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Detection of Hydrogen Fluoride Gas Using Piezoresistive Microcantilever Sensors

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We have used embedded piezoresistive microcantilever (EPM) sensors for the detection of hydrogen fluoride (HF) gas. These sensors have a keratin-based compound as the primary sensing material. Exposures to HF at high levels (beginning at 0 ppm and leveling off at 2300 ppm) resulted in nearly immediate response. Low-level exposures beginning at 0 ppm and leveling off at 230 ppm required 15 s for a measurable sensor response.

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