

development of SnO<sub>2</sub>-based thick film gas sensor promoted with molybdenum and nickel oxides for detection of H<sub>2</sub>S

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A SnO<sub>2</sub>-based thick film gas sensor promoted with molybdenum and nickel was developed in this study for the detection of H<sub>2</sub>S gas at 350°C. The SnO<sub>2</sub>-based gas sensors promoted with molybdenum and nickel were prepared by the physical mixing of tin oxide(SnO<sub>2</sub>) and promoters such as molybdenum oxide and nickel oxide. The SnO<sub>2</sub>-based gas sensor was not only a high sensor response of about 60% even in the very low concentration of 1ppm H<sub>2</sub>S, but also a complete recovery ability. Moreover, the response of SnO<sub>2</sub>-based gas sensors promoted with Mo and Ni could be maintained during multiple cycles of detection and recovery, unlike the response magnitude of a SnO<sub>2</sub> sensor, due to the promoter effect