries AG

Evonik Industries is the creative industrial group from Germany which operates in three business areas: Chemicals, Energy and Real Estate. Evonik is a global leader in specialty chemicals, an expert in power generation from hard coal and renewable energies, and one of the largest private residential real estate companies in Germany. Our strengths are creativity, specialization, continuous self-renewal, and reliability. Evonik is active in over 100 countries around the world. In its fiscal year 2008 about 41,000 employees generated sales of about €15.9 billion and an operating profit EBITDA of about €2.2 billion.

Further information on Evonik is available on the Internet at www.evonik.com.

ELANTAS Beck GmbH

ELANTAS Beck was established in 1904 and operates a production facility in Hamburg, Germany. ELANTAS Beck is a subsidiary of ELANTAS Electrical Insulation, which belongs to the ALTANA group. The division Electrical Insulation develops and produces wire enamels, impregnating varnishes, impregnating resins, conformal coatings and casting resins, which are used among other products for electric motors, transformers, generators, capacitors, printed circuit boards, sensors and electronic modules. ELANTAS Electrical Insulation is comprised of nine companies in six countries and the division is subdivided into the business lines "Primary Insulation", "Secondary Insulation" and "Electronics & Engineering Materials". More information about ELANTAS Beck visit www.elantas.com/beck.

Siemens AG

Siemens AG (Berlin and Munich) is a global powerhouse in electronics and electrical engineering, operating in the industry, energy and healthcare sectors. The company has around 420,000 employees (in continuing operations) working to develop and manufacture products, design and install complex systems and projects, and tailor a wide range of solutions for individual requirements. For over 160 years, Siemens has stood for technical achievements, innovation, quality, reliability and internationality. In fiscal 2008, Siemens had revenue of €77.3 billion and a net income of €5.9 billion (IFRS). Further information is available on the Internet at: www.siemens.com.

Contacts

PolyIC

Bettina Bergbauer
Telefon: +49 911 20249-8161
bettina.bergbauer@polyic.com

BASF

Juliana Ernst
Telefon: +49 621 60-42117
juliana.ernst@basf.com

Evonik Industries

Alexandra Boy
Telefon: +49 201 177-3167
alexandra.boy@evonik.com

Siemens

Dr. Norbert Aschenbrenner
Telefon: +49 89 636-33438
norbert.aschenbrenner@siemens.com

ELANTAS Beck

Mark Abendroth
Telefon: +49 40 78946-231
mark.abendroth@altana.com

Pictures concerning MaDriX can be downloaded in printable quality at the following link: <http://www.polyid.de/en/press-images.php>



1: Uniform system to plug in components



2: System for statistical characterization and measurement of new materials