



ISTITUTO ITALIANO  
DI TECNOLOGIA

#### TITLE

Biocompatible, Free-Standing Nanofilms Of Conductive Polymers

#### INVENTORS

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#### DESCRIPTION

The invention is related to the obtainment of free-standing nanofilms of conductive polymers. The method to obtain these films comprises four steps. In the first one there is the sequential deposition of, respectively, a sacrificial material, a layer of an electrolyte, a layer of the conductive polymer and, eventually, a further layer of polyelectrolyte. The second step is a thermal treatment of the multilayer structure; in the third step the sacrificial support is removed and in the last step the free-standing multilayer structure is transferred in solution. Due to their characteristics of flexibility, robustness, adhesion to different substrates and biocompatibility, are particularly useful in biomedical applications, e.g. as support for cell grow.



#### APPLICATIONS

Biological application, biomedical applications

#### KEYWORDS

Free-standing polymer film, conductive polymer, biocompatible, multilayer structure

#### BIBLIOGRAPHIC DATA FI2010A000230

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

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