Sensors and Materials, Vol. 18, No. 1 (2006) 029–033
MYU Tokyo

S & M 0627

Bending of PET-Ag Nanoparticle Strip in Electrolyte Solution

Xiao-Ming Chen, Guang-Tao Fei*, Li-Min Liang, Ping Cui and Yong Li

Key Laboratory of Materials Physics, Institute of Solid State Physics, Hefei Institutes of Physical Science, Chinese Academy of Sciences, Hefei 230031, China

(Received March 21, 2005; accepted September 22, 2005)

Key words: PET-Ag nanoparticle strip, bend, displacement, asymmetry

A novel bilayer strip was made by depositing Ag nanoparticles on the surface of poly(ethylene terephthalate) (PET) film via physical evaporation deposition (PVD). The result shows that the free tip of this strip can move 16 mm in 1 M NaOH electrolyte when a potential of 0.36 V is applied. The displacement exhibits asymmetry when positive and negative potentials are applied. The mechanism of the bending is discussed.

*Corresponding author, e-mail address: gtfei@issp.ac.cn.