



Dear readers,

Lately we sent you two special editions of the ic4u newsletter to inform you about PolyIC exhib-

iting at the CeBIT in Hannover, Germany, and at the conference Smart Labels USA in Boston, MA. Today, you receive a regular version of the newsletter with several new topics.

In this issue of the newsletter, we would like to inform you about our move as of April 3rd 2006 to our new location in the city of Fuerth. We would be pleased to welcome you in our new building. The chance to visit our facilities would be possible late this year in connection with the last OE-A meeting in 2006, which is held in Fuerth.

Recently, we showed our latest technical result: an 8 bit polymerbased RFID tag that can be read from a distance of more than 7 centimeters.

In the column **Knowledge** the difference between the frequency UHF (Ultra High Frequency) and HF (High Frequency) is explained.

In March 2006 PolyIC took part at the CeBIT exhibition in Hannover. Also PolyIC participated in the **Conference Smart Labels USA**. To learn more about this topic, read the following review on the reverse side of this newsletter.

We hope you enjoy the reading.

Yours,

Wolfgang Mildner



Managing Director
PolyIC GmbH & Co. KG

**Research & Technology
Conferences • Internal
Knowledge**

Internal

Move completed PolyIC has new facilities

Since April 3rd 2006, PolyIC GmbH & Co. KG has moved to a new building.

The new facilities are on the premises of the Leonhard Kurz GmbH & Co. KG.

The advantage of the new site is the proximity to the Kurz production facilities, which is very important shortly before entering the market.

PolyIC moved its complete offices and research laboratories from the Siemens research center to Fuerth.

PolyIC has re-launched its website with the move into its new building. Please take a look at our new website with our latest content at www.polyic.com.



This is our new address:

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Email and internet references
stay the same:
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Research & Technology:

PolyIC introduces 8 bit RFID tag with a frequency of 13.56 MHz

At the Smart Labels USA 2006 in Boston and at the DPG spring conference in Dresden, PolyIC displayed the first polymer based 8 bit RFID tag which functions at the frequency of 13.56 MHz.

The transponder chip is based on the semi conducting polymer

polythiophene and a flexible polyester substrate.

This chip was produced with the clean room process; the next goal will be to achieve a printed transponder chip that will be developed in the course of this year.

Preview

Printed Electronics Europe in Cambridge, UK

From April 19th until April 21st you can meet PolyIC at the Printed Electronics Europe and listen to Wolfgang Mildner. He will speak about the status quo at PolyIC.
Link: www.printelec.com

Hannover Messe in Hall 2, booth C30

The next possibility to meet PolyIC in Germany is from April 24th until April 28th 2006 at the Hannover Messe.

PolyIC will be at the booth of the Federal Ministry for Education and Research that is located in Hall 2 at booth C30.

Link: www.hannover-messe.de



Organic Electronics Conference and Exhibition 2006 in Frankfurt from September 25th until 27th 2006

The annual conference of the oe-a will take place this year together with the OSC 2006 in Frankfurt, Germany, in September.

We will give you further information on this conference in our next newsletter.

Link: www.oea-osc.com



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IC4U – the PolyIC Newsletter

Knowledge

Printed RFID tags for high frequency

With radio frequency identification (RFID) systems, there are only several frequency ranges that are allowed worldwide. The most important are : Low Frequency (LF) in the frequency band of 125 - 135 kHz, High Frequency (HF) with a set frequency of 13.56 MHz and the Ultra High Frequency (UHF) band ranging from 860 - 950 MHz as well as the micro wave band with approximately 2.45 GHz.

The frequency bands are subject to different regulations around the world and have different technical properties and therefore different areas of application. The internationally best standardized and widespread band is HF that that is used in

Smart Card systems as well as in logistics and automation. Lately, the UHF band has become known because of its use as Electronic Product Code (EPC) in the supply chain. UHF offers wide reading distances, however, shows problems when it comes to objects containing water. The water absorbs the UHF radio waves.

With printed RFID tags PolyIC focuses on the HF frequency. This is especially well suited for item level tagging on consumer goods that often contain water.

The HF frequency can be reached with polymer semi conductors and printing methods which is of great importance for the design of low-priced transponders.

Conferences

Short report on CeBIT 2006 and Smart Labels USA conference

At the CeBIT in Hannover PolyIC answered all questions regarding to RFID and printed electronics at the booth of the Bavarian Ministry of Economic Affairs, Infrastructure, Transport and Technology « Bavaria is IT ». These topics were also debated at the international conference Smart Labels USA in Boston.

Because of the focus on RFID at the CeBIT this year, strengthened by the dominant booth of the Metro Future Store Initiative, PolyIC was also totally en vogue.

Amongst others, the new Bavarian Minister for Economic Affairs, Dr. Erwin Huber, was interested in the new technology based on polymer electronics.



The conference Smart Labels USA in Boston running from 28th until 29th of March had more than 500 registered participants who also showed much interest in what was offered at the PolyIC's booth. Besides PolyIC's speech on printed electronics, there were also other interesting speeches on RFID and printed electronics.

Link: www.cebitec.com
www.smartlabelsusa.com

PolyIC

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