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Small electronic nose detects toxins

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CHAMPAIGN, Ill., Sept. 15 (UPI) -- University of Illinois scientists say they are developing a postage stamp-sized electronic sensor that can detect and identify poisonous gases and toxins.

The development of the electronic "nose" is being supported by the National Institute of [Environmental Health Sciences](#). The device can indicate which gas or toxin it has detected by changing colors.

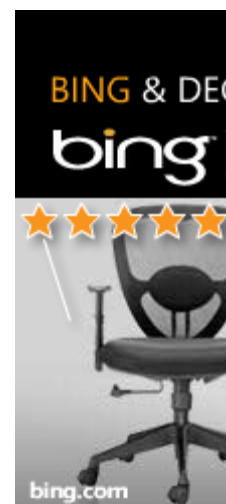
Researchers, led by Professor [Kenneth Suslick](#), said once fully developed, the sensor could be useful in detecting high exposures to toxic industrial [chemicals](#) that pose serious health risks in the workplace or through accidental exposure. The scientists say they hope to be able to market a wearable sensor within a few years.

"We have a disposable 36-dye sensor array that changes colors when exposed to different chemicals," said Suslick. "The pattern of the color change is a unique molecular fingerprint for any toxic gas and also tells us its concentration. By comparing that pattern to a library of color fingerprints, we can identify and quantify the (toxic industrial chemical) in a matter of seconds."

The research is reported in the journal Nature Chemistry.

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