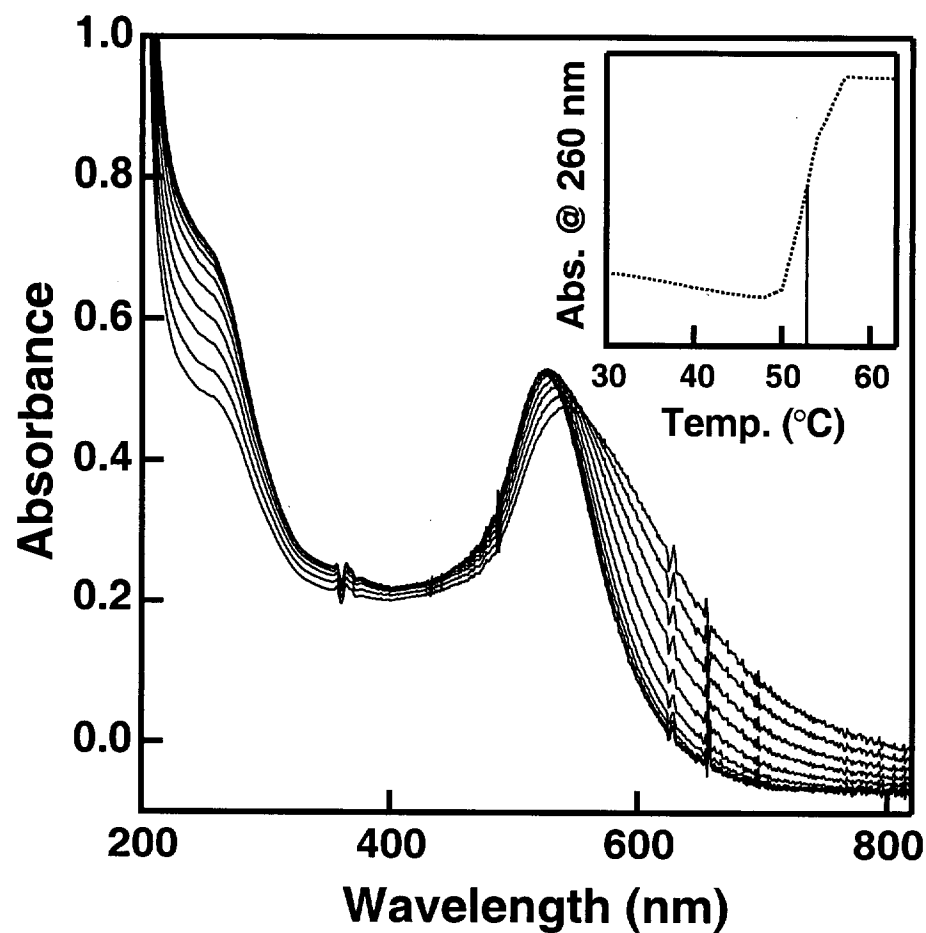


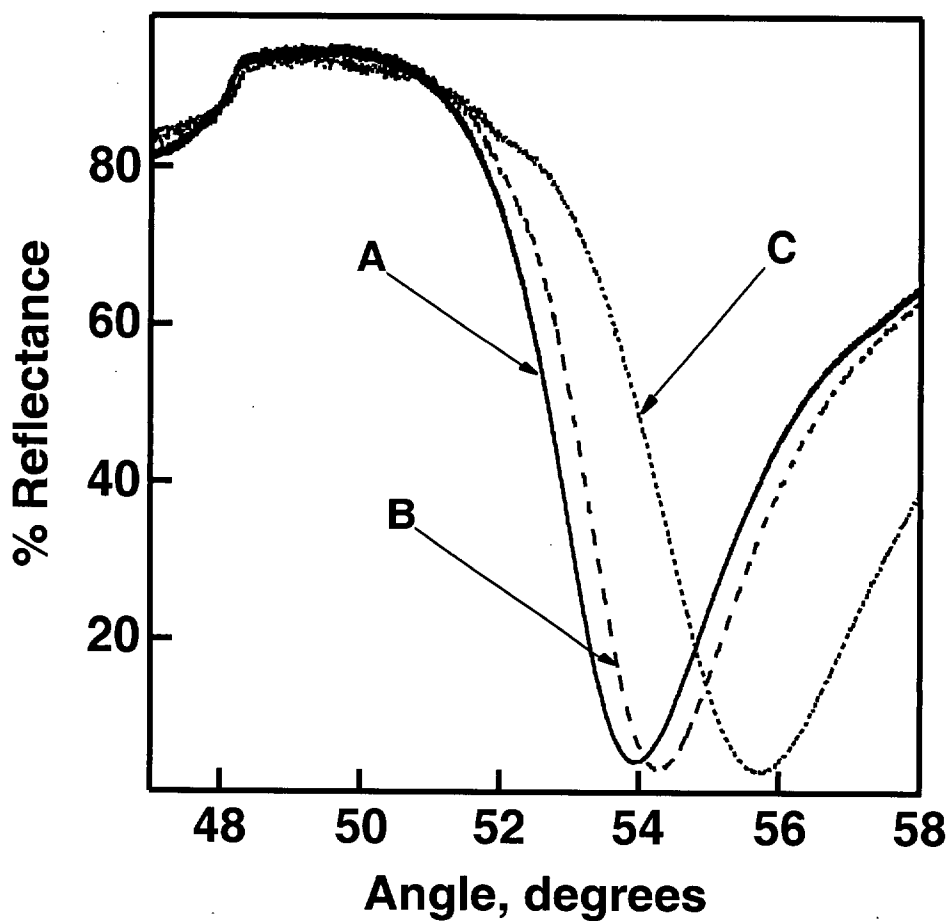
Supporting Information 1. UV-vis spectra of colloidal Au mixture of two different probes (S3:Au, S4:Au) without (A), and with (B) the linking oligonucleotide (S2) present in solution.

He et. al., "Colloidal Au-Enhanced Surface Plasmon Resonance...", Supporting Information 1.



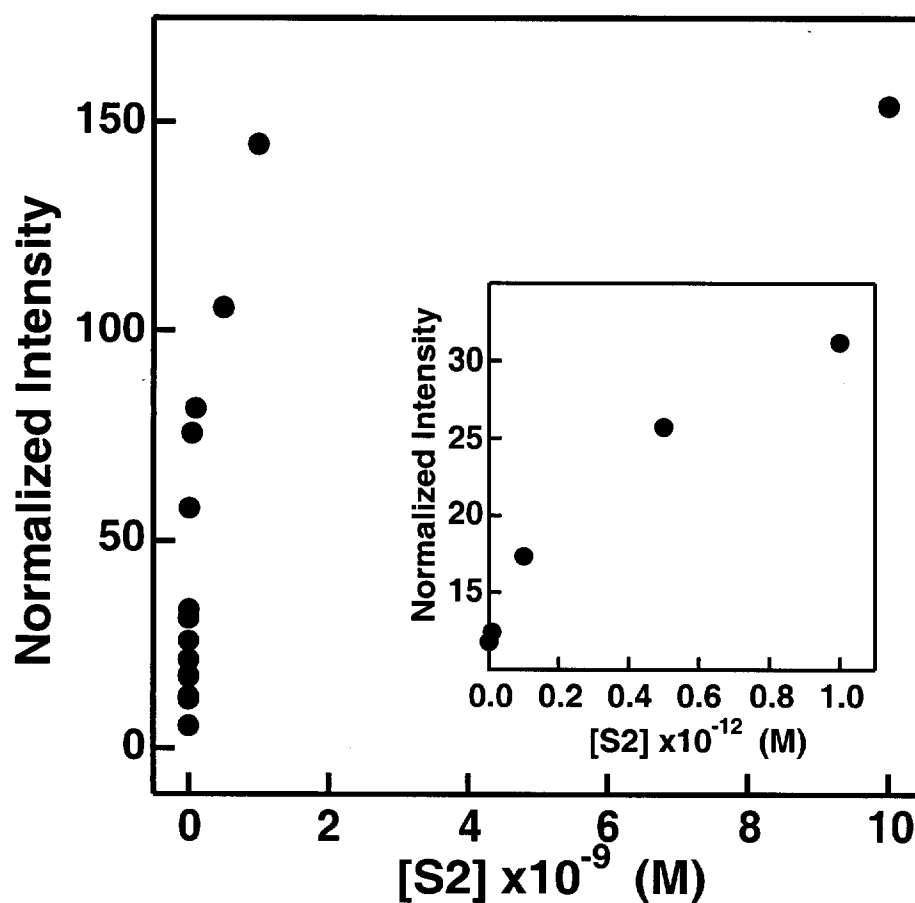
Supporting Information 2. UV-vis spectra of colloidal Au mixture of two different probes (S3: Au, S4: Au) with the linking oligonucleotide (S2) at different temperatures. The inset shows the absorbance change at 260 nm as a function of solution temperature, with the melting temperature (53°) labeled.

3

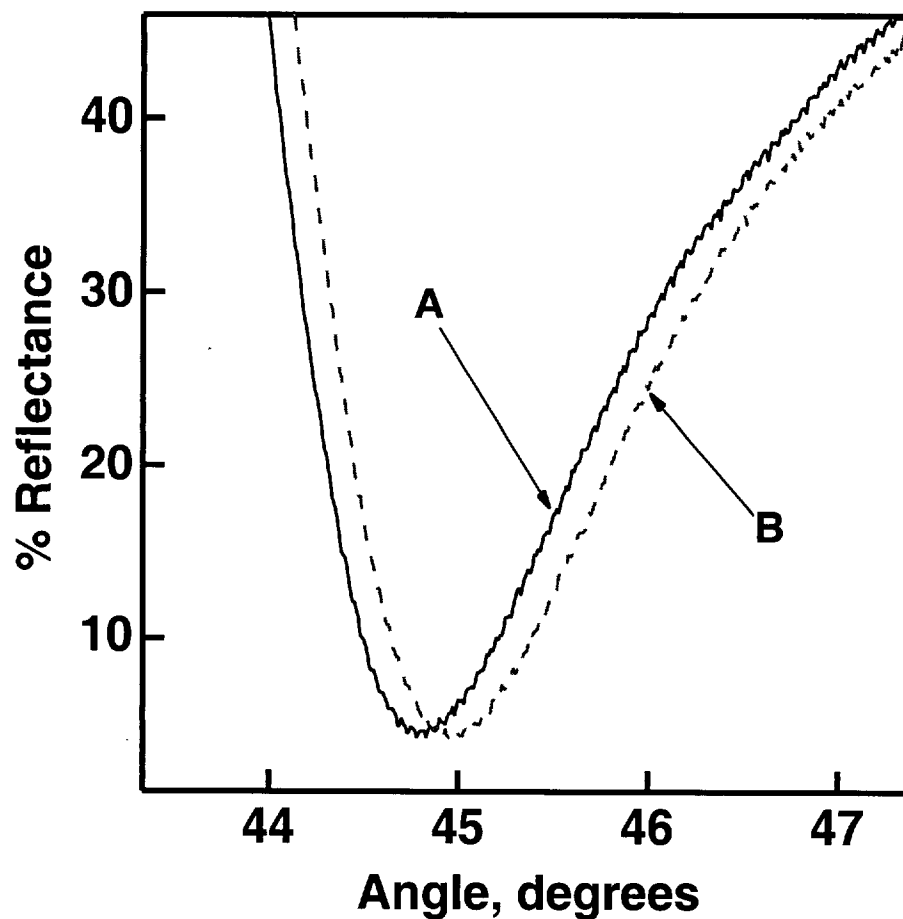


Supporting Information 3. SPR curves of S1-coated Au surface before (A), after exposure to the non-complementary probe (S4):Au conjugates (B), and the complementary probe (S3):Au conjugates (C).

He et. al., "Colloidal Au-Enhanced Surface Plasmon Resonance...", Supporting Information 3.



Supporting Information 4: Plot of normalized intensity of SPR reflectance as a function of the analyte 24-mer oligo (S2) concentration. Inset: blow up of low concentration data of [S2] ranging from 1 fM to 1 pM.



Supporting Information 5: Blow up of SPR curves of the surface prepared in Figure 6, #1 (A), and #2 (B) to the surface, demonstrating detectability of 0.12° angle shift for the unamplified event with $[S_2] = 10 \text{ nM}$.

He et. al., "Colloidal Au-Enhanced Surface Plasmon Resonance...", Supporting Information 5.