

Flexible biosensing platform based on MoS₂

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A flexible platform fabricated by a simple deposition process of a solution-based MoS₂ is presented. Mechanical and electrical characteristics obtained present outstanding characteristics comparable to those in the state of the art that follow complex and expensive fabrication processes. Biofunctionalization of the device allowed to prove its functionality as a biosensor for the VP40 matrix protein from the Ebola virus at femtomolar levels.

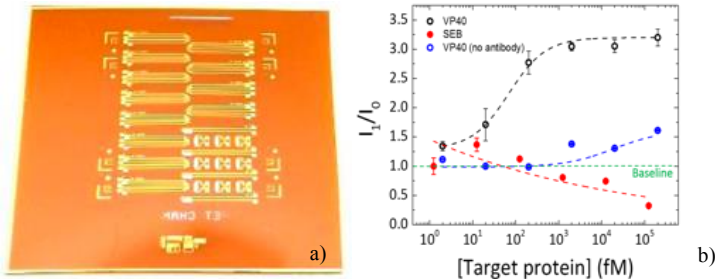


Figure 1: a) Fabricated device. b) Biosensing results with a biofunctionalized device.

REFERENCES:

1. Chang et al., MoS₂ transistors with High-k dielectrics for flexible Low-Power Systems. American Chemical Society, 2013.