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The invention relates to the semiconductor devices, particularly to the gas sensors and can be used for detection of toxic gases in the atmosphere.

The gas sensor on base of vitreous chalcogenide semiconductors includes an insulating base, on which there are placed in series a gas sensitive layer on base of a vitreous chalcogenide semiconductor, obtained by the method of vacuum evaporation of  $As_2S_3$ ,  $As_2Se_3$  or their solid solutions, and two electrodes. At the same time, the gas sensitive layer has a salient surface of strict periodicity, made in the form of diffraction grating by the holographic method.

Claims: 1

Fig.: 3