

# Capacitance modulation by light and mechanical stimuli in ALD-deposited ZnO thin films integrated in piezotronic MEMS strain microsensors

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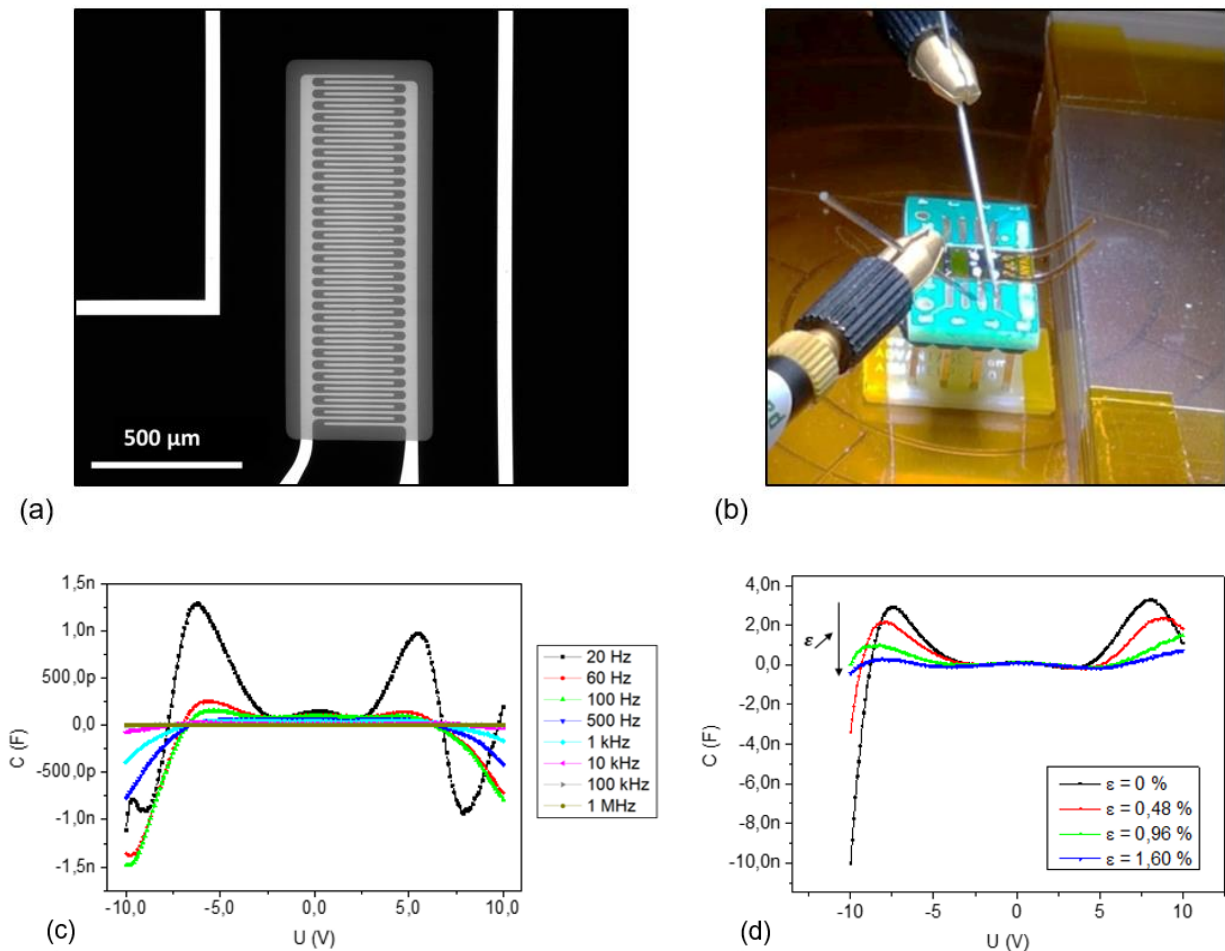


Figure 1: (a) Top view representation of zinc oxide (ZnO) thin film deposited on top of patterned interdigitated platinum electrodes and defined in polyimide flexible substrates. (b) Piezotronic strain microsensor mounted and bonded on a printed circuit board (PCB), contacted with tungsten probes. The polyimide cantilevers are bent upwards, leading to the generation of a compressive strain. (c) (C-V) characteristics under light conditions, for different fixed frequencies ranging between 20 Hz and 1 MHz. (d) (C-V) characteristics under light conditions, for a fixed frequency of 20 Hz, with controlled compressive strain steps imposed on the Pt/ZnO junctions.

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