Sensitivity enhancement of flexible gas sensors via conversion of inkjet-printed silver electrodes into porous gold counterparts

Yunnan Fang¹, Mitra Akbari², Jimmy G. D. Hester³, Lauri Sydänheimo², Leena Ukkonen², Manos M. Tentzeris³

¹School of Materials Science and Engineering, Georgia Institute of Technology, Atlanta, GA 30332-0245, USA ²Department of Electronics and Communications Engineering, Tampere University of Technology, 33101 Tampere, Finland

³School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, GA 30332-0250, USA



Supplementary Figure S1. Scotch-tape peel tests with the sensors electroded with the dense Ag IDEs and with the porous Au IDEs. a) and c) show optical images of the sensors electroded with the Ag IDEs and with the Au IDEs, respectively, that firmly stuck to the adhesive side of a piece of Scotch[®] magic tape. b) and d) show optical images of the sensors with the Ag IDEs and with the Au IDEs, respectively, after the tape has been peeled off. Insets in b) and c) show high magnification optical images of the IDE fingers on the Kapton[®] substrate shown in b) and c), respectively.