

## Detection of Chlorine Gas Using Embedded Piezoresistive Microcantilever Sensors

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Embedded piezoresistive microcantilever (EPM) sensors may be constructed for various sensing applications. In each application, a custom sensing material that responds volumetrically to the desired analyte is designed. Here, we constructed EPM sensors for chlorine gas ( $\text{Cl}_2$ ) detection. The sensing materials used consisted of polymer matrices combined with NaI crystals. Sensors constructed from a silicone-based matrix exhibited the strongest response to  $\text{Cl}_2$ , with detection limits in an outdoor exposure setting of approximately 20 ppm.

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