D-alanyl-D-alanine-Modified Gold Nanoparticles Form a Broad-Spectrum Sensor for Bacteria

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**Figure S9.** TEM image of Au_DADA stored for 15 months at 4 °C and for 2 months at 37 °C.

**Table S1.** Zeta potential of AuNPs.

![Figure S1. Colorimetric response of various concentrations of Au_DADA incubated with S. aureus.](image)

(A) Photographs of Au_DADA solution. (B) A 600 nm/A 520 nm value of Au_DADA.
**Figure S2.** TEM images of *S. aureus* and Au_DADA.

**Figure S3.** Characterization of Au_LALA. (A) TEM image of Au_LALA. Inserted structure is LALA. (B) UV-via spectrum of Au_LALA. Inserted photo is Au_LALA.
Figure S4. Colorimetric response of Au_LALA or Au_DADA. (A) Au_LALA incubated with *S. aureus*. (B) Au_LALA incubated with *E. coli*. Inserts are the corresponding plots of $A_{600\text{nm}}/A_{520\text{nm}}$ of Au_LALA versus different incubated time and the photographs of Au_LALA incubated with bacteria. (C) UV-vis spectra of Au_DADA mixed with *C. albicans*. (D) The plot of $A_{600\text{nm}}/A_{520\text{nm}}$ of Au_DADA versus different incubated time. With the growth of bacteria or fungus, the lines of spectra are moved higher vertically compared with control group.
Figure S5. FT-IR of aggregated Au_DADA that incubating with bacteria and DADA.

Figure S6. Cytotoxicity of Au_DADA incubated with HUVECs and HeLa cells for 24 h.
Figure S7. Stability of Au_DADA in various pH values. (A) Photos of Au_DADA in different pH solutions. (B) Absorption spectra of Au_DADA incubated in aqueous solutions at various pH values.

Figure S8. Absorption spectra of Au_DADA incubated with ascetic fluid and various positive ions.
Figure S9. TEM image of Au_DADA stored for 15 months at 4 °C and for 2 months at 37 °C.

Table S1. Zeta potential of AuNPs.

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<tr>
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<th>Au_DADA</th>
<th>Au_LALA</th>
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<tr>
<td>Zeta potential (mV)</td>
<td>$-21.9 \pm 1.3$ mV</td>
<td>$-18.8 \pm 0.9$ mV</td>
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