

A new propylamine sensor using artificial dimorphite

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Abstract

The sandwich metal-dimorphite(As/S)-metal structure is used as a sensor for detection of propylamine ($\text{C}_3\text{H}_7\text{NH}_2$) vapor. The gas induced shifts of the current-voltage characteristics as well as transient characteristics of gas-induced current are studied with respect of morphology of dimorphite films. Propylamine vapor lead to increasing of current i.e. has a doping effect. Sensitivity dependence on applied voltage and on gas concentration is found. Results are discussed in themes of gas controlled trapping of carriers injected from electrodes which influence the space charge limited current (SCLC).