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## ISSYS Develops Methanol Concentration Sensor for Fuel Cell Market

Integrated Sensing Systems, Inc. (ISSYS) in Ypsilanti, Michigan, announced today that it is developing small methanol concentration sensors, targeting the active Direct Methanol Fuel Cell (DMFC) market. ISSYS is both developing its own products and working with Japanese based, Kyoto Electronics Manufacturing Company (KEM) <http://www.kyoto-kem.com/top.html> on another version of this device. These small sensors will also be utilized in a variety of other industrial and analytical applications for the need of a low-cost, accurate, small, inline density or chemical concentration sensors.

Dr. Douglas Sparks, ISSYS' Executive Vice President, stated that "We began selling in-line chemical concentration meters in 2003 with our model 203 micro density meter. The next smaller industrial density / concentration sensors will be ready for sale by the first quarter 2006. ISSYS is in the process of recruiting capital investment in order to commercialize the low-cost (and high volume) methanol concentration sensors that are expected to be ready for sampling by third quarter of 2006 and for high-volume sales by 2007."

Dr. Yoichi Ueda, KEM's President, stated that "We have endeavored, as a specialized manufacturer of analytical instruments over 45 years, to enhance R&D, new applications and diverse post-sale support for customer satisfaction. We are now aware that there exists an increasing demand for more user-friendly, compact and precise devices with less measuring time. MEMS is an indispensable technology that fills the recent need for this solution, so it was of prime importance for us to tie up with ISSYS in order to realize our global strategy."

ISSYS' sensors are based on Micro ElectroMechanical System (MEMS) technology. This microfluidic technology offers advantages in system and sample size, cost and reliability over current approaches to fluidic density, methanol concentration and chemical concentration measurement, <http://www.mems-issys.com/html/density.html>.

The use of a methanol concentration sensor is essential for the practical application of a variety of DMFC technologies. Currently ISSYS' technology offers the only efficient solution for the DMFC application, particularly due to its outstanding accuracy, stability and potential low cost. Furthermore, unlike previous methanol concentration sensors, ISSYS' products operate over a wide temperature range and are not sensitive to chemical impurities.

Fuel cells offer a big improvement in portability over conventional battery packs. Applications for DFMC technology include laptop computers, PDAs, camcorders and other portable consumer electronics.

**Company Background:** ISSYS is a leader in advanced micromachining technologies for medical devices, microfluidic and scientific analytical sensing applications. Founded in 1995 by world-renowned leaders in MEMS technology, ISSYS is one of the oldest independent MEMS companies in the US and has been offering MEMS services longer than any other company in the US. ISSYS operates a "full manufacturing under one roof," multi-million-dollar, state-of-the-art MEMS fabrication facility located near Ann Arbor, Michigan. An ISO 9000:2001 certified organization, ISSYS is a vertically integrated company dedicated to developing and manufacturing system-level products based on MEMS technology. ISSYS is currently undertaking a round B fund-raising effort to raise capital for new medical and fuel-cell sensor product launches. For more company, product and service information, please visit <http://www.mems-issys.com/>

Kyoto Electronics Manufacturing, Co. Ltd ("KEM") is a specialized manufacturer of scientific instruments since 1961, introducing a broad product line of analyzers of high quality and reliability including Analytical and Measuring Instruments that addressed laboratory needs and Continuous Monitoring Systems. Headquartered in Kyoto, Japan, KEM has a world-wide network of sales offices and distributors. For more company and product information, please visit <http://www.kyoto-kem.com/top.html>.

**Key Words:** Concentration sensor / meters, Density sensor / meters, Fuel cells, Methanol sensors / meters, Direct Methanol Fuel Cell (DMFC)

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