



UCSD Makes Breakthrough in Bomb Detection

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A team of researchers at UC San Diego has developed a small sensor chip capable of detecting trace amounts of hydrogen peroxide, a chemical commonly used in homemade bombs, the university announced Tuesday.

The penny-sized electronic sensor is capable of sniffing out minute amounts of peroxide-based explosives, such as those used in the 2005 bombing of the London transit system, according to UCSD.

"The detection capability of this tiny electronic sensor is comparable to current instruments, which are large, bulky and cost thousands of dollars each," said William Trogler, a professor of chemistry and biochemistry at UCSD, and one of the device's inventors.

"If this device were mass produced, it's not inconceivable that it could be made for less than a dollar," Trogler said.

The team that invented the device also included UCSD professors Ivan Schuller and Andrew Kummel, along with a group of graduate students.

In addition to detecting explosives, UCSD scientists said the sensor could be used to protect factory workers by monitoring the toxic hydrogen peroxide vapors from bleached pulp and other products.

It works by using thin films of metal that when exposed to hydrogen peroxide show an increase in electric current.

The device, which was developed through funding by the U.S. Air Force Office of Scientific Research, is detailed in this week's issue of the Journal of the American Chemical Society.



