

Electronic Supplementary Information (ESI)

Hierarchically Branched Silver Nanostructures (HBAgNSs) as Surface Plasmon Regulating Platforms for Multiplexed Colorimetric DNA Detection

*Sang Hun Han, La Seong Park and Jae-Seung Lee**

Department of Materials Science and Engineering, Korea University,

Anam-dong, Seongbuk-gu, Seoul, Republic of Korea, 136-713

E-mail: jslee79@korea.ac.kr

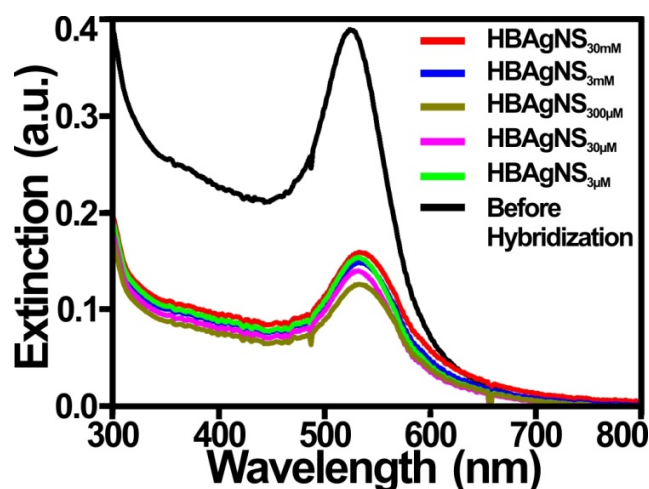


Fig. 1S. UV-vis spectra of unhybridized DNA-AuNP probes obtained from their mixtures with each type of HBAgNSs after hybridization. The [DNA-AuNP] before the hybridization was ~ 2 nM (black curve). About 63% of the DNA-AuNPs are determined to hybridize with HBAgNSs on average. The DNA-AuNPs with HBAgNS_{300μM} exhibit the lowest extinction, indicating that HBAgNS_{300μM} has relatively the highest surface area. The difference in the portion of unhybridized DNA-AuNPs, however, is somewhat negligible, suggesting that the other HBAgNSs would give similar sensitivity and selectivity for the detection.

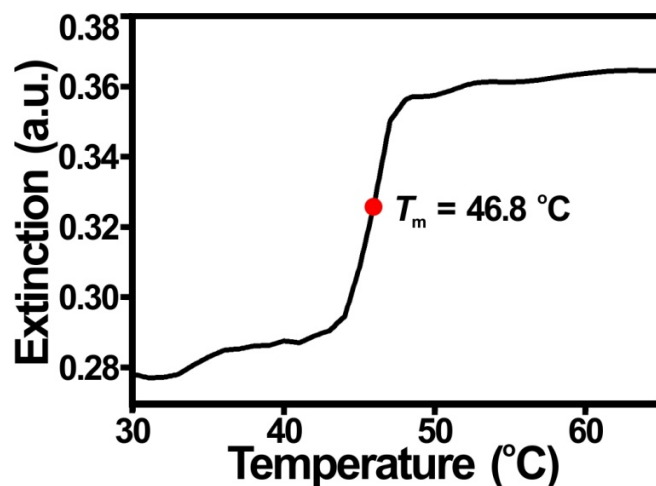


Fig. 2S. A melting transition obtained from the rehybridized DNA-HBAgNS_{300μM} and DNA-AuNPs after their first melting. Note that the melting temperature (T_m) slightly decreases from 48.4 °C to 46.8 °C, owing to the thermally induced DNA loss on the HBAgNS_{300μM} surface.