

# Gallium plasmonic nanoparticles for label free DNA and single nucleotide polymorphism sensing

Antonio García Marín,<sup>#,a</sup> Tania García-Mendiola<sup>#,b,c</sup> Cristina Navio Bernabeu,<sup>c</sup> María Jesús Hernández,<sup>a</sup> Juan Piqueras,<sup>a</sup> Jose Luis Pau,<sup>a</sup> Félix Pariente,<sup>b,c</sup> Encarnación Lorenzo<sup>b,c\*</sup>

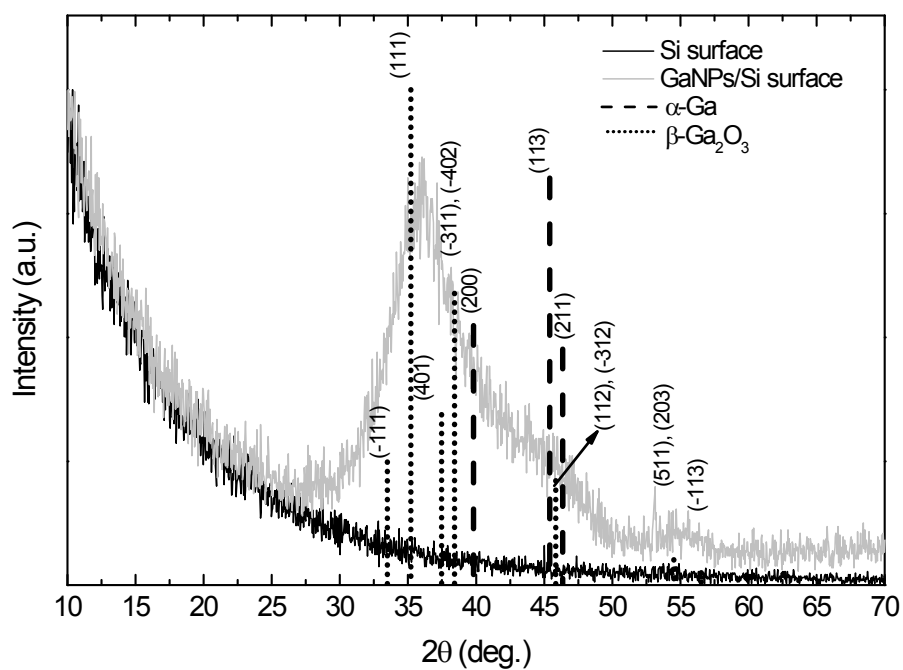
<sup>a</sup>*Grupo de Electrónica y Semiconductores, Departamento de Física Aplicada, Universidad Autónoma de Madrid, Spain*

<sup>b</sup>*Departamento Química Analítica y Análisis Instrumental, Universidad Autónoma de Madrid, Spain.*

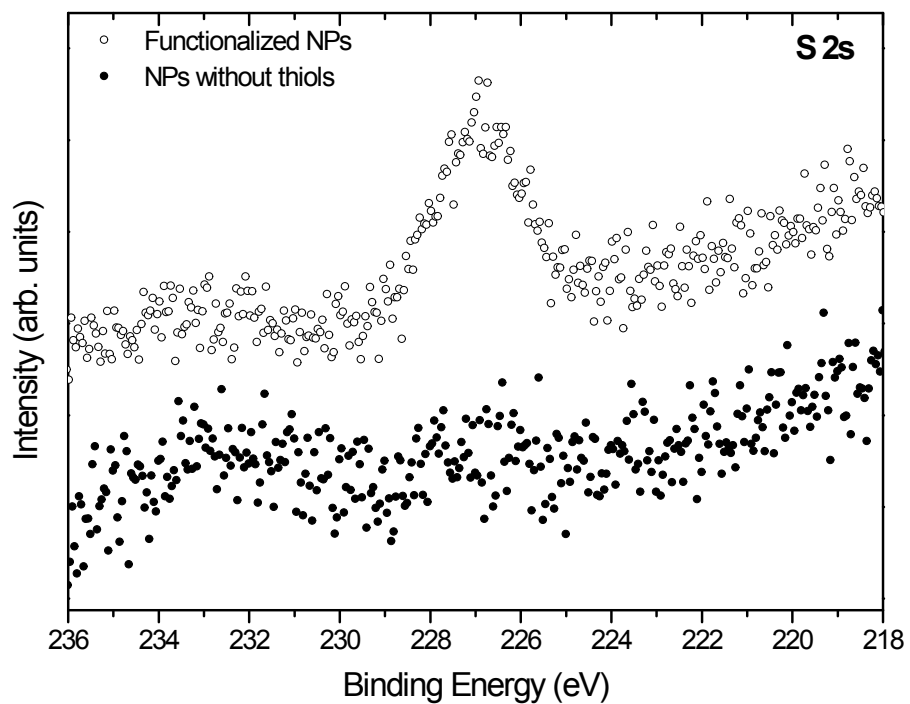
<sup>c</sup>*Instituto Madrileño de Estudios Avanzados (IMDEA) Nanociencia*

\*E-mail: [encarnacion.lorenzo@uam.es](mailto:encarnacion.lorenzo@uam.es)

<sup>#</sup>*These authors contributed equally to this work*



**Figure S1:** X-ray diffractograms of the as-evaporated GaNPs on silicon (grey curve) and a plain silicon wafer (black curve). The strongest diffraction peaks for  $\alpha$ -Ga and  $\beta$ -Ga<sub>2</sub>O<sub>3</sub>, extracted from #00-005-0601 and #01-087-1901 files of the International Centre for Diffraction Data (ICDD), are represented as dashed lines and dots, respectively.



**Figure S2.** S 2s core level XPS spectra of the GaNPs/Si platform before (black circles) and after the modification with the DNA probe (HP1-SH) and MCH (open circles).