

CNT based stretchable optically transparent electrodes for DEAs

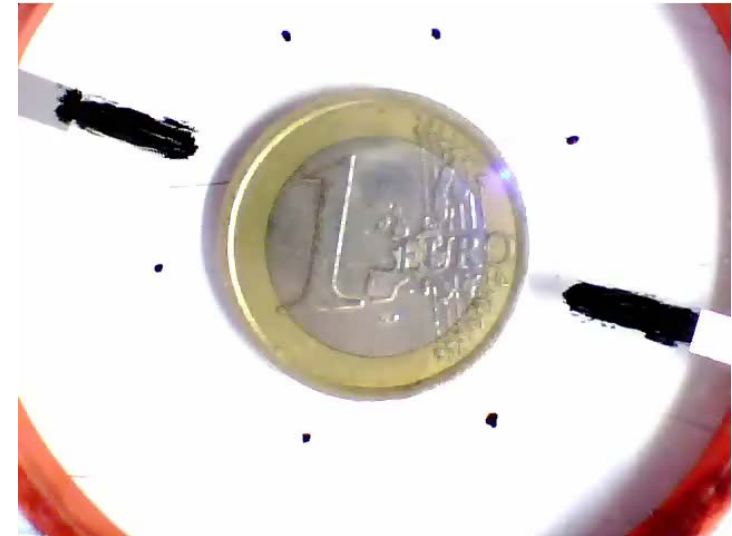
Collaboration project

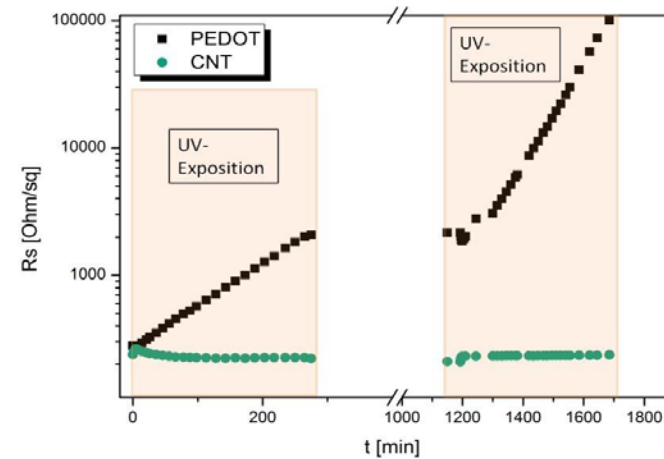
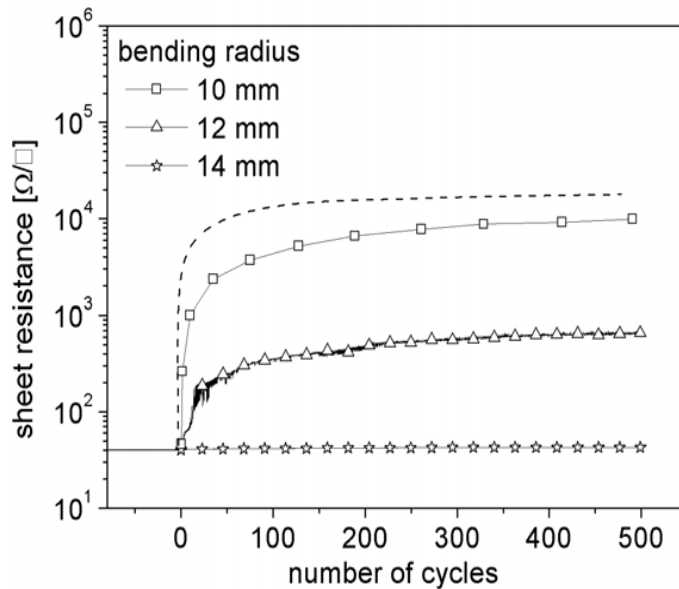
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UV stability CNT vs. PEDOT

Influence of bending radii on the electrical resistance of ITO-sputtered PET films [1]

- high electrical conductivity and transparency
- excellent scratch and mar resistance
- unsuitable due to their brittleness

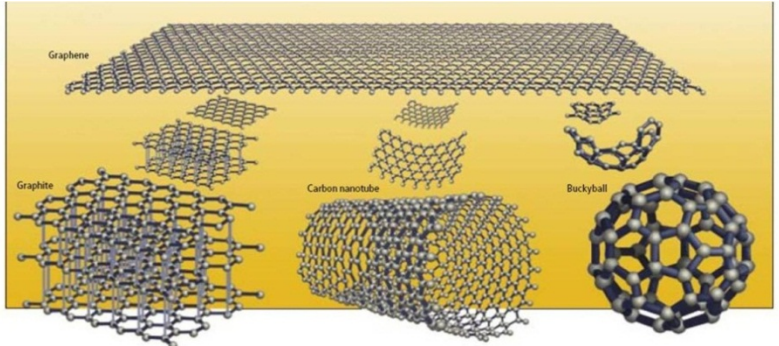
- high electrical conductivity and transparency
- poor chemical and UV stability
- hydrophilic

[1] Koniger, T. and H. Munstedt, Advanced device for testing the electrical behaviour of conductive coatings on flexible polymer substrates under oscillatory bending: comparison of coatings of sputtered indium-tin oxide and poly(3,4-ethylenedioxythiophene). Measurement Science & Technology, 2008. 19(5)

CNTs and DEAs



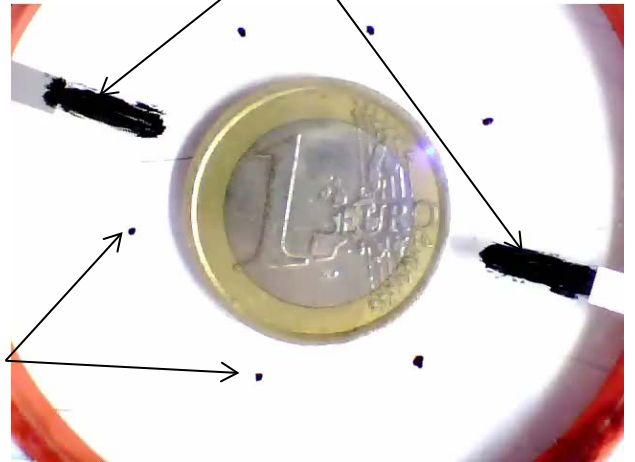
CNT film deposited on elastomer substrate: (left) by spray coating; (right) by inkjet printing



Source: Geim A.K., Kim P., Sci. Am., April 2008



Additional electrodes



Markers around the coated area

Ready sample prepared for the actuation test

