Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Targeted Carbon Monoxide Delivery Combined with Chemodynamic, Chemotherapeutic and Photothermal Therapies for Enhanced Antitumor Efficacy

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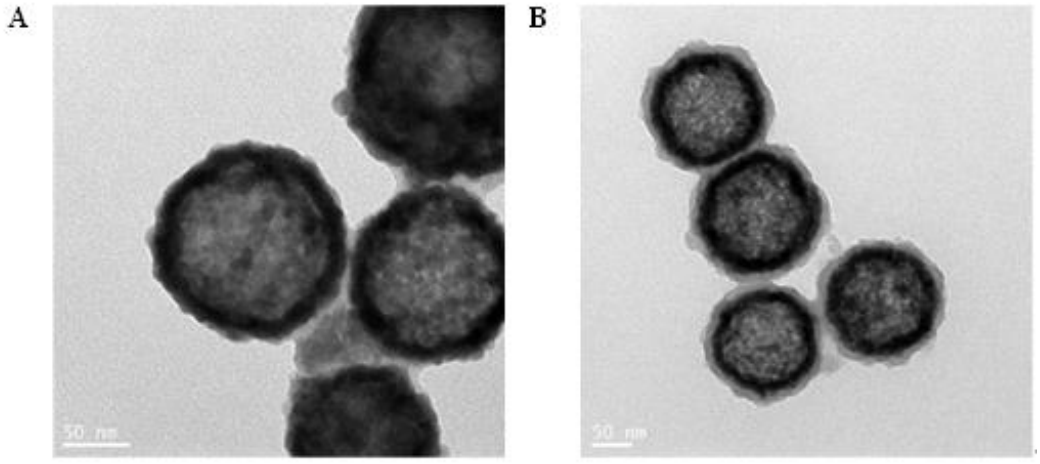

Fig. S1 TEM image of (A) HMCuS and (B) HMCuS@DHA@PDA.

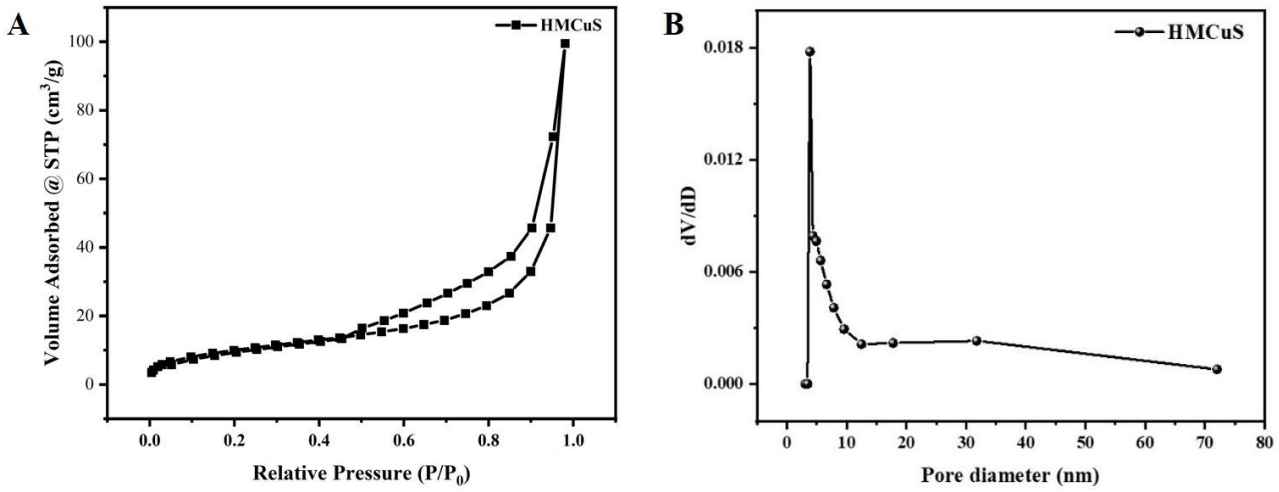

Fig. S2 (A) N_2 adsorption−desorption isotherms and (B) Pore size distribution of HMCuS.

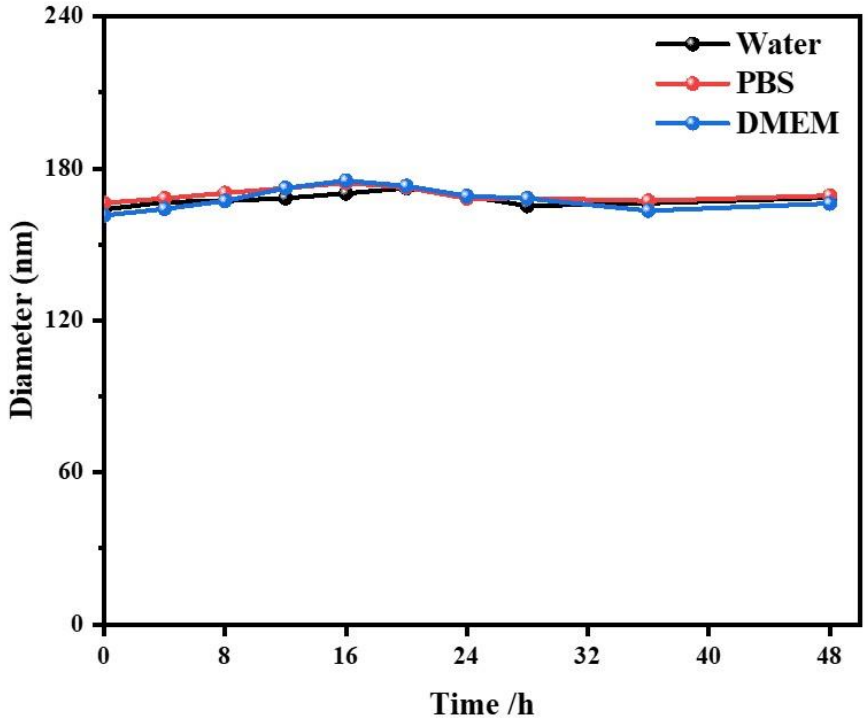

Fig. S3 Particle size variation of HDPMF dispersed in PBS, water and DMEM within 48 h.

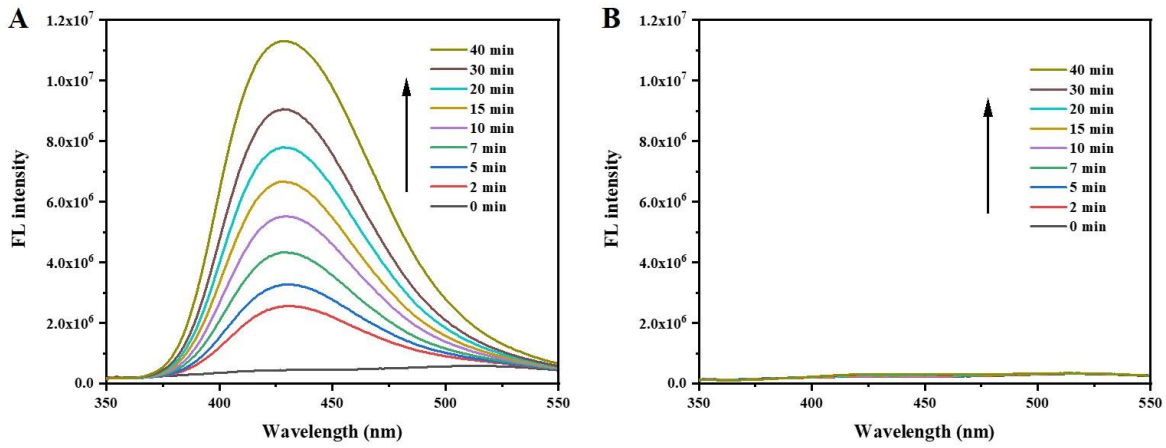

Fig. S4 (A) Fluorescence spectral changes of TPA (1.0 mM) in the presence of (A) HMCuS@DHA @PDA (200 μg/mL) and H_2O_2 (10 mM), (B) HMCuS@DHA@PDA (200 μg/mL), H_2O_2 (10 mM), and DMSO (0.6 M) recorded at intervals as indicated. DMSO is a scavenger for ·OH species.

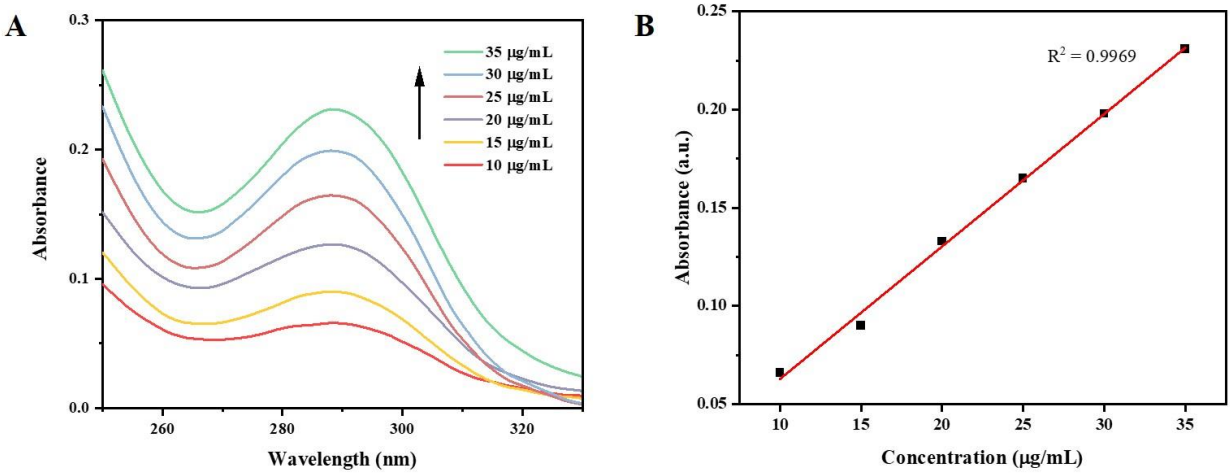

Fig. S5 Standard curve for quantification of DHA via recording the absorption at 290 nm.

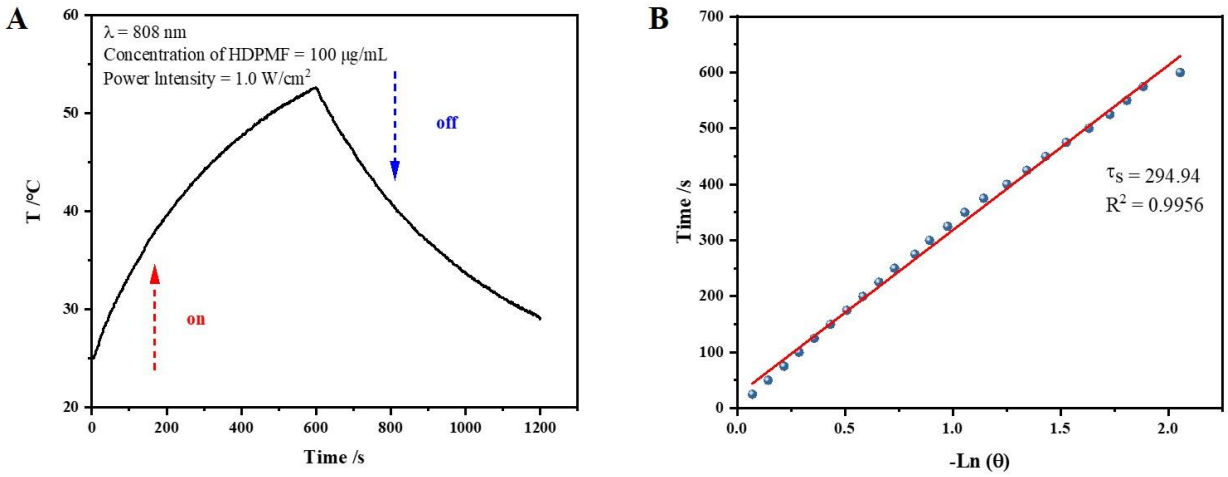

Fig. S6 (A) Photo-to-heat conversion capability of a HDPMF aqueous solution irradiated by an 808 nm (1.0 W/cm^2) laser. (B) The time constant was calculated from the cooling period.

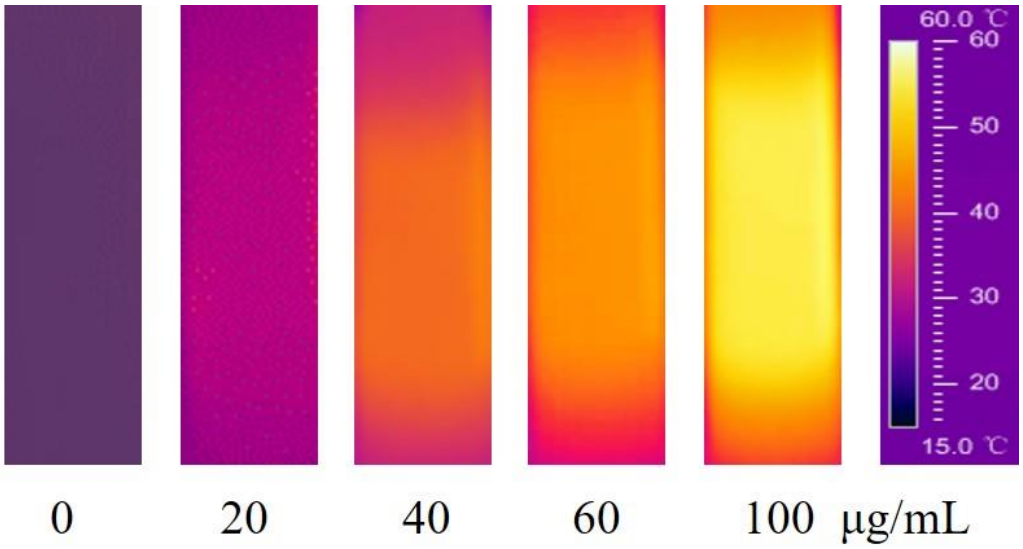

Fig. S7 Infrared (IR) thermographic images of HDPMF solutions with varied concentrations (0, 20, 40, 60,100 μg/mL) under 808 nm laser irradiation (1.0 W/cm^2,15 min).

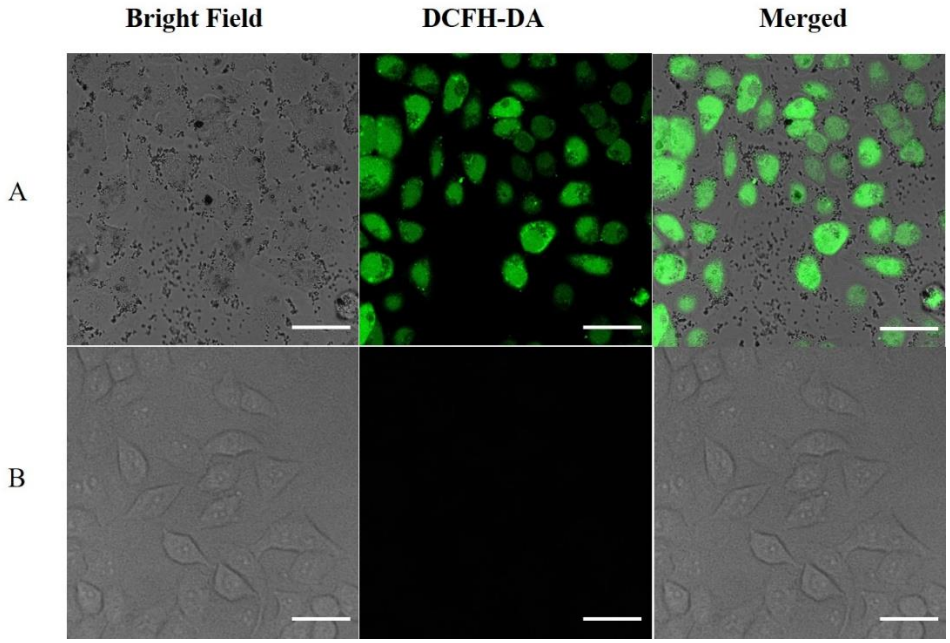

Fig. S8 Intracellular ROS detection. Confocal microscopic images of HeLa cells with (15 μg/mL) (A) or without (B) HDPMF treatment in the presence of the DCFH-DA probe under the dark and 808 nm light irradiation (1.0 W/cm^2, 10 min), respectively. Scale bar: 50 μm.

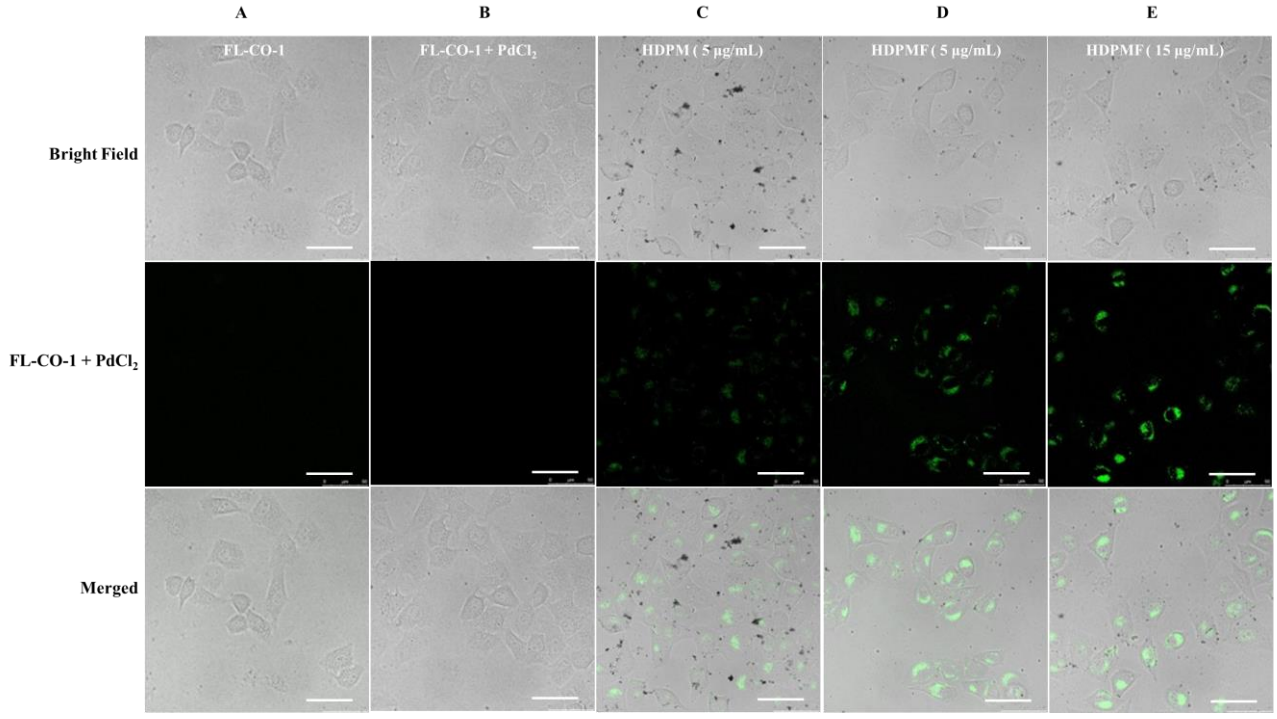

Fig. S9 Intracellular CO detection. Confocal microscopic images of HeLa cells co-incubated with nanoplatforms and the probe system (FL-CO-1 + $PdCl_2$, 1 μM each). (A) FL-CO-1, (B) FL-CO-1 + $PdCl_2$, (C) HDPM (5 μg/mL), (D) HDPMF (5 μg/mL), (E) HDPMF (15μg/mL). Scale bar: 50 μm.

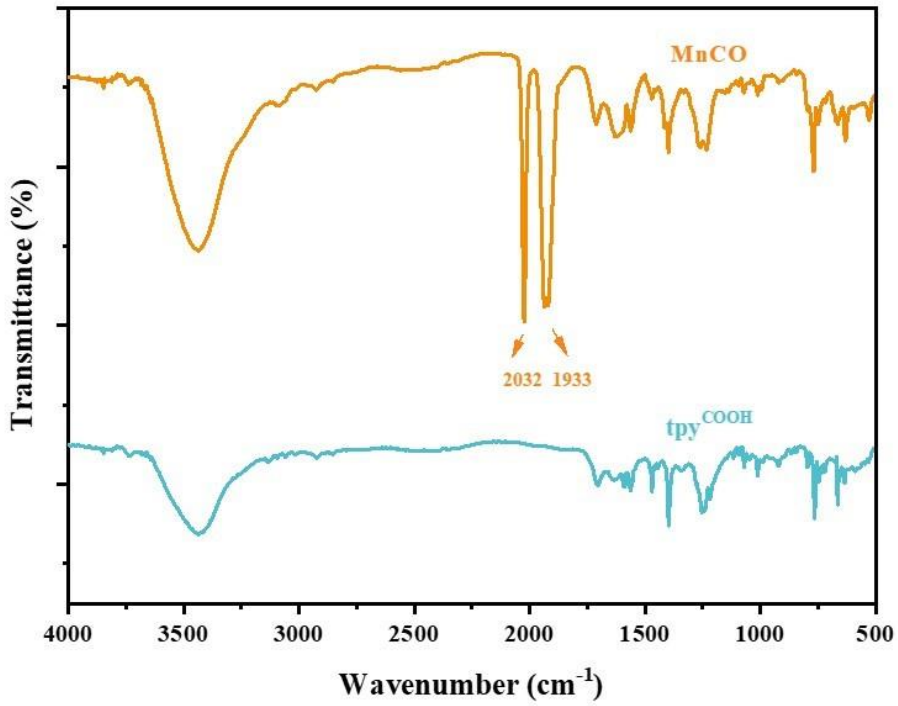

Fig. S10 FT-IR spectra of the MnCO and tpy^{COOH}.

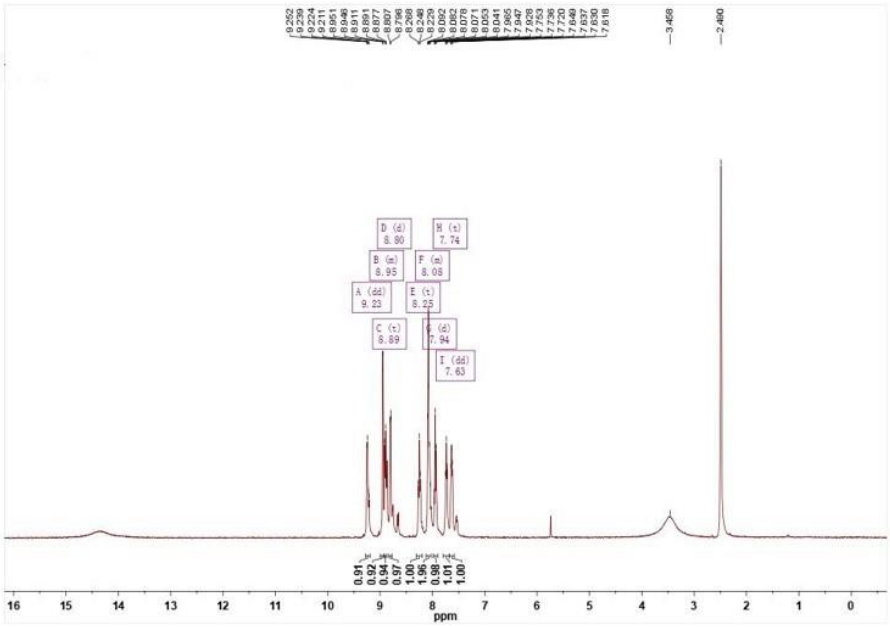

Fig. S11 ^{1}H NMR spectrum of MnCO in DMSO-d6.

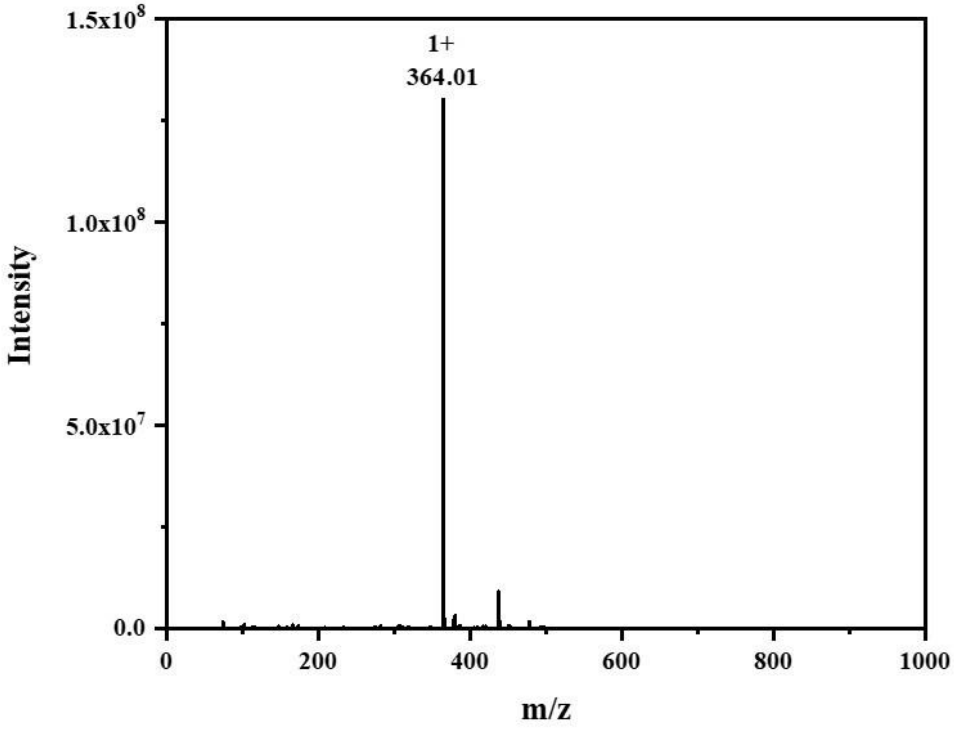

Fig. S12 Mass spectrum of MnCO.