

Chalcogenide semiconductor based sensor for fast NO₂ detection

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Abstract

For the first time it is shown that thin films based on tellurium alloys exhibit high sensitivity to nitrogen dioxide at room temperature. The resistance of the films decreases reversibly in the presence of NO₂. Sensitivity of the device depends on gas concentration and is better at concentrations less than 3 ppm. The response time is considerably short being in the range of 2-3 min.