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**Supplementary Information**

# Apta-Sensor for Selective Determination of Dopamine Using Chitosan-Stabilized Prussian Blue Nanoparticles

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**List of supplementary data**

**Michaelis-Menten and Lineweaver-burk double reciprocal Equations**

I. Michaelis-Menten equation

$$V_0 = \frac{V_{max}[S]}{K_m + [S]}$$

II. Lineweaver-Burk double reciprocal Equation

$$\frac{1}{V} = \frac{K_m}{V_{max}[S]} + \frac{1}{V_{max}}$$

Where $V_0$ indicates the initial velocity and $V_{max}$ is maximum reaction velocity. The $[S]$ is concentration of substate and $K_m$ is Michaelis-Menten constant.

III. Turnover number ($K_{cat}$)

$$K_{cat} = \frac{V_{max}}{[E]}$$

Where $[E]$ means the enzyme concentration.

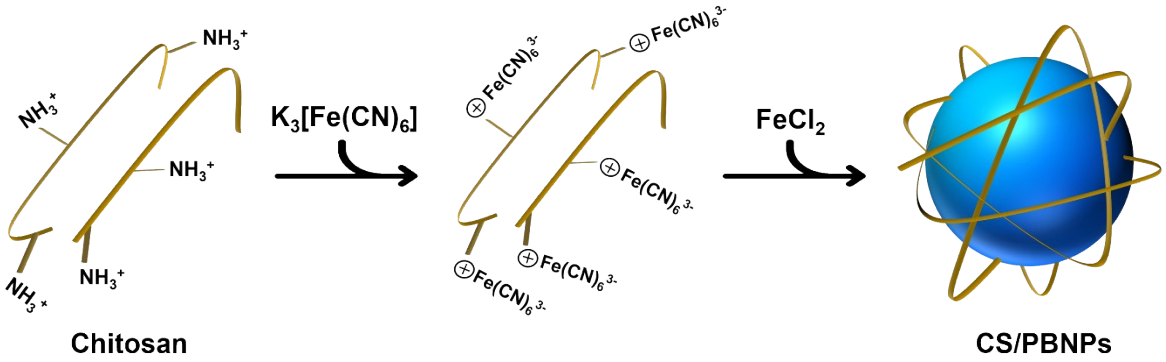


**Fig. S1.** Schematic illustration for the synthesis of CS/PBNPs

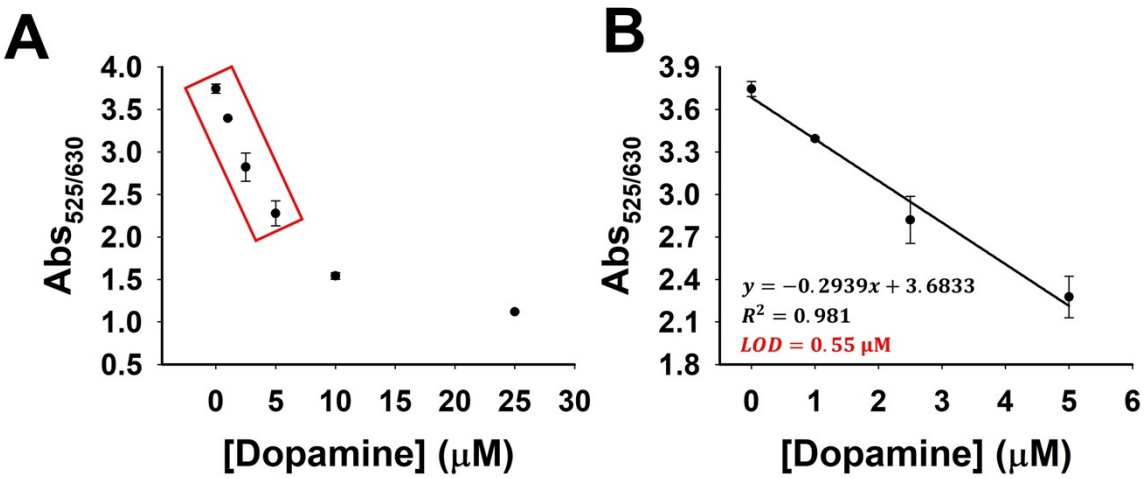


**Fig. S2.** (A) Colorimetric calibration curves for the change of the absorbance ratio of the AuNPs for DA concentrations (0-25 μM). (B) Linear relationship between DA concentrations (0-5 μM) and $Abs_{525/630}$.

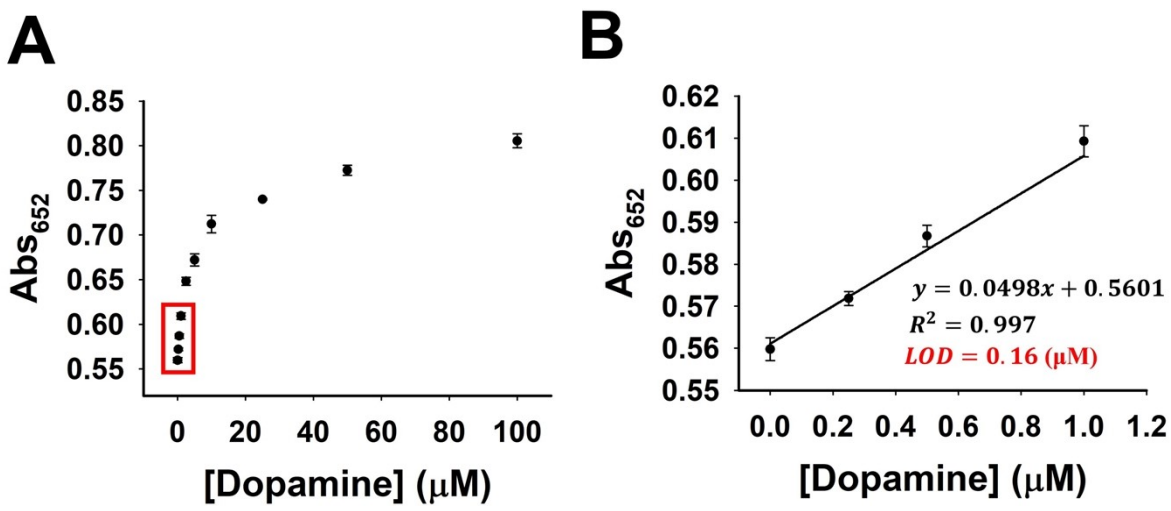


**Fig. S3.** (A) Plot of absorbance vs DA concentrations (0-100 μM). (B) Linear relationship between the absorbance and DA concentrations (0-1 μM).

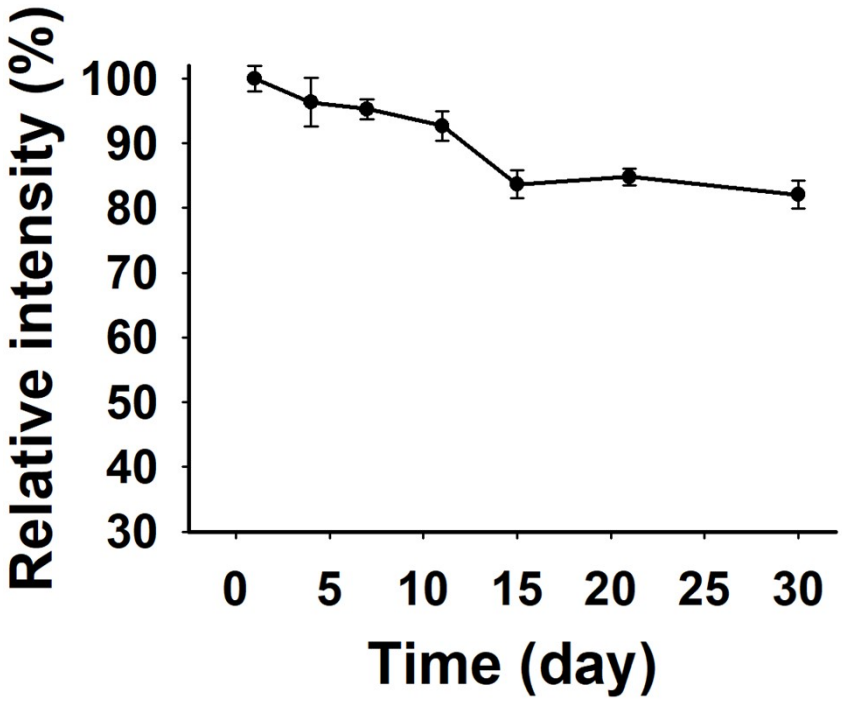


**Fig. S4.** Long-term stability of CS/PBNPs/DBA.