

# Laboratory licenses hydrogen sensor technology

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The U.S. Department of Energy's National Renewable Energy Laboratory (NREL) announced on Feb. 23 that Nuclear Filter Technology (NucFil) has been awarded licenses to manufacture Fiber Optic Hydrogen Sensors. The licenses, together with a Cooperative Research and Development Agreement (CRADA), allow NucFil to work with scientists and engineers at NREL to further develop fiber optic hydrogen sensors that will then be manufactured and integrated into safety sensors for nuclear waste packages, automobiles, industrial plants and anywhere else hydrogen may be present.

Hydrogen is very reactive. It only takes about five percent hydrogen in air and a small spark to ignite. Early detection is essential to safely handling hydrogen.

"We at NREL are very pleased to have NucFil as our licensee to commercialize this technology and more importantly to be partnering with NucFil, under a CRADA to help in reducing the time to market." said Gib Marguth, NREL's Director of Research and Technology Applications. Rich Bolin, the NREL licensing professional on the case added, "Finding the right licensee is sometimes a difficult and time consuming process. It is great that we have been able to transfer NREL technology to just the right company that happens to be only a few minutes away from the lab."

Roland Pitts, a co-inventor on the licensed technology and principal investigator for NREL under the collaborative agreement said, "We are

particularly pleased to be able to work directly with the engineering staff of NucFil because of their proven track record at commercialization of related technology, and the entrepreneurial leadership from their CEO Gil Brassell. Close coupling with our industry partner is often the key to success.

Gil Brassell, a materials scientist and CEO of NucFil responded by adding "NREL's outstanding scientists and engineers have always been great to work with, and I'm sure that working with Pitts and other NREL technical staff members in developing the sensors and partnering with them will be more of the same."

"During the coming year we will focus on developing manufacturing processes and integrating the sensor into our core product lines, drum vent filters and nuclear material storage containers," said Terry Wickland Vice President for Marketing. "Eventually we will have the sensors built into vehicles powered by fuel cells. These sensors are intrinsically safe, meaning the sensor, which is smaller than the eraser of a pencil, changes color in the presence of hydrogen and is detected with fiber optics."

Source: National Renewable Energy Laboratory

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