

## Supporting Information for:

# Direct Detection of MicroRNA based on Plasmon Hybridization of Nanoparticle Dimers

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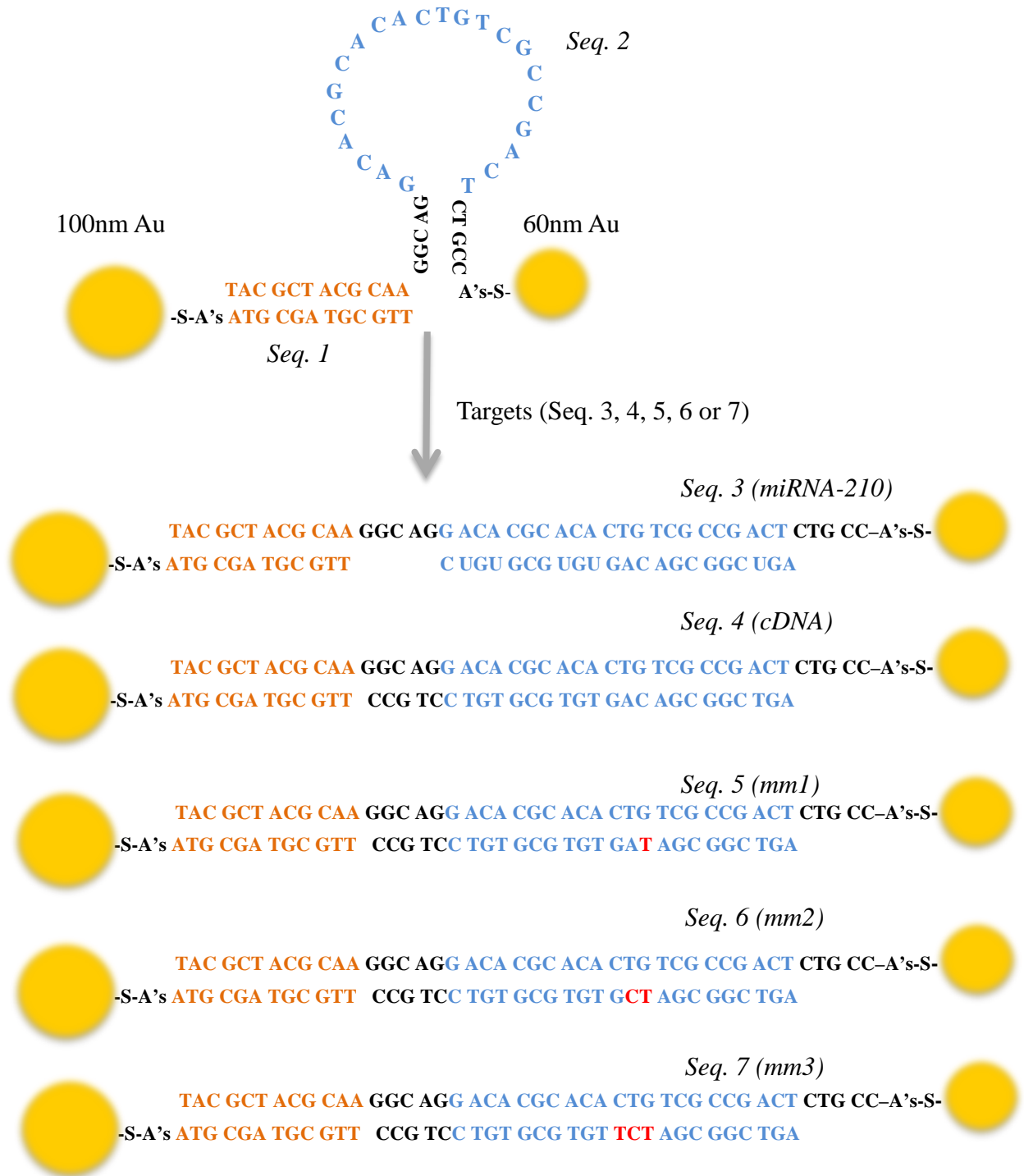
### **Contents:**

Scheme S1. DNA base-pairing in gold nanoparticle dimer.

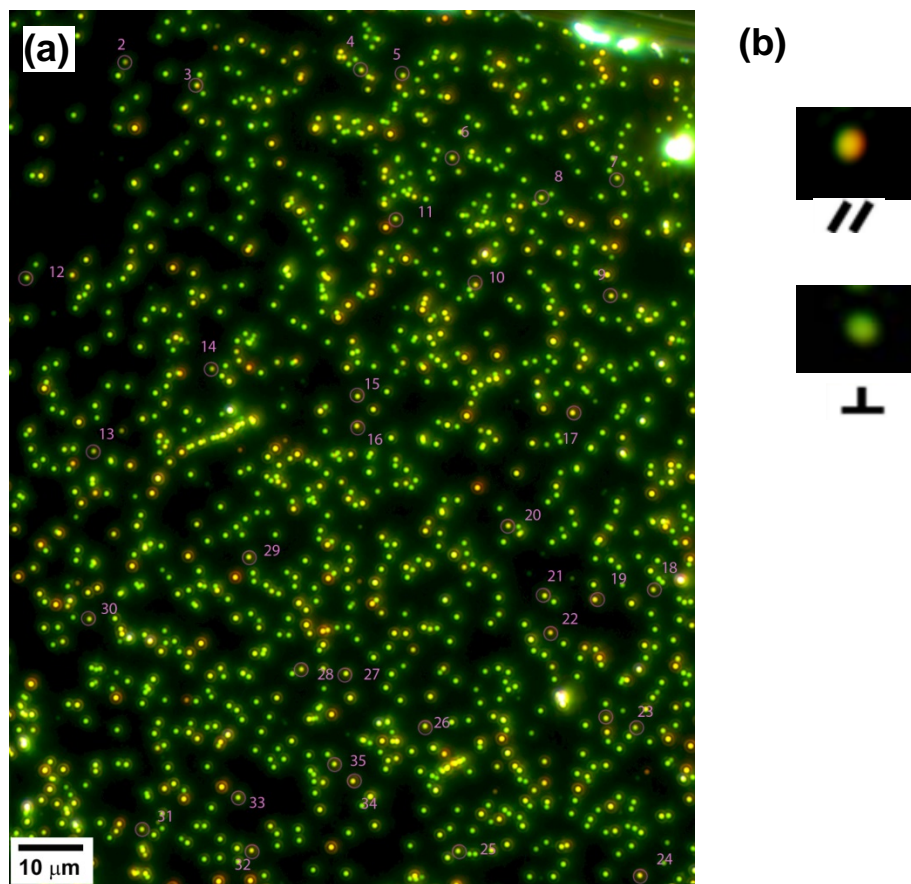
Figure S1. Darkfield image of nanoparticles anchored on substrate.

Table S1. Percentage of dimers formed on substrate.

**Scheme S1.** DNA base-pairing in gold nanoparticle dimer. Binding of the target opens up the stem-loop linker and geometrically extends the dimer.



## Supporting Figure



**Figure. S1.** Darkfield image of nanoparticles anchored on glass substrate. (a) A map of selected dimers (circled and labelled) in a typical area used for sensing experiments. Dimers can be distinguished from single nanoparticles and larger aggregates by the polarization-dependent scattering (b): they appear orange or brown under parallel-polarized light and green under perpendicular-polarized light with respect to the dimer axis.

## Supporting Table

**Table S1.** Percentage of dimers formed on the substrate from the analysis of darkfield images.

<b>Sample</b>	<b>Number of dimers</b>	<b>Total number of nanostructures</b>	<b>Percentage of dimer</b>
1	51	605	8.4
2	89	767	11.6
3	63	779	8.1
4	81	760	10.7
5	95	736	12.9
6	56	652	8.6
7	101	769	13.1
8	99	913	10.8