

Newsletter February 2009

1. Development of an Underwater Hydrogen/Hydrogen Peroxide fuel cell stack

AMT Analysenmeßtechnik GmbH has started successfully the development of an Underwater Hydrogen/Hydrogen Peroxide fuel cell stack. This project is financially supported by the German Ministry of Education and Research. During this project AMT will work in the fields of electrochemistry and technological solutions for underwater fuel cells. The main aim of this project is to develop an alternatively reliable and nearly maintenance-free underwater energy source for a long time. In cooperation with several companies and institutes in a first step a 10 W module will be developed, which is designed above all for high current consuming underwater probe systems.

2. Phosphate sensor module

The determination of phosphate in aqueous solutions with sensors is a problem, which is not really solved until now. Both colorimetric and optical methods and biosensors as well have not lead to a satisfying direct reading sensor. This is due to the difficult analytical characteristics of phosphates. Therefore AMT has started in cooperation with institutes and private companies to develop a new measuring principle for a phosphate sensor. This is based on a combination of physical, electrochemical and optical methods. The first laboratory experiments showed already a good sensitivity against phosphates.

3. Multisensor-Messgerät MS 08

The Multi-Sensor Measuring Instrument MS 08 has been developed for the *in-situ* determination of dissolved H₂S, oxygen, ozone, hydrogen, hydrogen peroxide, pH and temperature in laboratories and for the simple field use. It is equipped with innovative electrochemical micro-sensors for H₂S/Sulphide, dissolved oxygen, ozone, dissolved hydrogen, hydrogen peroxide and with additional sensors for pH and temperature. The display shows all the calculated chemical and physical data with their units or the raw data if requested. The instrument is equipped with a power supply unit as standard and can also be operated with batteries. A serial interface RS232 is included as well as a case for the storage and for the transport of the instrument.



Fig.: Measuring Instrument MS 08 with micro-sensor, temperature sensor, RS 232 interface, power supply unit

4. Wilson Scientific Co. Ltd.

The cooperation with the company Wilson Scientific Co. Ltd. from Taiwan was concluded onesided by AMT Analysenmeßtechnik GmbH because of the long-time outstanding payments. Therefore it is announced, that Wilson Scientific Co. Ltd. is no longer authorized agent for AMT Analysenmeßtechnik GmbH.