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Stretchable strain sensor based on metal nanoparticles-Polydimethylsiloxane nanocomposites

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The preparation of nanocomposites materials by using Polydimethylsiloxane (PDMS) with metal nanoparticles (gold and silver) and metal oxide nanoparticles (Zinc oxide and Titanium dioxide). Then, Characterization of the films was carried out by atomic force microscope (AFM) and fourier transform infrared spectroscopy (FTIR) after that the film creates to the electrodes on the film for applying an strain measurement devices. The maximum current output increased as a result of the metal nanoparticle that composites with an improved electrical conductivity of PDMS strain sensor.

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