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TITLE

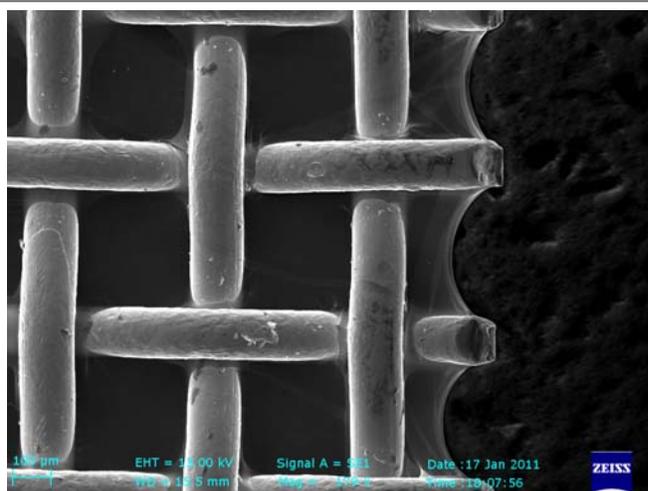
Conductive polymer free-standing nanosheets

INVENTORS

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DESCRIPTION

This invention realizes free-standing conductive ultra-thin films based on poly(3,4-ethylenedioxythiophene)/poly (styrenesulfonate) (PEDOT/PSS), proposing a fabrication process based on a modified Supporting Layer technique, that provides for the easy production of conductive nanofilms having a very large surface area with typical thickness of tens of nanometres. The free-standing nanofilms can be manipulated, folded and unfolded in water many times without suffering from cracks, disaggregation or from loss of conductive properties. After collecting them onto rigid or soft substrates, they retain their functionality. Possible applications are foreseen in the field of sensing and actuation, as well as in the biomedical field, e.g. as smart substrates for cell culturing and stimulation.



APPLICATIONS

Possible applications of this invention are in the field of sensing and actuation, as well as in the biomedical field, e.g. as smart substrates for cell culturing and stimulation.

KEYWORDS

conducting polymers, nanosheets

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Processo per preparare nanofilm biocompatibili auto-supportanti di polimeri conduttori mediante strato di supporto

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