Supporting information

Colorimetric plasmon sensors with multilayered metallic nanoparticle sheets
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Fig. S1   FDTD simulation results of 1L AuOA on a 20-nm SiO$_2$/3-layered AgMy/Ag substrate.

Fig. S2   FDTD simulation results of 1L AuOA on a 10-nm organic layer (OL, $n = 1.45$)/20-nm SiO$_2$/3-layered AgMy/Au substrate.
**Fig. S3** Control experiment: adsorption of AuCA NPs (without biotin) onto an avidin/PEG-SiO$_2$/3-layered AgMy/Au substrate. The solution concentration was 1.19 mg/mL.

**Fig. S4** Effective dielectric constant of the particle composite layer $\varepsilon'_{\text{eff}}$ as a function of the volume fraction $f$, based on the simplified Maxwell-Garnett equation (eq. 1).