

# Graphene and Nanotechnologies contributions to SPR in Sensia's experience

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SENSIA is a technological leader company in the field of analytical instrumentation based on SPR (Surface Plasmon Resonance), for life sciences laboratories and environmental measurements.

Sensia has developed in 2014 an innovative SPR (Surface Plasmon Resonance) solution, using graphene biosensing and introducing on the market the first available commercial graphene biosensors, in a device whose microfluidics have been conceived to withstand the use of bacteria and/or of nanoparticles.

The conception of the optical system enables extreme versatility, allowing the indifferent use of gold biosensors, of graphene coated biosensors, and of silica coated biosensors, with no required change of geometry of the optical platform, although the refractive indexes change.

Several strategies of immobilization can be therefore used.

The combination of graphene biosensors together with nanoparticles in Sensia's SPR device, the Indicator-G, leads to new unattained limits of detection, getting into the attomolar range, therefore bringing in new applications and diagnostic possibilities.

## References

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