

KOROTCENKOV, G., BRINZARI, V., CHO, B.K. In<sub>2</sub>O<sub>3</sub>- and SnO<sub>2</sub>-based ozone sensors: Design and characterization. *In: [Critical Reviews in Solid State and Materials Sciences](#)*. 2018, Vol **43**, Issue **2**, pp. 83–132. ISSN 1040-8436.

This article describes in detail the SnO<sub>2</sub> and In<sub>2</sub>O<sub>3</sub> metal oxides as materials for designing solid state conductometric ozone sensors. The main focus of this article is on the description of the SnO<sub>2</sub> and In<sub>2</sub>O<sub>3</sub> films' structural parameters important for gas sensor design and on the establishment of the main regularities of the film parameters influence on the sensor characteristics. Advantages and disadvantages of approaches used for optimization of ozone sensor parameters are also analyzed. In particular, surface modification, bulk doping of SnO<sub>2</sub> and In<sub>2</sub>O<sub>3</sub>, and the use of 1D structures and hybrid materials are considered. The main factors, controlling parameters of SnO<sub>2</sub>- and In<sub>2</sub>O<sub>3</sub>-based ozone sensors, are determined, and recommendations for the process of the SnO<sub>2</sub> and In<sub>2</sub>O<sub>3</sub> films deposition, facilitating the search of the film parameters and the fabrication technologies that optimize the ozone sensor performance, are formulated.