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Supporting Information

A dual-functional biomimetic mineralized nanoplatform for glucose detection and therapy with cancer cells in vitro

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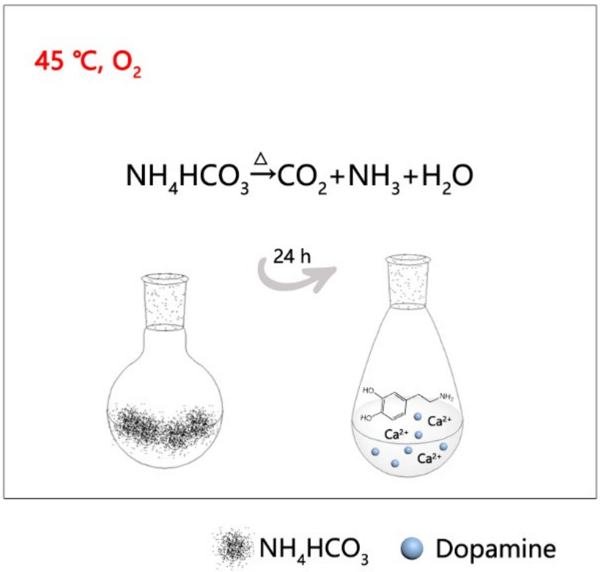

Figure S1. The experimental apparatus of $CaCO_3$-PDA mesoporous nanoparticles synthesis.

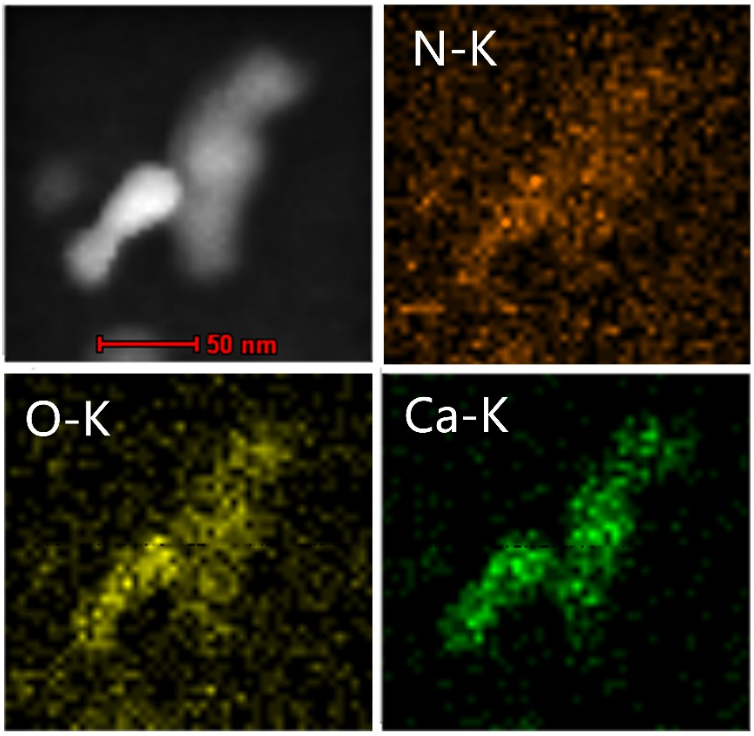

Figure S2. STEM mapping analysis of $CaCO_3$-PDA mesoporous nanoparticles in the dark field.

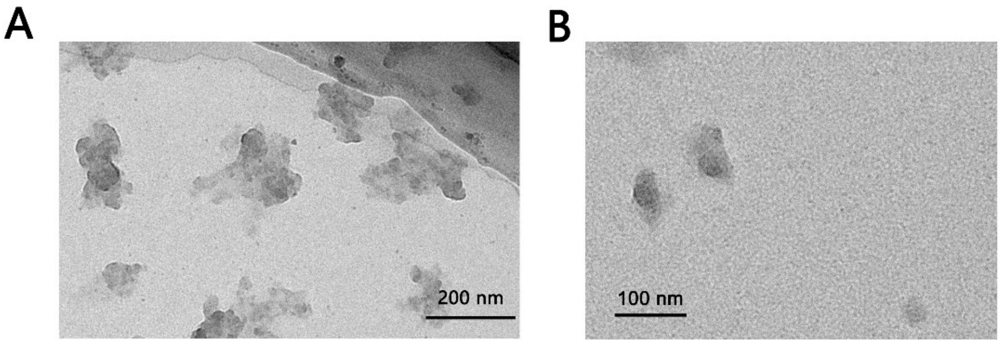

Figure S3. (A) TEM image of $CaCO_3$-PDA@DOX-GOx NPs. (B) TEM image of $CaCO_3$-PDA@DOX-GOx incubated with glucose solution.

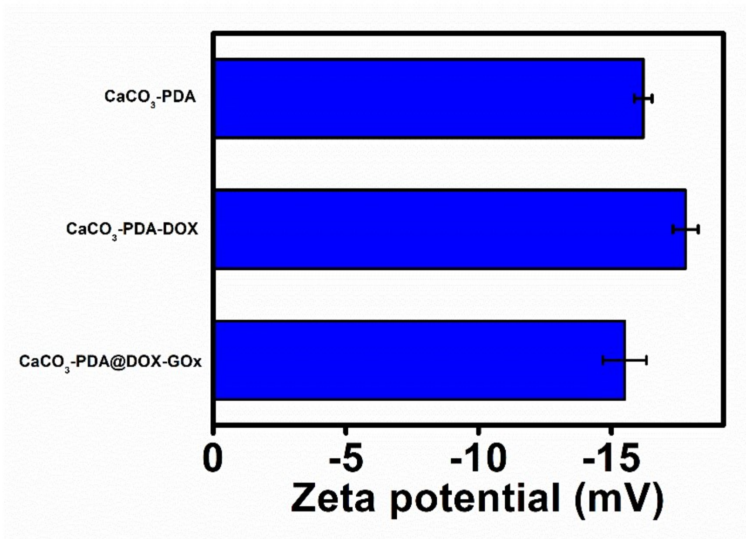

Figure S4. The Zeta potentials of $CaCO_3$-PDA, $CaCO_3$-PDA-DOX, and $CaCO_3$-PDA@DOX-GOx.

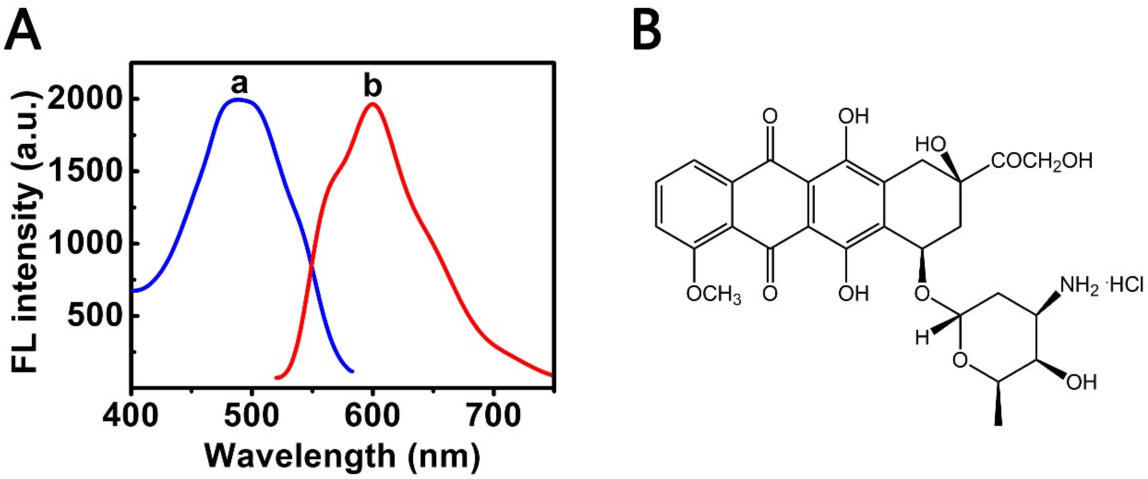

Figure S5. (A) (a) Excitation and (b) emission spectra of DOX. (B) molecular structures of DOX.

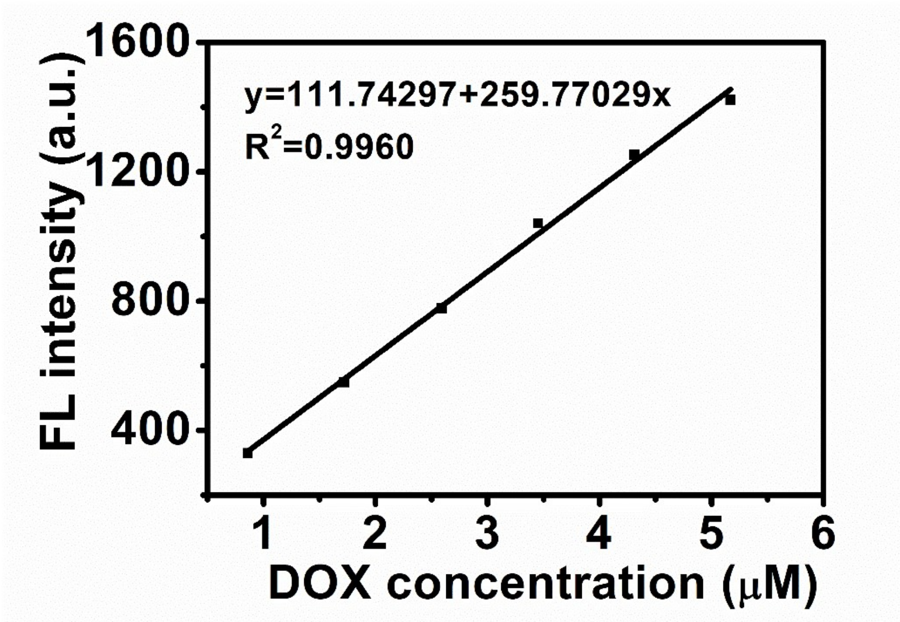

Figure S6. Linear relationships between the concentration of DOX and the fluorescence intensity.

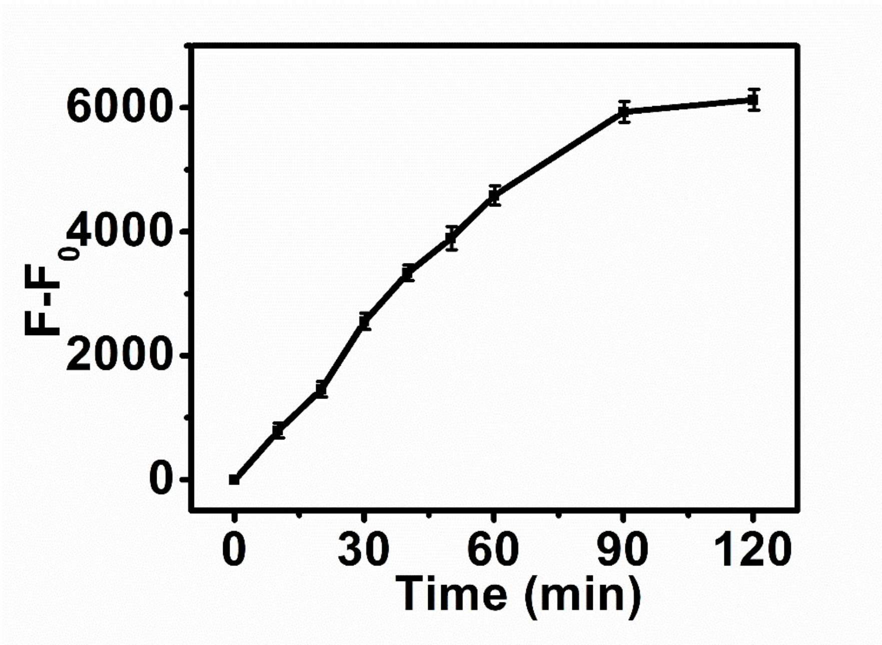

Figure S7. Evolution of the fluorescence intensity with the increase of incubation time after glucose solution (10 mM). All of the fluorescence intensities are recorded at 599 nm, under the excitation of 470 nm.

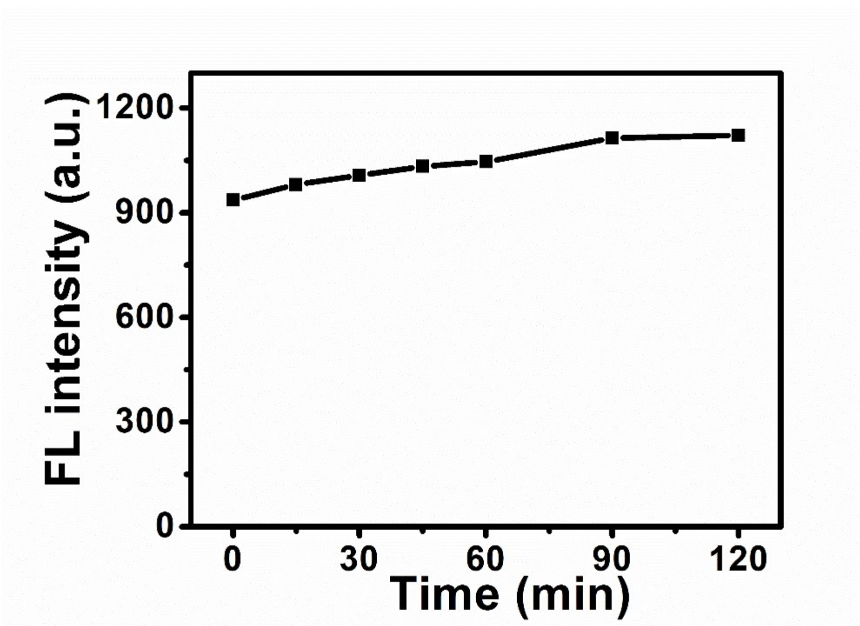

Figure S8. Fluorescence response of $CaCO_3$-PDA@DOX-GOx NPs in 10 mM glucose with PBS 7.4 (0.01M).

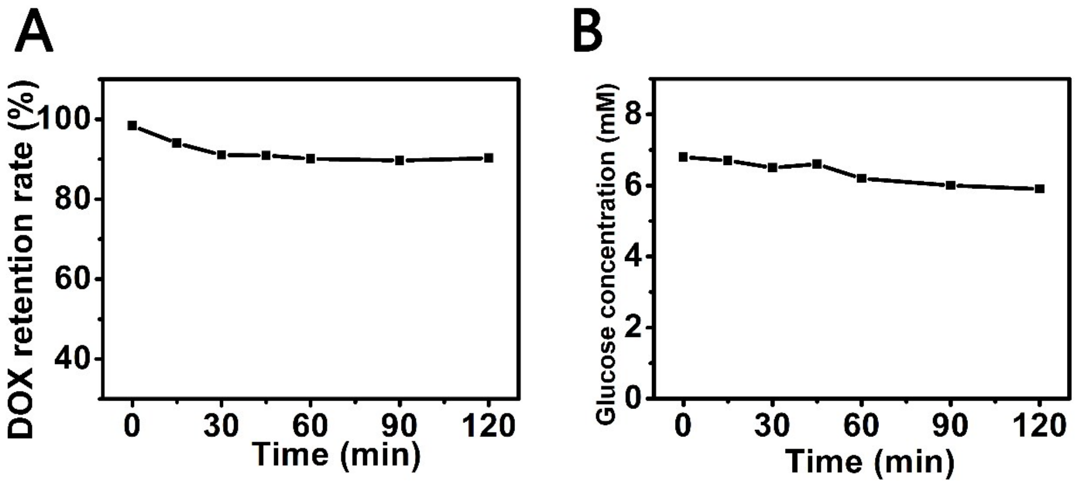

Figure S9. (A) The DOX retention rate in $CaCO_3$-PDA@DOX-GOx with increased incubation time in PBS 7.4. (B) The changes of glucose concentrations (reflect the loss amounts of GOx in supernatant of self-assembly in PBS 7.4) with increased incubation time.

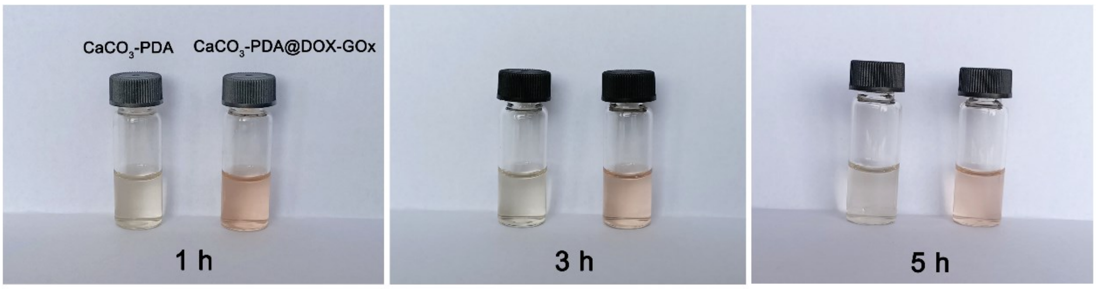

Figure S10. Photographs of $CaCO_3$-PDA and $CaCO_3$-PDA@DOX-GOx in PBS 7.4 at different time.