

Graphene-on-Polymer films for low cost flexible & disposable biosensors

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We are developing (1) a technology platform that exploits the sensing features of monolayer graphene, an atomically-thin layer of pure carbon (2) for its promising perspectives in biomedical applications, especially for embedded devices and wearables.

For that purpose, we have developed (1) biocompatible (3) films based on graphene-on-polymer for enabling sensing layers which have proven both in-vitro (4,5,6) and in-vivo (7) real-time sensing and diagnostics on the skin as well as on open wounds for healing assessment (1) and for implants (7).

I will present the capabilities of the films and the perspectives for enabling RFID connected wearables for remote patient monitoring as well as disposable devices for rapid point-of-care diagnostics.

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FIGURES

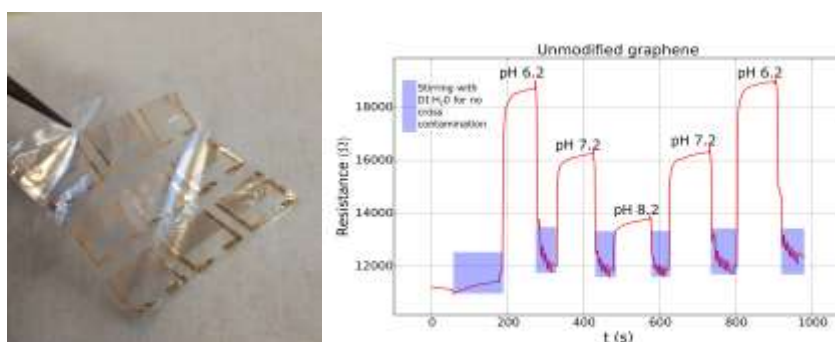


Figure 1: Left sensors on polymer, Right: time traces of pH Sensors made of graphene-on polymer devices.