

Comparison of TiO_2 Active Area of Gas Sensors Enhanced by Annealing and RIE Etching

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Abstract. In this article we deal with enhancement of nanostructured polycrystalline titanium dioxide surfaces deposited on insulating SiO_2 layers, that can be implemented into sensoric structures for detection of gases. We take advantage of the change in conductivity of thin TiO_2 layer after gas exposure as the basic principle of gas detection. We try to increase and enhance the active area of the TiO_2 surface by its annealing and by controlled ICP RIE etching through a resist mask.