Electronic Supplementary Material (ESI) for Analyst
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Title:

Femtomolar Detection of Single Mismatches by Discriminant Analysis of DNA Hybridization Events Using Gold Nanoparticles

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Supplementary Materials

Figure S-1 AFM image of the sensing platform using a multimode scanning probe with a Nanoscope 3D controller (Digital Instruments/Veeco Probes). The image was analyzed with WsXM SPIP software, in which the capture gold nanoparticles were red color and detection gold nanoparticles were yellow color with the associated dimension profiles.

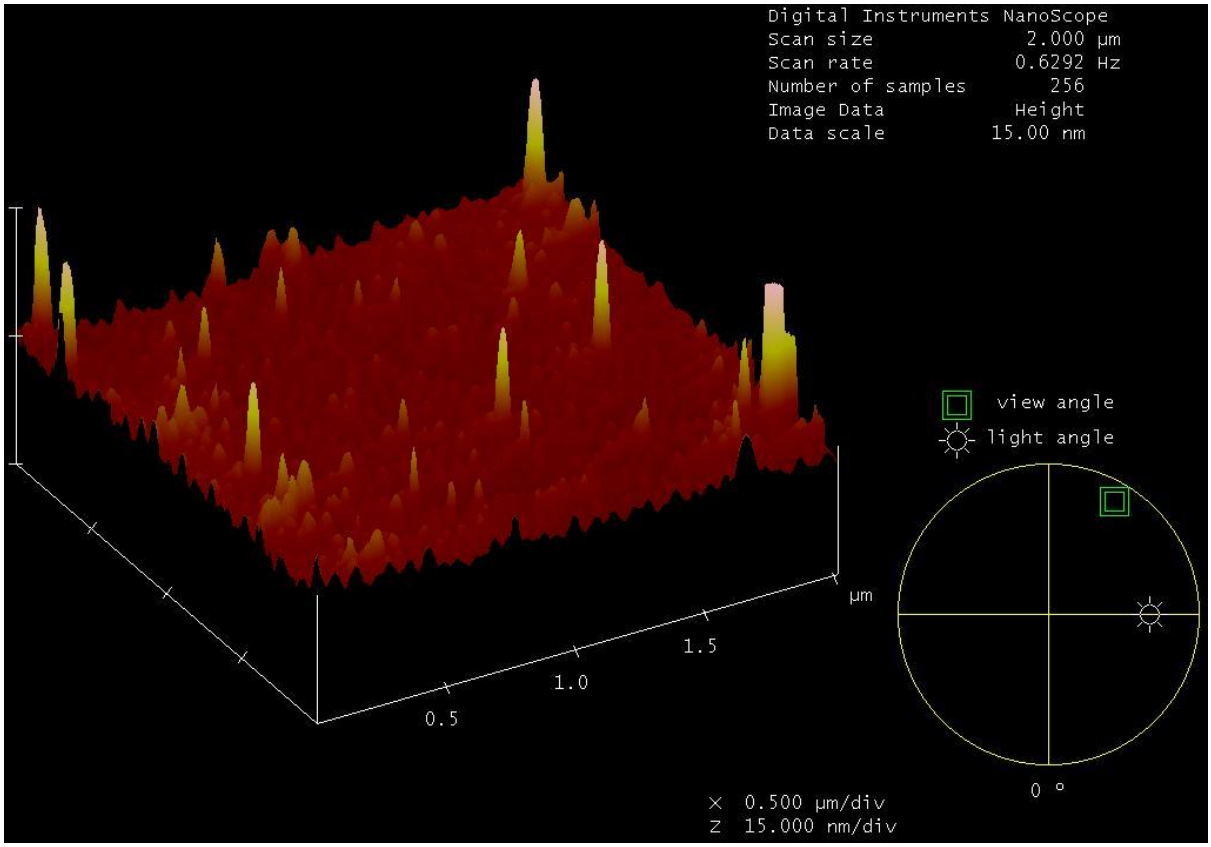

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Figure S-2 Absorbance spectra of gold nanoprobe in various concentrations of salt. The overall shapes of the spectra were not obviously altered, with the exception of some decrease in the absorbance (depend on the concentration). This indicated detection AuNPs maintained consistency under the salt concentration from 0.1 to 0.5 M. It benefits from the surface modification of MPA and the homogeneous conjugation of DNA.

Please note that the same nanoprobe with the same concentration was used in each batch of detection.