Supporting Information

Biodegradable calcium sulfite nanoreactor for pH triggered gas therapy in combination with chemotherapy

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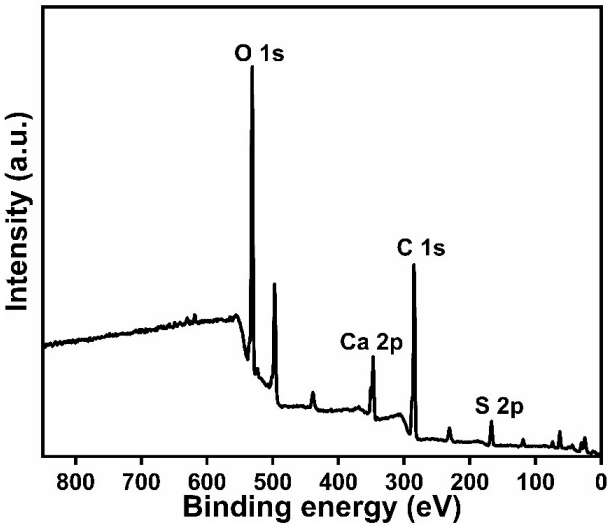

Fig. S1 Wide scan XPS spectra of CS NPs.

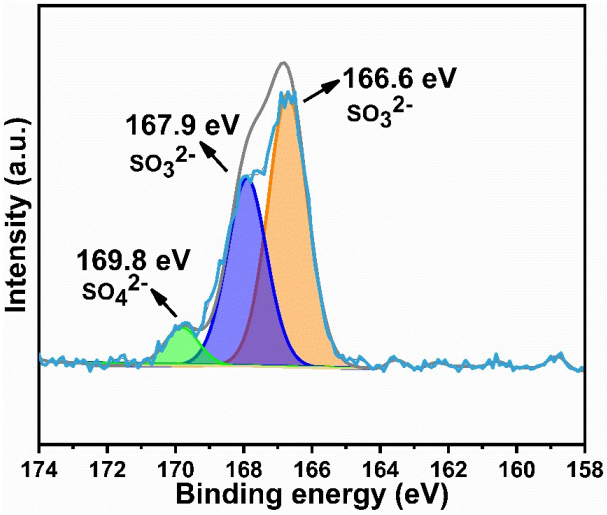

Fig. S2 XPS partial peak fitting of S element in CS NPs.

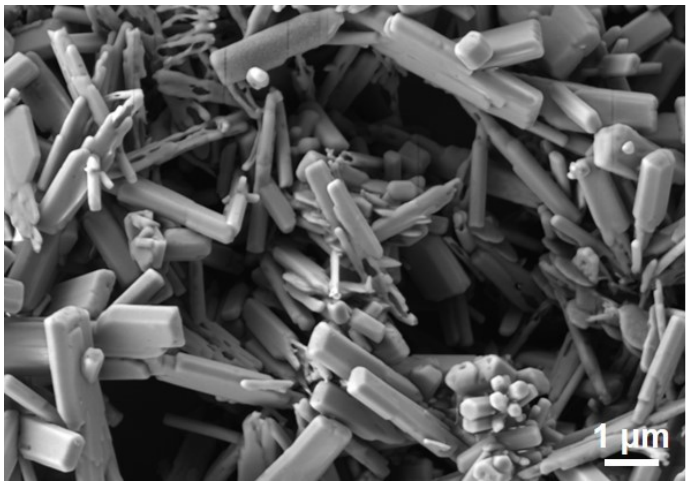

Fig. S3 SEM image of CS control sample that prepared in the absence of PAA.

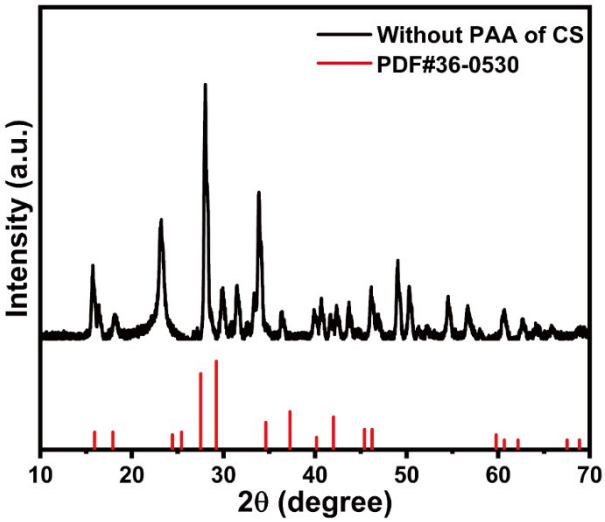

Fig. S4 XRD pattern of CS control sample that prepared in the absence of PAA.

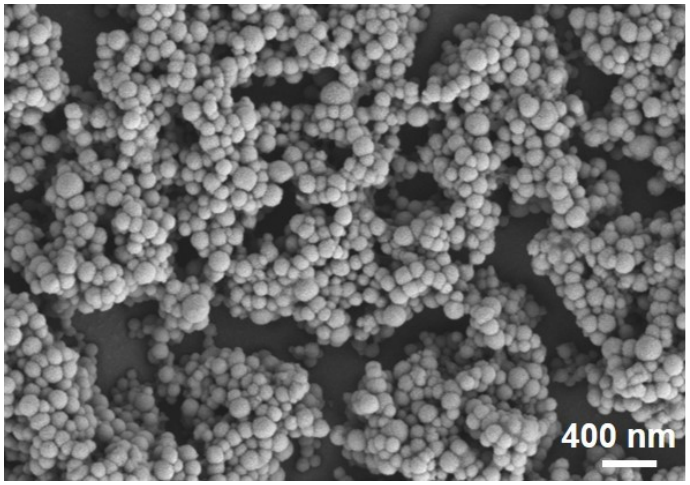

Fig. S5 SEM image of HCS NPs.

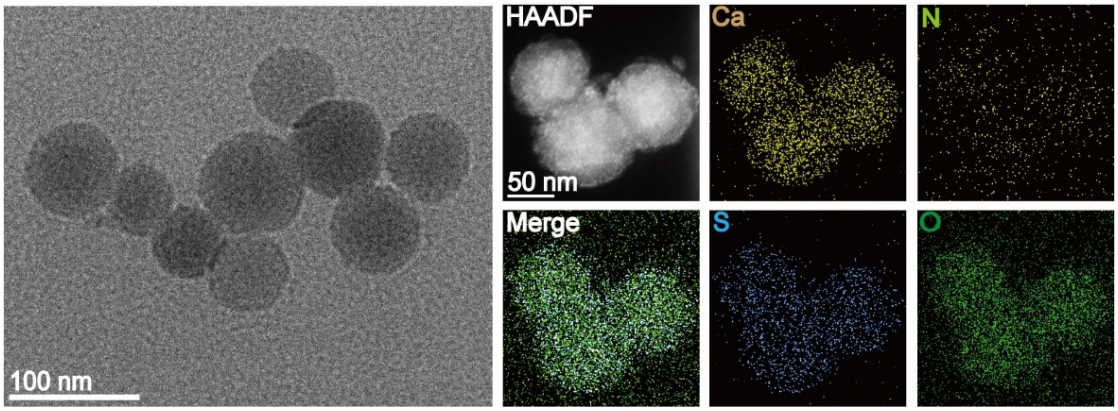

Fig. S6 TEM image and elemental mapping of HCS NPs.

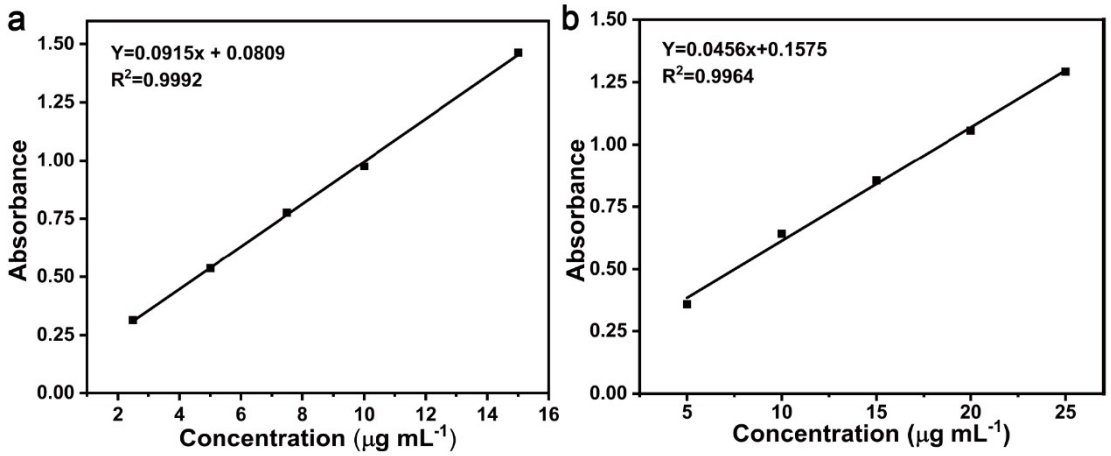

Fig. S7 Standard concentration curve of HCPT in different solutions: (a) ethanol solution, and (b) aqueous solution.

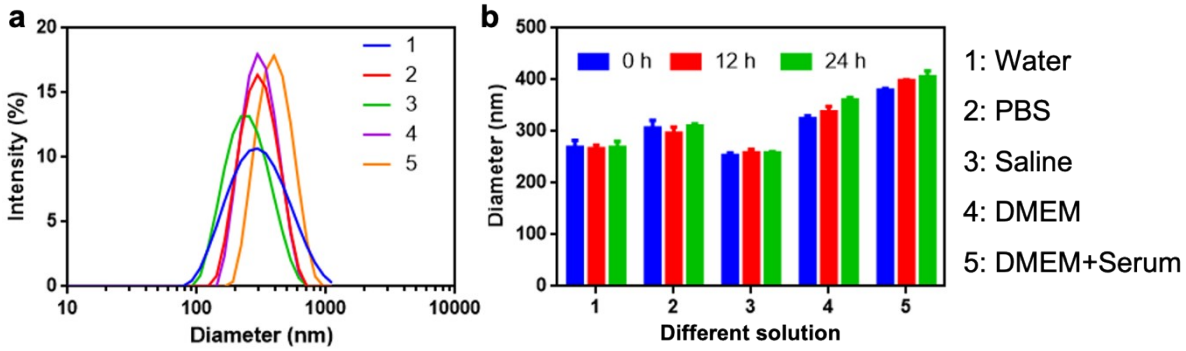

Fig. S8 The DLS hydrodynamic size distribution of HCSL NPs in different solutions (a) and the hydrodynamic size change within 24 h (b).

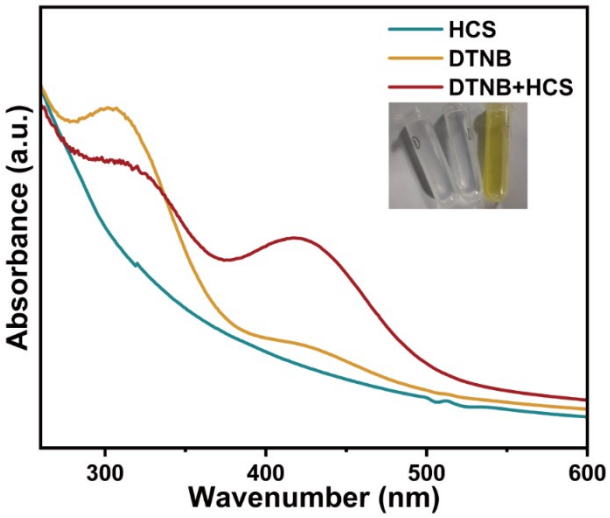

Fig. S9 UV-vis absorption spectra and the corresponding digital photos of DTNB, HCS NPs, and DTNB + HCS NPs.

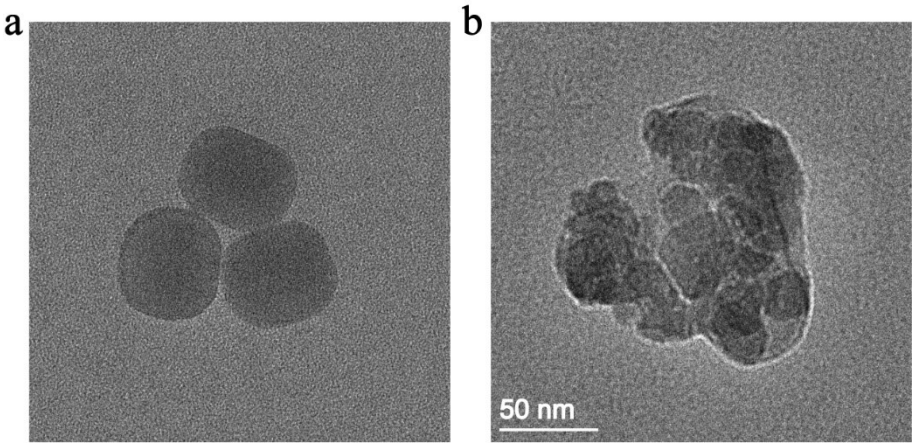

Fig. S10 TEM images of HCSL NPs after 6 h immersion in PBS with different pH values: (a) pH = 7.4, and (b) pH = 5.8.

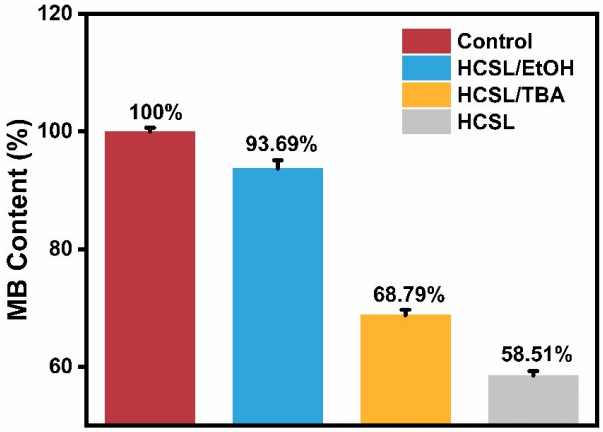

Fig. S11 ROS capture experiment: EtOH as a scavenger for •OH and $•SO_3^{2-}$, TBA as a scavenger for •OH.

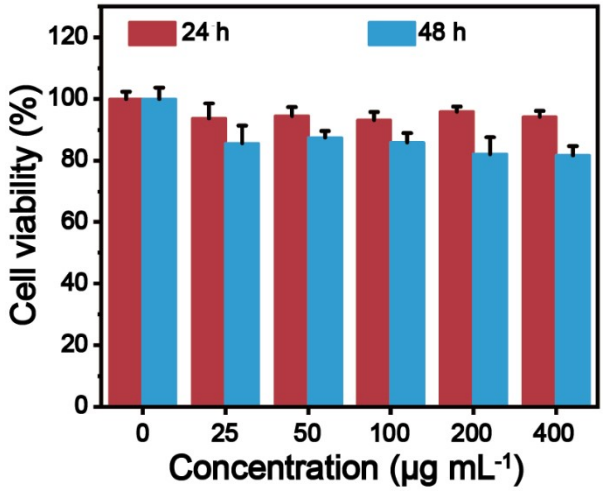

Fig. S12 Cell viability of L929 cells after co-incubation with CSL NPs for 24 h or 48 h. n = 3.

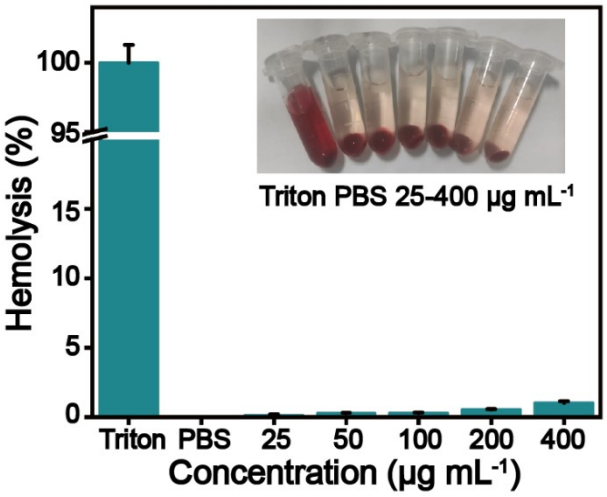

Fig. S13 Hemolysis testing of the HCSL NPs at different concentrations. n = 3.

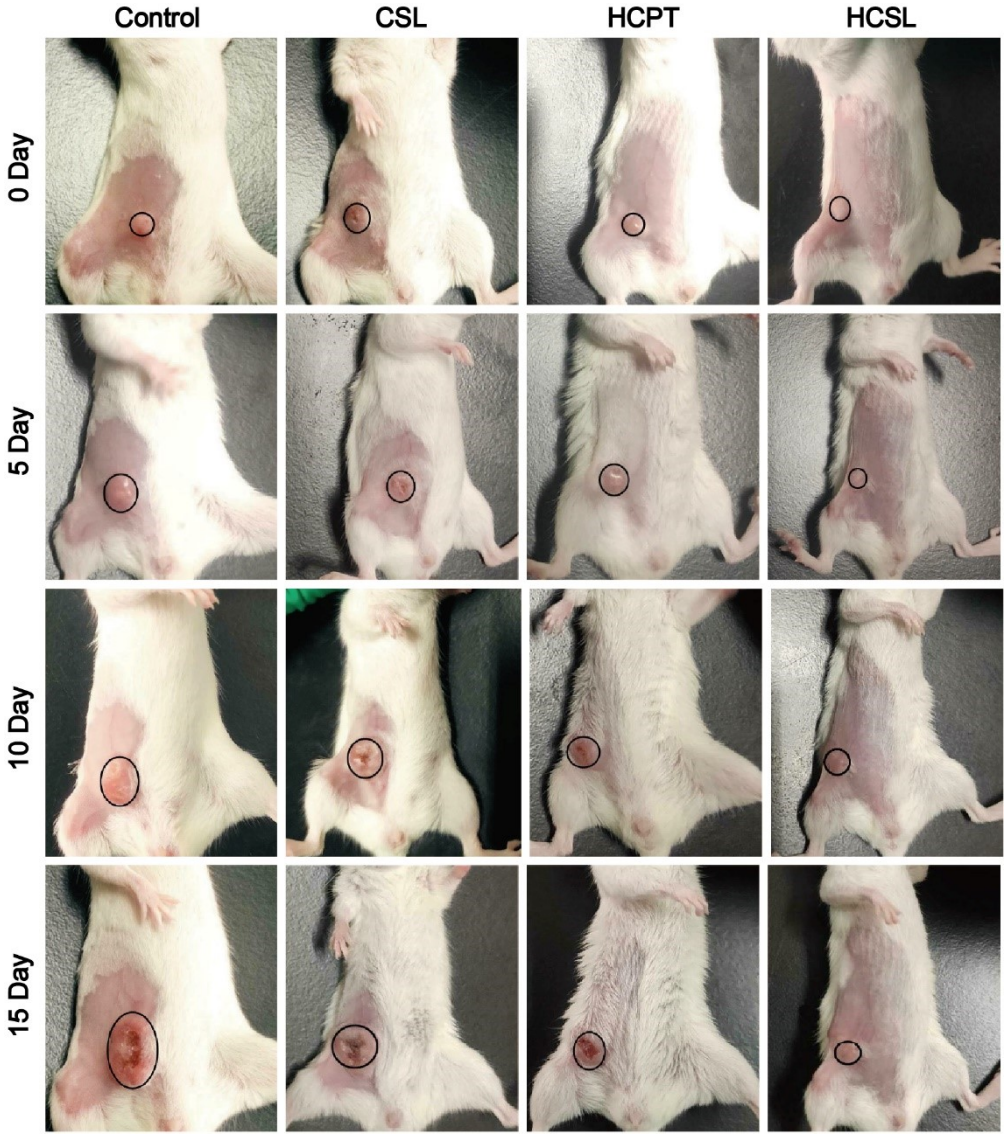

Fig. S14 Digital photos of tumors in mice after different time of treatment.

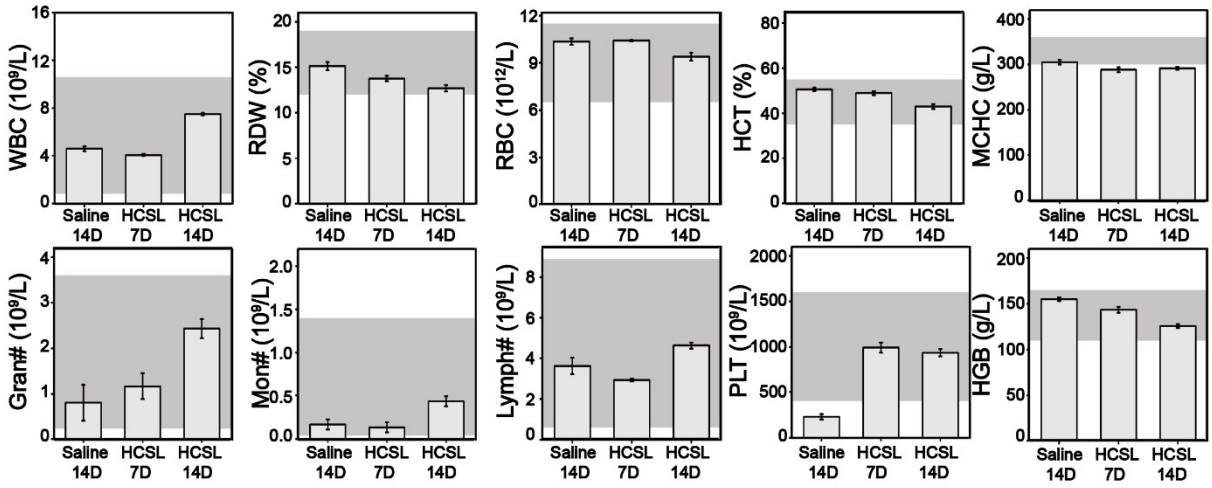

Fig. S15 The blood routine examination of mice after treatment with saline (14 days) or HCSL (7 days or 14 days). The gray areas represent the standard range of biochemical indicators. n = 3.