

Supporting Information

**Ag-Au Bimetallic Nanostructures: Co-reduction Synthesis  
and their Component-dependent Performance of  
Enzyme-free H<sub>2</sub>O<sub>2</sub> Sensor**

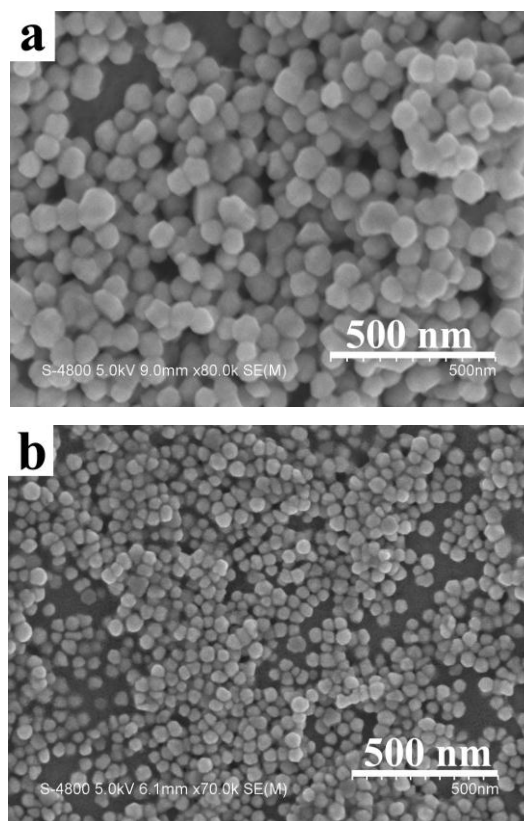
Wenzheng Li, Long Kuai, Qing Qin and Baoyou Geng\*

*College of Chemistry and Materials Science, Anhui Key Laboratory of  
Functional Molecular Solids, Anhui Laboratory of Molecular-Based Materials,  
Anhui Normal University, Wuhu 241000, P. R. China*

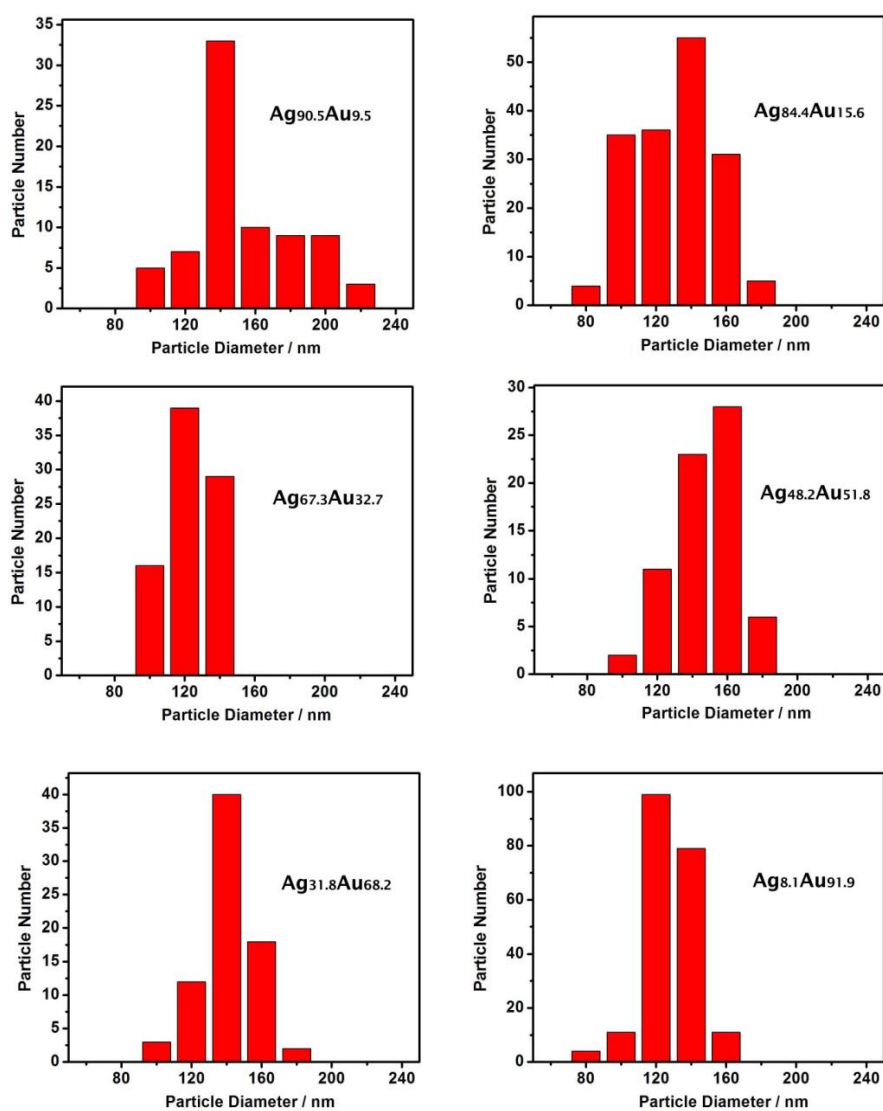
Corresponding author's E-mail: [bygeng@mail.ahnu.edu.cn](mailto:bygeng@mail.ahnu.edu.cn)

**Additional Figures and Figure Captions**

**Figure S1** SEM images of Ag (a) and Au (b) nanoparticles.



**Figure S2** the corresponding size distribution histograms of the Ag-Au bimetallic NPs



**Table S1** the comparison of different proportions of Ag and Au modified GC electrodes for H<sub>2</sub>O<sub>2</sub> sensor.

<b>Sample</b>	<b>Sensitivity (<math>\mu\text{AmM}^{-1}\text{cm}^{-2}</math>)</b>	<b>Range of detection (mM)</b>	<b>Limit of detection (<math>\mu\text{M}</math>)</b>
<b>Ag</b>	<b>192.3</b>	<b>0.2 - 10</b>	<b>20</b>
<b>Ag<sub>90.5</sub>Au<sub>9.5</sub></b>	<b>374</b>	<b>0.18 - 48</b>	<b>2</b>
<b>Ag<sub>84.4</sub>Au<sub>15.6</sub></b>	<b>400.6</b>	<b>0.1 - 52</b>	<b>1.8</b>
<b>Ag<sub>67.3</sub>Au<sub>32.7</sub></b>	<b>600</b>	<b>0.01 - 68</b>	<b>0.2</b>
<b>Ag<sub>48.2</sub>Au<sub>51.8</sub></b>	<b>520.6</b>	<b>0.01 - 60</b>	<b>1.2</b>
<b>Ag<sub>31.8</sub>Au<sub>68.2</sub></b>	<b>425.4</b>	<b>0.08 - 52</b>	<b>1.4</b>
<b>Ag<sub>8.1</sub>Au<sub>91.9</sub></b>	<b>209</b>	<b>0.2 - 10</b>	<b>12</b>
<b>Au</b>	<b>33.7</b>	<b>0.2 - 2</b>	<b>200</b>