Body-Clearable Chromium Nitride for the Synergetic Photothermal and Photodynamic Treatment

Yutuo Fu,[a,b†] Le Wang,[a†] Xiaoyu Chi,[a†] F. Alvarado-Cesar,[a] Na An,[a] Yuanjun Song,[a] Yadong Wu,[a] Peng Zhang,[c*] Chongshen Guo[a*]

a. School of Chemistry and Chemical Engineering, Harbin Institute of Technology, Harbin 150001, China.

b. Heilongjiang Provincial Hospital, Harbin Institute of Technology, Harbin 150001, China.

c. Center for Precision Engineering, Harbin Institute of Technology, Harbin 150001, China

Corresponding author: chongshenguo@hit.edu.cn (C. S. Guo); zp@hit.edu.cn (P. Zhang)

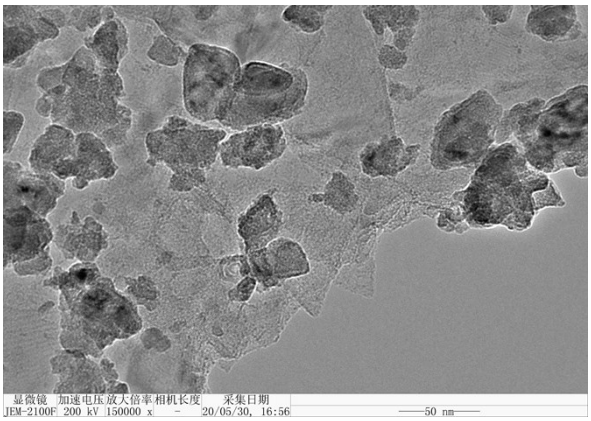

Figure S1 The enlarged TEM image of Cr_2N.

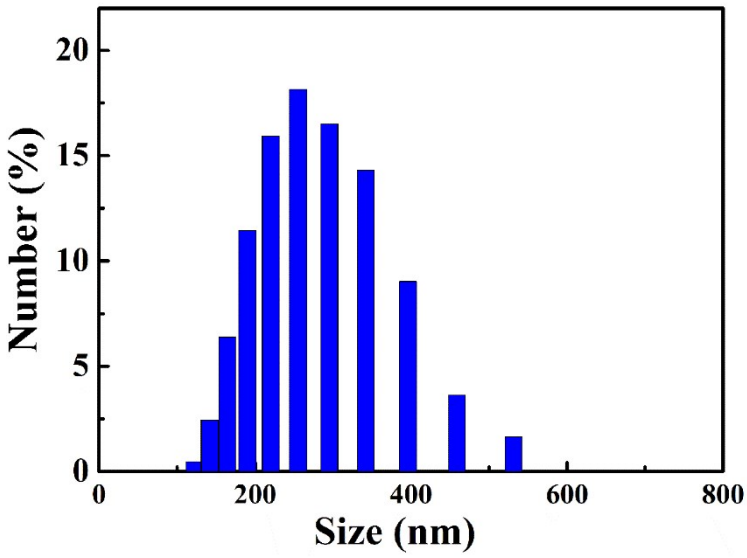

Figure S2 The average hydrodynamic diameter of Cr_2N determined by dynamic light scattering.

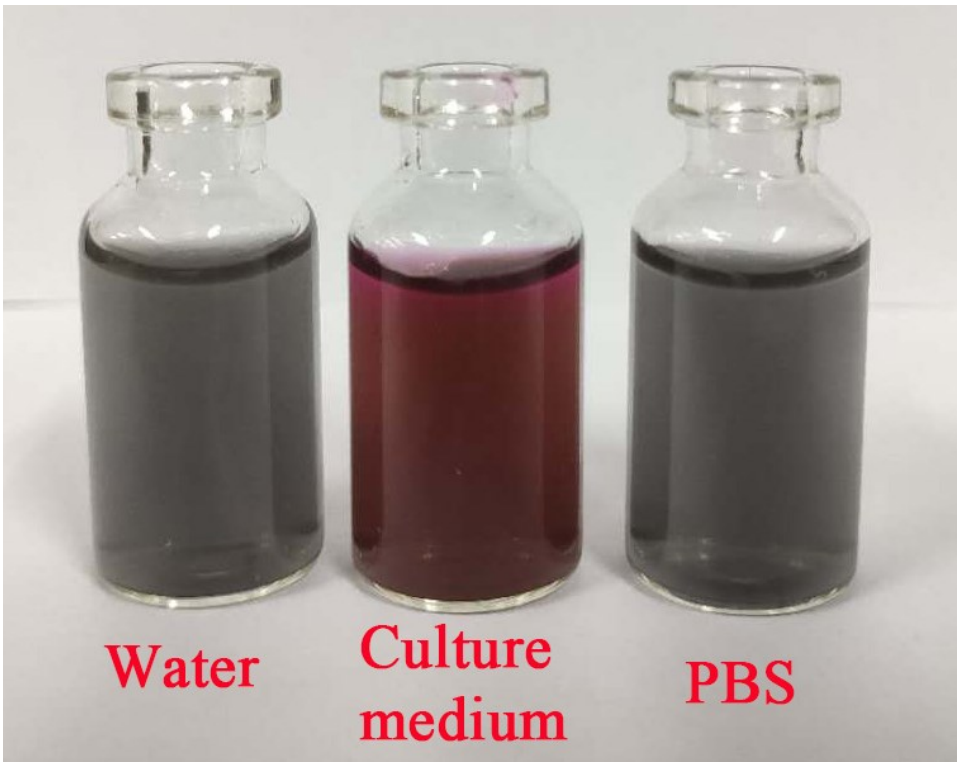

Figure S3 Photographs of Cr_2N dispersed in water, culture medium and PBS.

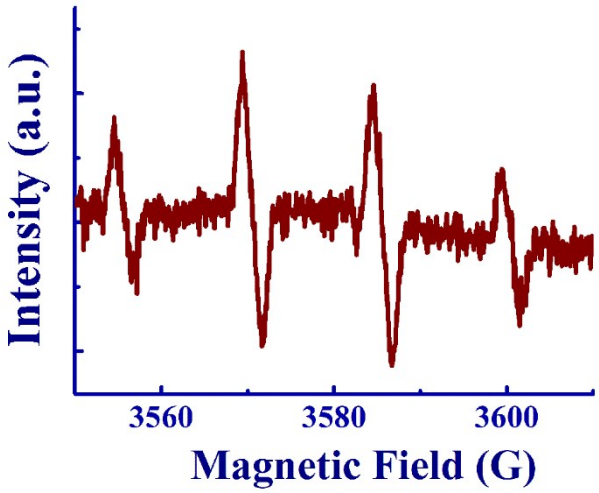

Figure S4 ESR spectra of DMPO-•OH adduct spin-trap (NIR irradiation for 10 min)

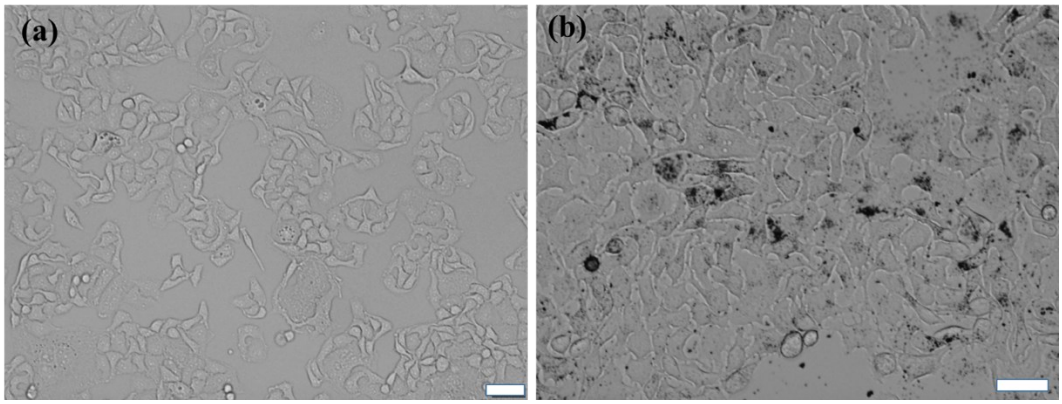

Figure S5 Photographs of HepG2 cell before and after incubation with Cr_2N for 12 h. (Cells were seeded onto 6-well plates at a density of 50 x 10^4 cells per well and incubated with Cr_2N (0.5 mg·mL^{-1}) for 12h. Then, excess media was removed and the cells were thoroughly washed with PBS. After that, the cell pallets were deconstructed with 1 mL HNO_3 (60%) to dissolve Cr_2N, which was then diluted into 10 mL with water for the ICP measurement. By this way, intracellular content of Cr_2N was determined as 0.12 ng per cell.)