

Fabrication, Properties and Functionalization of Nanoporous Gold Films

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Nanoporous Au films have been a point of interest over the last decade due to their potential applications due to their high surface area. In this study, the fabrication of crack-free nanoporous Au films is presented. The mechanical properties such as elastic modulus are reported. The prototype for energy harvesting device is designed and the tests on the functionality of this material is investigated. The fabrication process is described in detail and the effects of individual parameters on the device performance are discussed. The effectiveness, drawbacks in fabrication and improvements of the devices are presented.

Keywords: Nanoporous gold, micro device.