COST-EFFECTIVE GAS SENSOR FOR HYDROGEN AND AMMONIA DETECTION

TECHNOLOGY DEVELOPED AT THE INSTITUTE OF ELECTRICAL ENGINEERING OF THE SLOVAK ACADEMY OF SCIENCES

CUTTING EDGE GAS SENSOR TECHNOLOGY

BACKGROUND INFORMATION

- Novel gas sensor based on conducting polymers
- Innovative manufacturing method ensuring more precise measurement of gases, predominantly hydrogen and/or ammonia, by application of chemical and electrochemical means
- Enhanced performance through plasma treatment of the outer surface of conducting polymers
- Award-winning technology – GOLD MEDAL at the Taipei International Invention Show & Technomart

WIDE RANGE OF APPLICATIONS

GAS SENSOR FOR THE HYDROGEN ECONOMY

- Invention applicable in the field of gas sensors, especially gas sensors for hydrogen detection
- Hydrogen sensors predominately used for safety reasons or monitoring in various industries, including manufacturing, semiconductors, nuclear energy and environmental protection
- Wide-range of applications with respect to the growing hydrogen economy and increase in use of hydrogen fuel cells

COMPETITIVE TECHNOLOGY

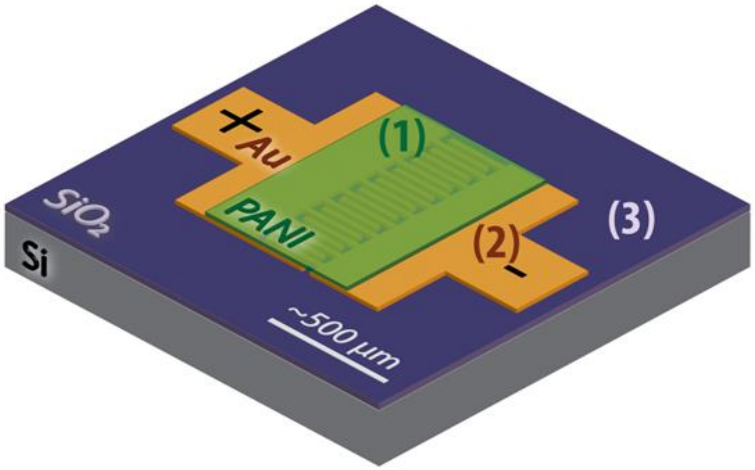
HIGHLY SENSITIVE SENSOR AVAILABLE AT A FRACTION OF COST

- Available at a fraction of cost as no noble metals such as palladium are used in production compared to conventional gas sensors
- Lower operational costs, allowing for immediate repeat use
- High sensitivity, even in circumstances with low gas concentration
- Fast response time and improved stability of the sensor
- Production process utilizing commonly available infrastructure

TECHNICAL DETAILS

PROTOTYPE OF THE RESISTIVE GAS SENSOR

(1) thin polyaniline film
(2) gilded electrodes
(3) chemical substrate



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STAGE OF DEVELOPMENT

TECHNOLOGY READY FOR LICESING OR SALE

- PCT patent application PCT/SK2011/050024 filed in 2011
- Prototype ready for display and testing
- Ongoing negotiation about official testing with the National Renewable Energy Laboratory, USA

INTERNATIONALLY RECOGNISED INVENTORS

TECHNOLOGY DEVELOPED BY A TEAM OF SCIENTISTS AT SAS

- Inventors Ing. Pavol Kunzo and Ing. Peter Lobotka, CSc.
- Research team from the Institute of Electrical Engineering of the Slovak Academy of Sciences, with focus on gas sensors based on conductive polymers
- Experts in the field of electrical engineering with combined experience of more than 30 years
- Authors of tens of scientific papers in refereed journals and a chapter in Springer book.
- Collaboration on research projects in Europe

THE INVENTORS ARE LOOKING FOR AN INDUSTRIAL PARTNER TO SELL OR LICENSE THE GAS SENSOR TECHNOLOGY

FOR MORE INFORMATION PLEASE CONTACT

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The proprietor uses services of Neulogy, a Bratislava-based consultancy, to market its technology.

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