

IDTechEx Printed Electronics Awards – Winners announced

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Attendance at the annual IDTechEx Printed Electronics USA 2008 event reached almost 700 people from 22 countries. The event hosted the IDTechEx Printed Electronics Awards to recognize outstanding achievement. The award categories and winners are:



1. Technical Development Manufacturing Award: NovaCentrix
2. Technical Development Materials Award: Plextronics
3. Technical Development Device Award: Plastic Logic
4. New Product Development Award: Kovio
5. Commercialization Award: Epson
6. Academic R&D Award: University of St Andrews, Scotland
7. Printed Electronics USA Champion: Dr Vivek Subramanian

Technical Development Manufacturing Award: NovaCentrix

NovaCentrix wins this award for its PulseForge™ line of processing tools. PulseForge tools sinter in milliseconds metal and semiconductor inks, including on low temperature, flexible substrates such as PET and paper. Where ovens can require minutes or hours of processing time, the PulseForge tools require less than a second. The key element of the tools is the patented pulsed light technology which uses proprietary lamps to deliver the energy required to effect the desired material changes. Tools are available ranging from process development to full roll-to-roll processing, the latter being demonstrated for the first time at the event.



The PulseForge tools are a significant step in allowing printed electronics to be manufactured at commercial scale and cost, overcoming many limitations. As a result, NovaCentrix were chosen by the judging panel as the winner of the IDTechEx Manufacturing Award.

Technical Development Materials Award: Plextronics



Plextronics recently made available the Plexcore® PV 1000 and Plexcore® PV 2000 ink systems for use in research-scale printed solar cell development. In Q2 of 2008, Plextronics' organic photovoltaic technology achieved a world record in the conversion of solar light to power efficiency. The 5.98 % result, achieved on a 50 mm × 50 mm substrate, established a new world record for single layer organic solar cells and was certified by the National Renewable Energy Laboratory (NREL). Plextronics wins the award for this material development.

Technical Development Device Award: Plastic Logic



Plastic Logic has made advances in plastic electronics that are enabling the worlds' thinnest, lightest, largest and most robust plastic displays. Plastic Logic had to develop methods for manufacturing high-resolution transistor arrays at low-temperatures. The company developed a process that uses coating methods on flexible plastic substrates that enable a completely flexible active matrix displays that are thinner, lighter and more robust than glass.

The company's manufacturing facility, which opened in September in Dresden, Germany, is

the world's first commercial-scale plastic electronics manufacturing facility. Plastic Logic's display is core to Plastic Logic's first product: A ground-breaking e-reading product that provides a portable digital reading experience. The product will be to be released in the marketplace in Spring 2009. Plastic Logic wins the award for the plastic e-reader display.

Best New Product Development Award: Kovio

Kovio wins the IDTechEx New Product Development Award for its printed silicon RFID platform for item-level intelligence. The company has demonstrated the world's first silicon-ink based 128-bit HF (13.56MHz) RFID tag. Based on



ISO 14443 standards, this product features integrated synchronous analog, logic, anti-collision, and read-only memory blocks. With data rates of 106kbps, this product is 100-1000X higher than previously reported printed organic tags. The breakthrough performance is enabled by Kovio's proprietary IC design and high performance silicon transistors - high mobility (~100cm²/v.s) and low power (CMOS). The product is being sampled by lead customers with volume production to start in Q2 2009. Future products based on this platform will include UHF tags and integration of additional intelligence such as sensors and displays.

Best Commercialization Award: Epson



Epson has invested substantially in developing inkjet printing technologies for electronics, and wins the IDTechEx Commercialization Award for commercializing the technology in large-scale deployments. For example, at the Sharp Kameyama plant in Japan, Epson's inkjet printing technology is employed to print the color filters for Gen 8 (2160 x 2460mm) displays. The successful commercialization was achieved by Hisashi Aruga and his team at Epson.

Academic R&D Award: University of St Andrews, Scotland



Prof Samuel founded and leads the Organic Semiconductor Centre at the University of St Andrews. This Centre fosters interdisciplinary research on solution-processed (and hence printable) organic semiconductors. His research has had considerable impact on the printed electronics community, such as developing the standard method for measuring the efficiency of OLED materials. He also developed highly efficient light-emitting dendrimers.

Printed Electronics USA Champion: Dr Vivek Subramanian



The Printed Electronics Champion Award is given to an individual that has done an extraordinary amount of work technically but has also participated in activities to promote and develop the industry. It is awarded to Dr Vivek Subramanian, Associate Professor at the University of California, Berkeley. Dr Subramanian is a co-founder of Kovio and is involved in the research and development of many different printed electronics technologies at the University of California, Berkeley. He lectures and advises companies around the World, promoting the industry. He is globally recognized as a leading industry expert.

Submissions were judged by a panel made up of four independent experts - two were based in the US one in the UK, and one in Germany. For more details please see www.IDTechEx.com/awards.

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