

ELECTROLUMINESCENCE STUDY ON POROUS SILICON

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ABSTRACT

Electroluminescence Study on Porous Silicon

The aim of this study is to obtain efficient electroluminescence from porous silicon using gold as a solid state contact. All the samples were prepared by etching process with constant current applied and voltage applied. The parameters that vary were time of etching and current density. The times used for etching were 10 minutes, 20 minutes, 30 minutes, 40 minutes and 50 minutes. It was found that the EL exhibited higher intensity in the range of 471 to 476 nm of sample 30 min. A visible (blue) light was produced. This was due to the higher porosity of the sample. Increasing in time of etching process, caused porosity of porous layer increases. The study can be improved by doping impurities to the PS.