

Supporting Information

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

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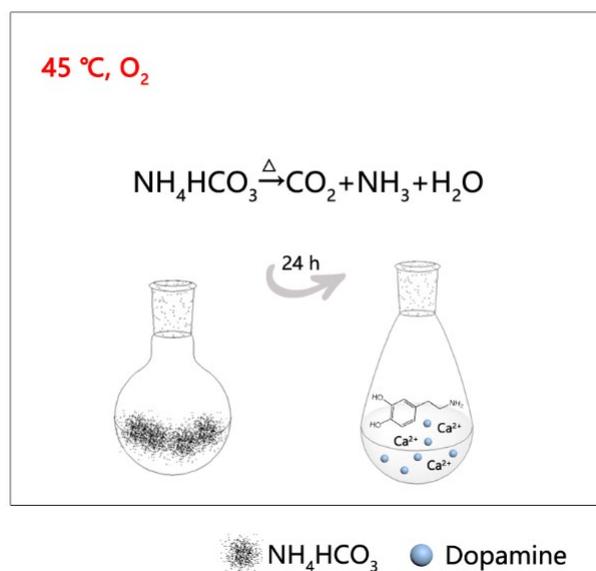
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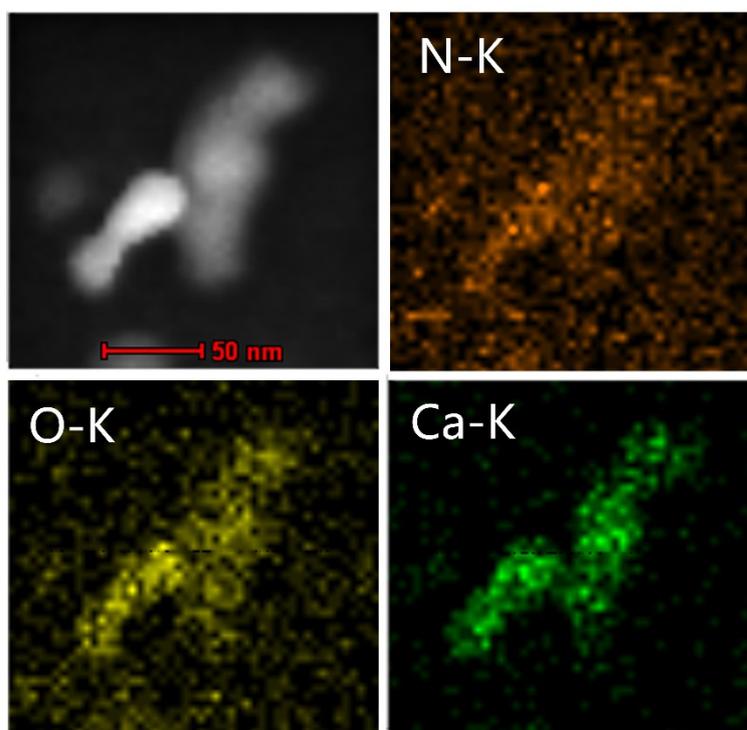
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2 **Figure S1.** The experimental apparatus of CaCO₃-PDA mesoporous nanoparticles

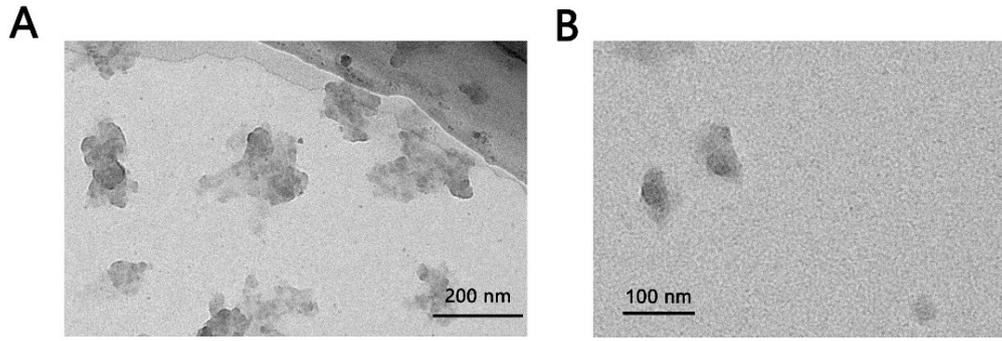
3 synthesis.



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5 **Figure S2.** STEM mapping analysis of CaCO₃-PDA mesoporous nanoparticles in the

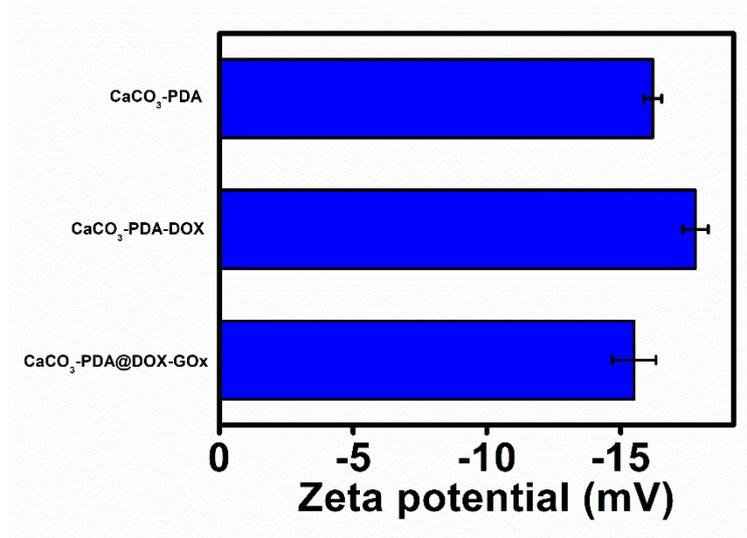
6 dark field.



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2 **Figure S3.** (A) TEM image of $\text{CaCO}_3\text{-PDA@DOX-GOx}$ NPs. (B) TEM image of
3 $\text{CaCO}_3\text{-PDA@DOX-GOx}$ incubated with glucose solution.

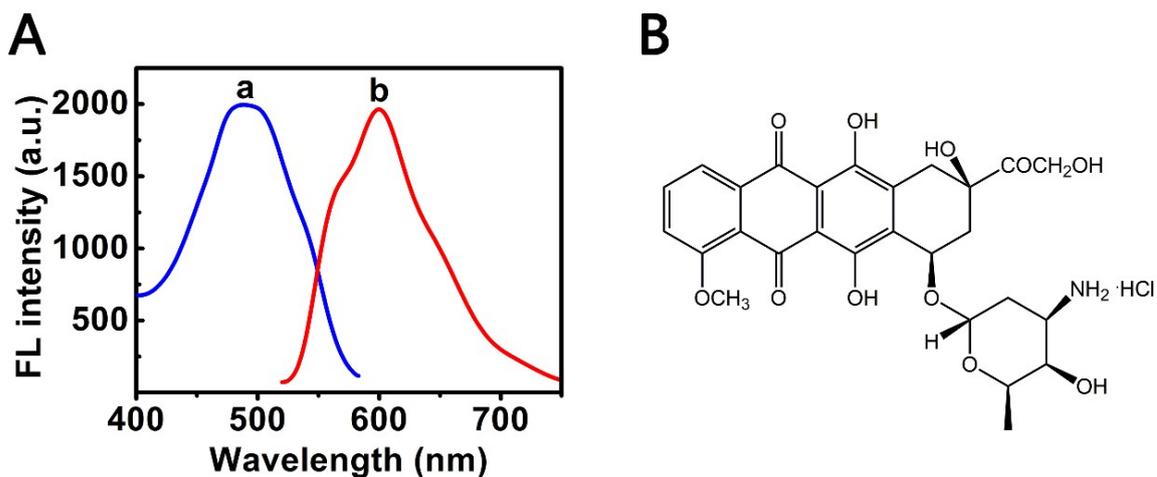
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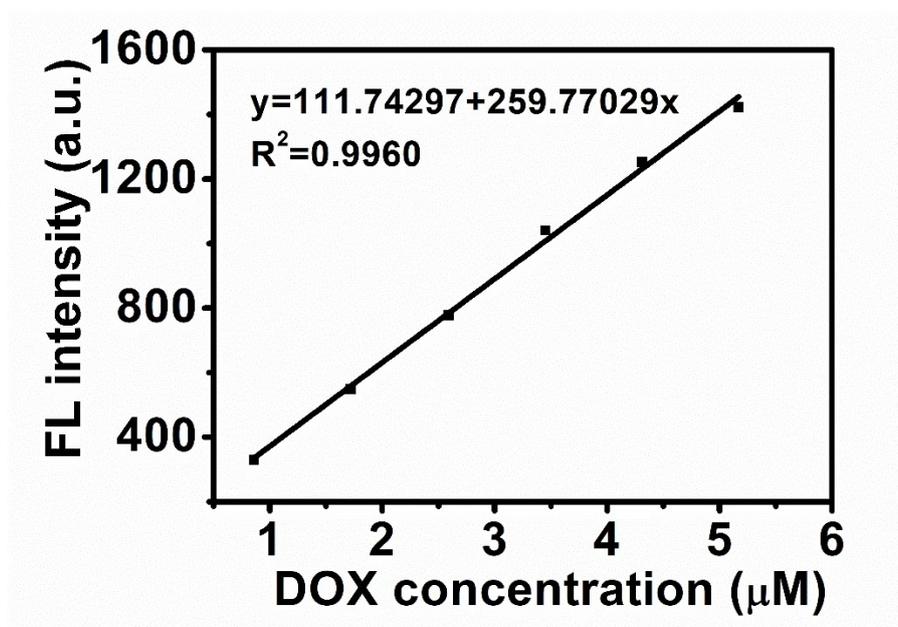
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6 **Figure S4.** The Zeta potentials of $\text{CaCO}_3\text{-PDA}$, $\text{CaCO}_3\text{-PDA-DOX}$, and $\text{CaCO}_3\text{-}$
7 PDA@DOX-GOx .

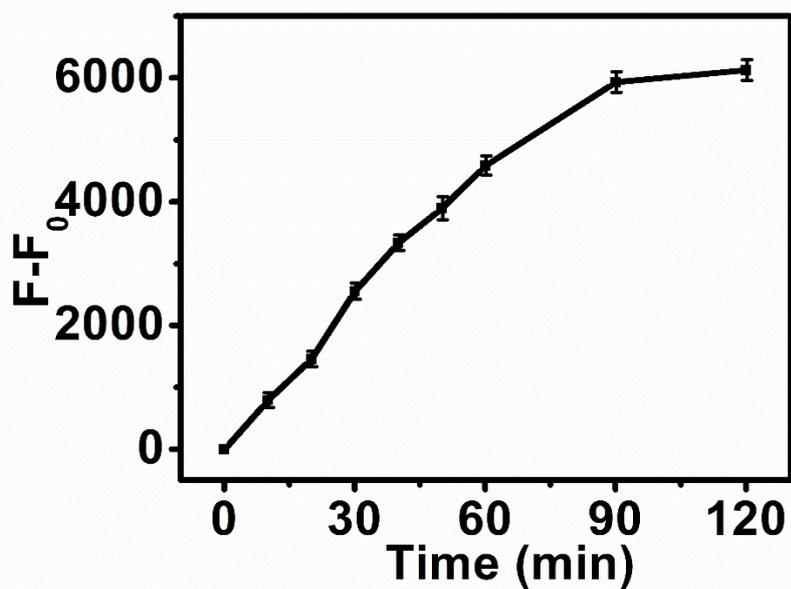
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 2 **Figure S5.** (A) (a) Excitation and (b) emission spectra of DOX. (B) molecular structures
 3 of DOX.

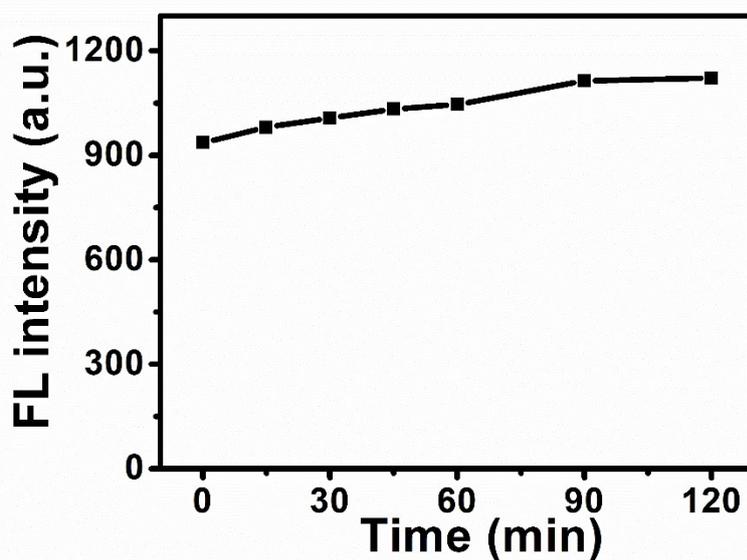


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 5 **Figure S6.** Linear relationships between the concentration of DOX and the
 6 fluorescence intensity.



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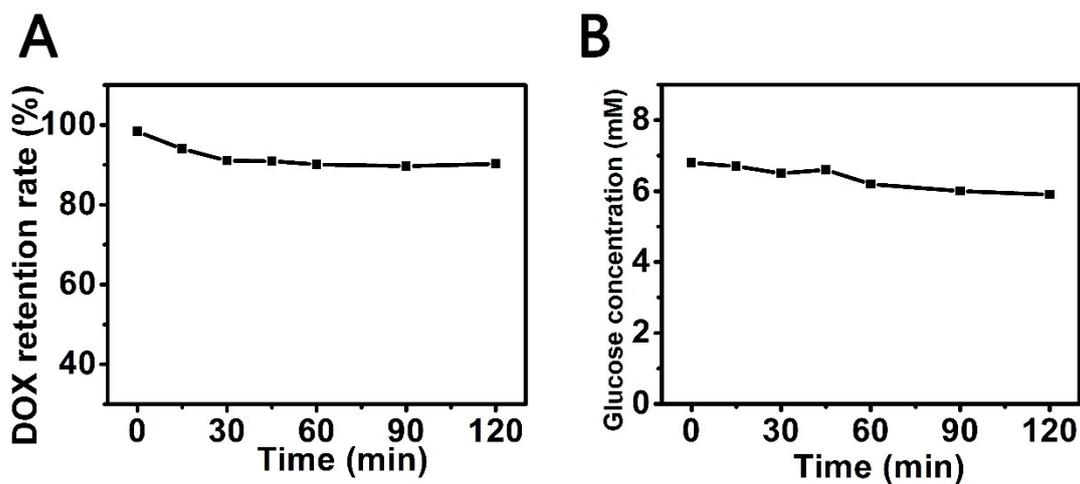
2 **Figure S7.** Evolution of the fluorescence intensity with the increase of incubation time
 3 after glucose solution (10 mM). All of the fluorescence intensities are recorded at 599
 4 nm, under the excitation of 470 nm.



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6 **Figure S8.** Fluorescence response of CaCO₃-PDA@DOX-GOx NPs in 10 mM glucose
 7 with PBS 7.4 (0.01M).

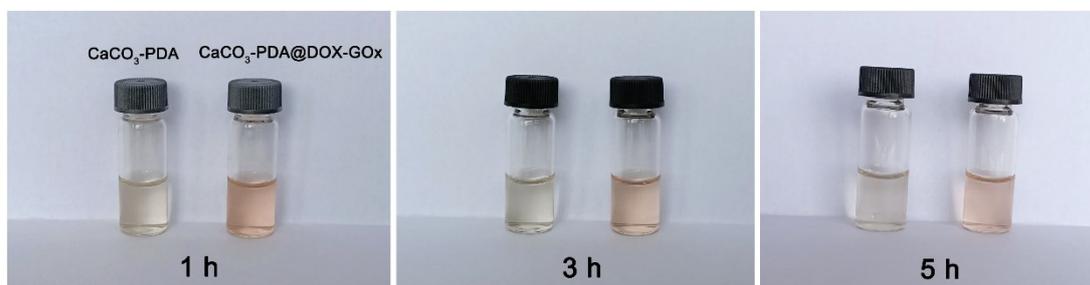
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2 **Figure S9.** (A) The DOX retention rate in CaCO₃-PDA@DOX-GOx with increased
 3 incubation time in PBS 7.4. (B) The changes of glucose concentrations (reflect the loss
 4 amounts of GOx in supernatant of self-assembly in PBS 7.4) with increased incubation
 5 time.

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8 **Figure S10.** Photographs of CaCO₃-PDA and CaCO₃-PDA@DOX-GOx in PBS 7.4 at
 9 different time.

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