

## **ZnO thin film deposition on butterfly shaped electrodes for ultraviolet sensing applications**

### **Abstract**

ZnO thin film was deposited on patterned gold electrodes using sol-gel spin coating technique. Conventional photo-lithography with wet etching process was used to create butterfly shaped 13- $\mu$ m gap from zero gap chrome mask. The deposited thin film was characterized structurally, morphologically and electrically using X-ray diffraction, scanning electron microscope and Keithly source meter. Current-voltage(I-V) characterization was captured in dark and UV conditions. The current gain of the fabricated device was 1.36 and the response and recovery time of the sensor was 76 s and 104 s, respectively, showed the fabricated device can be used for UV applications.

### **Keywords**

Crystal structure; ZnO thin film; Sol-gel; UV