

1 **A pMnO<sub>2</sub>@ABVN nanoparticle with dual pH/GSH response for the production**  
2 **of alkyl radicals for the treatment of osteosarcoma**

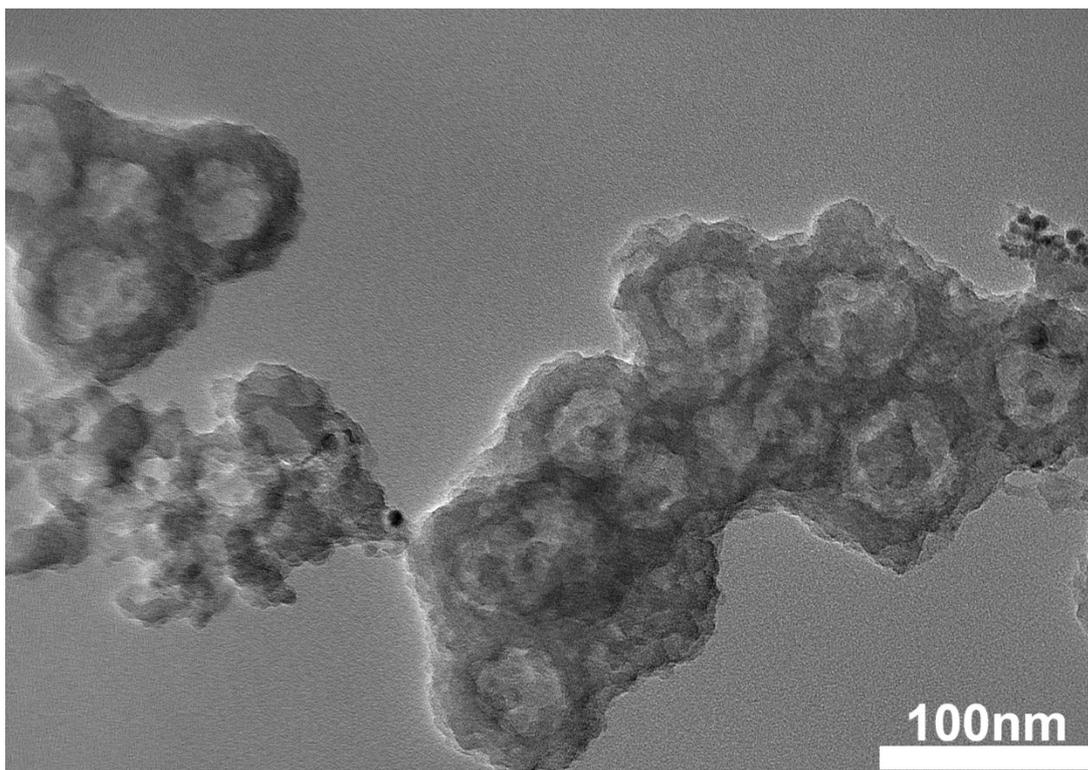
3 Guorui Song <sup>a,1</sup>, Jinke Ji <sup>a,1</sup>, Changying Li <sup>b,\*</sup>, Jinlong Zhao <sup>a,\*</sup>, Bo Zhang <sup>a,\*</sup>

4 <sup>a</sup> 3201 Hospital of Xi'an Jiaotong University Health Science Center, Hanzhong

5 723099, China

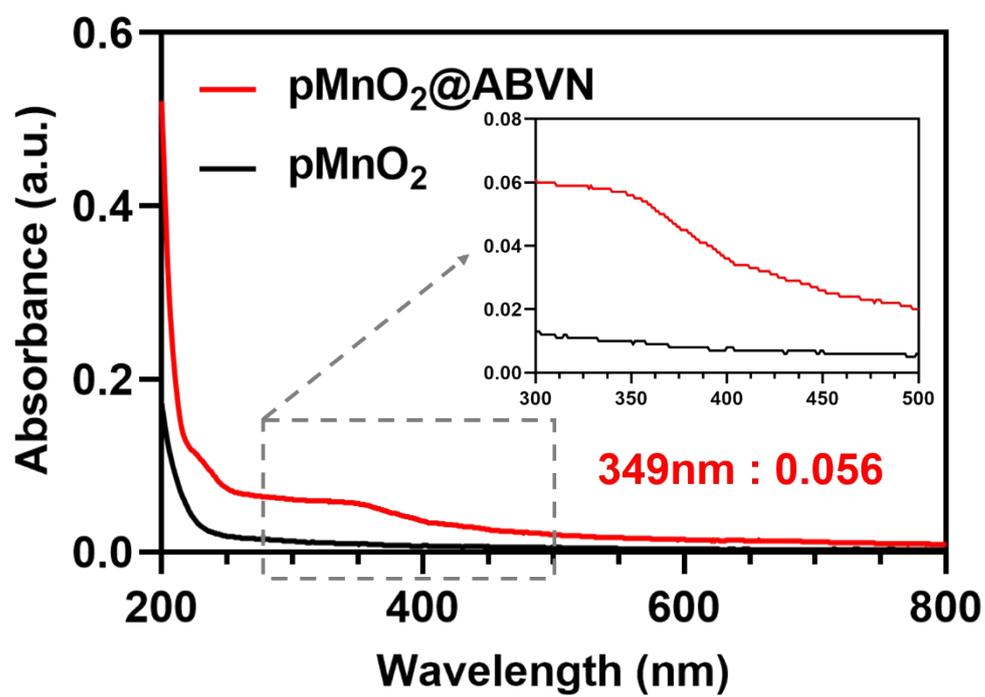
6 <sup>b</sup> Jining No. 1 People's Hospital, Jining 272011, China

7 <sup>1</sup> These authors contributed equally to this work



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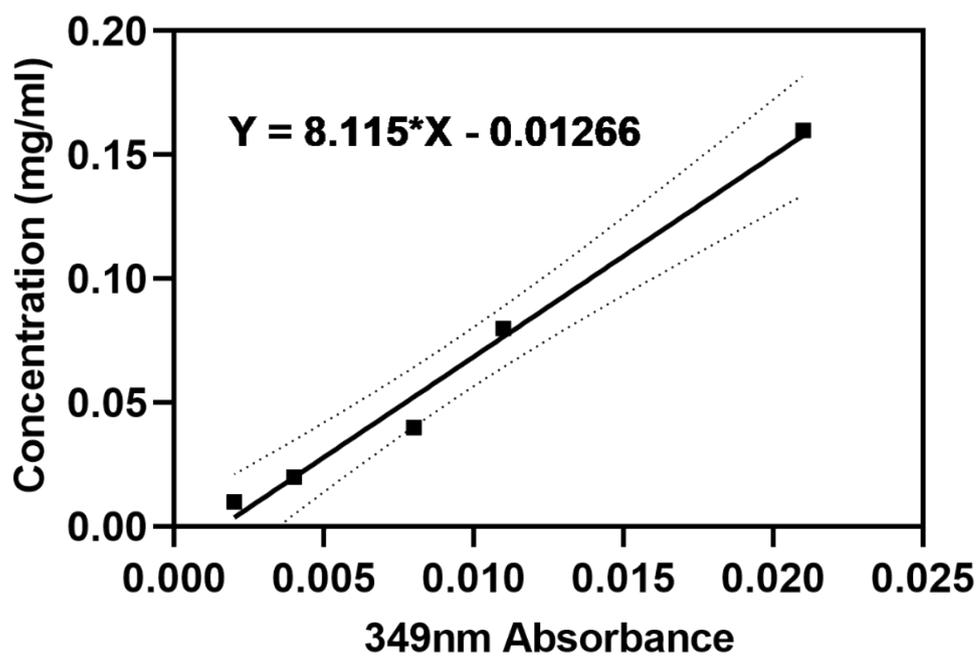
9 Figure S1. Transmission electron microscopy images of pMnO<sub>2</sub>@ABVN nanoparticles  
10 after 14 days of incubation in 10%FBS.



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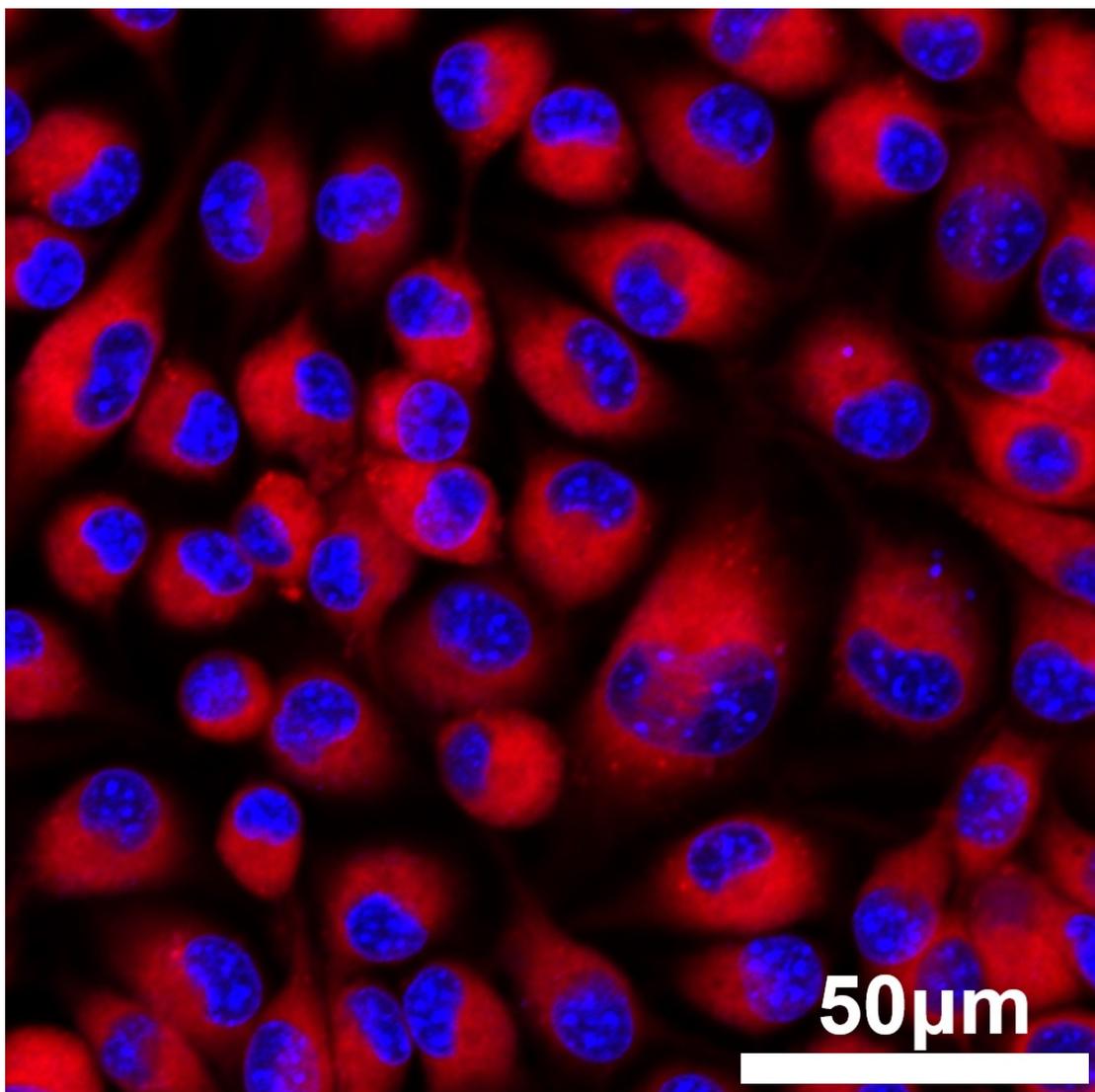
12 Figure S2. UV absorption of pMnO<sub>2</sub> and pMnO<sub>2</sub>@ABVN (5mg/ml) in deionized water.

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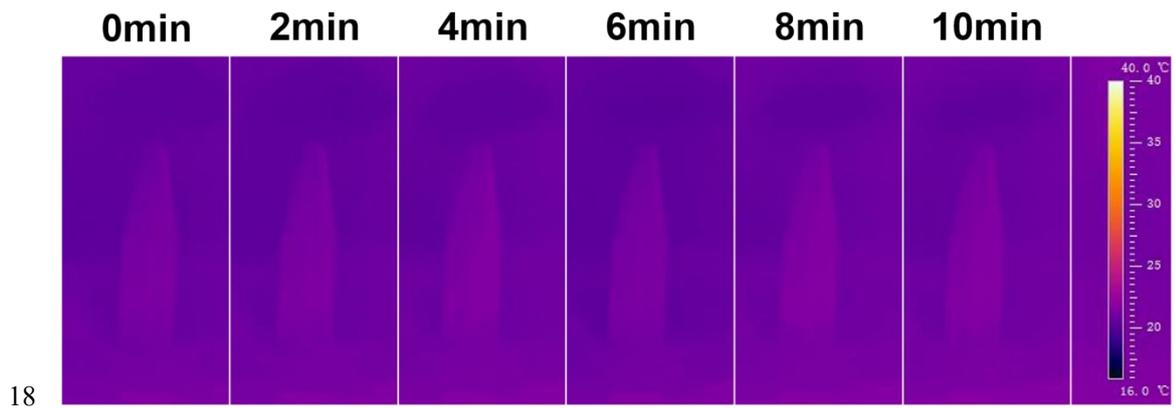
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15 Figure S3. Standard curve of ABVN in deionized water.



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17 Figure S4. Confocal images of cells at two hours after uptake of  $pMnO_2$ .

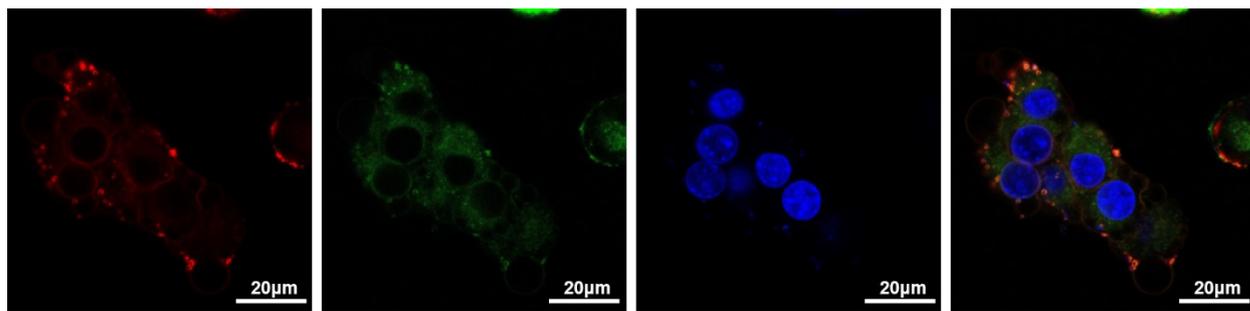


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19 Figure S5. Photothermal imaging of the culture medium irradiated with an 808nm laser

20 ( $1.5\text{W}/\text{cm}^2$ ) for 10 min.

21



22 Figure S6. Confocal images of co-localization of lysosomes and nanoparticles in 143B

23 cells (green: LysoTracker; red: pMnO<sub>2</sub>@Nile Red; blue: DAPI)