ABSTRACT

In this paper the response of printed thick-film of WO3 doped by Y2O3 to organic solvent was studied. Different ratio of doping was prepared and changes of film resistance at different temperature in present of vaporized types of alcohol were observed. The results showed a high sensitivity of the film of 80.1%WO3-18.8%Y2O3 to Toluene, Xylene, Methanol, and 2-Propanone (Acetone) at 250, 450, and 550 °C, and higher sensitivity of 94.3%WO3-4.7%Y2O3 at 350 °C. Microscopic images of the samples including SEM and TEM were observed. EDX and XRD analysis onto the samples also were done.

**Keyword:** Gas sensor; Thick film; Tungsten oxide; Yttria