SUPPLEMENTARY MATERIAL

Synthesis of gold nanoparticles by tetrachloroaurate reduction with cyclodextrins

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Figure 1S. FTIR spectra of α-cyclodextrin and the corresponding gold nanoparticles
Figure 2S. FTIR spectra of β-cyclodextrin and the corresponding gold nanoparticles

Figure 3S. FTIR spectra of γ-cyclodextrin and the corresponding gold nanoparticles
Figure 4S. Hydrodynamic size distribution of nanoparticles in the sample containing NaOH, HAuCl₄ and 0.001 mol L⁻¹ α-cyclodextrin before heating (a); as well as after 18 minutes (b); and after 32 minutes (c) of heating. Zeta potentials are -1.27 mV (b) and -2.91 mV (c)
Figure 5S. Hydrodynamic size distribution of nanoparticles in the sample containing NaOH, HAuCl₄ and 0.002 mol L⁻¹ α-cyclodextrin before heating (a); as well as after 9 minutes (b); and after 17 minutes (c) of heating. Zeta potentials are 11.6 mV (b) and 106.85 mV (c)
Figure 6S. Hydrodynamic size distribution of nanoparticles in the sample containing NaOH, HAuCl₄ and 0.004 mol L⁻¹ α-cyclodextrin before heating (a); as well as after 6 minutes (b); and after 8 minutes (c) of heating. Zeta potentials are 0.82 mV (a), 122.46 mV (b), and 0.99 mV (c).
Figure 7S. Hydrodynamic size distribution of nanoparticles in the sample containing NaOH, HAuCl₄ and 0.001 mol L⁻¹ β-cyclodextrin before heating (a); as well as after 24 minutes (b); and after 33 minutes (c) of heating. Zeta potentials are 113.63 mV (a), 59.89 mV (b), and 1.99 mV (c)
Figure 8S. Hydrodynamic size distribution of nanoparticles in the sample containing NaOH, HAuCl₄ and 0.002 mol L⁻¹ β-cyclodextrin after 10 minutes (a) and after 13 minutes (b) of heating. Zeta potentials are 1.11 mV (a) and 20.5 mV (b)
Figure 9S. Hydrodynamic size distribution of nanoparticles in the sample containing NaOH, HAuCl₄ and 0.004 mol L⁻¹ β-cyclodextrin before heating (a); as well as after 17 minutes (b); and after 31 minutes (c) of heating. Zeta potentials are 0.9 mV (a), -29.55 mV (b), and -17.87 mV (c).
Figure 10S. Hydrodynamic size distribution of nanoparticles in the sample containing NaOH, HAuCl₄ and 0.001 mol L⁻¹ γ-cyclodextrin before heating (a) and after 5 minutes of heating (b) with a zeta potential of 25 mV.
Figure 11S. Hydrodynamic size distribution of nanoparticles in the sample containing NaOH, HAuCl₄ and 0.002 mol L⁻¹ γ-cyclodextrin without heating (a) and after 5 minutes of heating (b). Zeta potentials are -114.46 mV (a) and 0.9 mV (b)
Figure 12S. Hydrodynamic size distribution diagrams of nanoparticles in the sample containing NaOH, HAuCl₄ and 0.004 mol L⁻¹ γ-cyclodextrin without heating (a) and after 4 minutes of heating (b). Zeta potential is 106.89 mV
Figure 13S. Absorbance spectra of the reaction mixture containing NaOH, HAuCl₄ and 0.001 mol L⁻¹ α-cyclodextrin after different heating durations

Figure 14S. Absorbance spectra of the reaction mixture containing NaOH, HAuCl₄ and 0.002 mol L⁻¹ α-cyclodextrin after different heating durations
Figure 15S. Absorbance spectra of the reaction mixture containing NaOH, HAuCl₄ and 0.004 mol L⁻¹ α-cyclodextrin after different heating durations

Figure 16S. Absorbance spectra of the reaction mixture containing NaOH, HAuCl₄ and 0.001 mol L⁻¹ β-cyclodextrin after different heating durations
Figure 17S. Absorbance spectra of the reaction mixture containing NaOH, HAuCl₄ and 0.002 mol L⁻¹ β-cyclodextrin after different heating durations

Figure 18S. Absorbance spectra of the reaction mixture containing NaOH, HAuCl₄ and 0.004 mol L⁻¹ β-cyclodextrin after different heating durations
Figure 19S. Absorbance spectra of the reaction mixture containing NaOH, HAuCl₄ and 0.001 mol L⁻¹ γ-cyclodextrin after different heating durations.

Figure 20S. Absorbance spectra of the reaction mixture containing NaOH, HAuCl₄ and 0.002 mol L⁻¹ γ-cyclodextrin after different heating durations.
Figure 21S. Absorbance spectra of the reaction mixture containing NaOH, HAuCl₄ and 0.004 mol L⁻¹ γ-cyclodextrin after different heating durations.