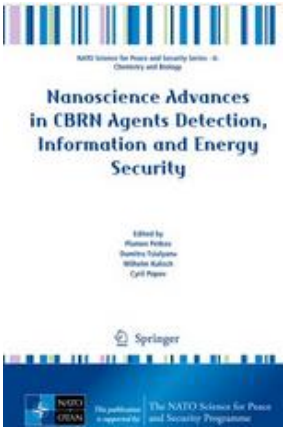

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Cyclic Nanoindentation for Examination of the Piezoresistivity and the Strain-Sensor Behavior of Indium-Tin-Oxide Thin Films

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Abstract

The piezoresistivity of indium-tin-oxide (ITO) thin films was investigated using the three point bending method combined with cyclic indentation. The 500 nm thick ITO films were deposited on glass slides using magnetron sputtering. The resistance variation of the resulting ITO/glass based sensors during cyclic indentation showed a good sensitivity and fast response to mechanical strain, with the gauge factor ranging from −1.4 to −3.7.

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