Fraunhofer
ENAS

Press Release

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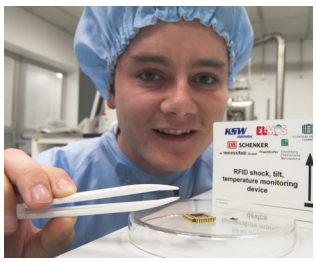

Markus Nowack shows an integrated sensor chip for the RFID label of the collaborative project ASIL
(Quelle: Fraunhofer ENAS)

Fraunhofer ENAS presents new developments for the application in logistics and medicine

Small, smart and low weight - these are characteristic properties of the developments of Fraunhofer ENAS. A printed battery with a mass of less than 1 g, a smart label, which is able to monitor any event during transportation of valueable goods, and laboratory equipment, which is small enough for a vest pocket, will be shown. The Fraunhofer Research Institution for Electronic Nano Systems ENAS will present these applications at the exhibition Micromachine/MEMS (in hall 5, booth E-18) in Tokyo from July 29th till 31st, 2009.

The researchers from Chemnitz will show the active smart RFID label of the collaborative project ASIL in Japan for the first time. The project partners developed a label which measures temperature, inclination and acceleration during the carriage of goods and stores the data in periodic time intervals.

The printed batteries already attracted attention in Japan in the spring 2009. The battery manufactured by screen printing technique weights less than one gram and is less than one millimeter thick. It is possible to print it in serial connections up to four batteries with voltages of 1.5 to 6 V depending of the connection. The batteries are environment-friendly because they do not contain mercury. This new generation of batteries can be applied for medicine products or printed media.

Furthermore the Fraunhofer ENAS developed an integrated cartrigde for the Point-of-Care diagnostics. Inside the system liquides can be transported by innovative inexpensive actuator principles. These electro-chemical, micro fluidical actuators are characterized by requiring small spaces, reaching high backpressure, simple feasibility. The system can be applied e.g. for Immuno Assays.

The exhibition Micromachine/MEMS is specialized in Micromachine, MEMS and Nanotechnology. The MEMS market in Japan is growing at great speed. The focus has now turned to third-generation MEMS called "BEANS" that can offer new lifestyle possibilities and innovations by fusing nano-material technologies with biotechnologies.

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