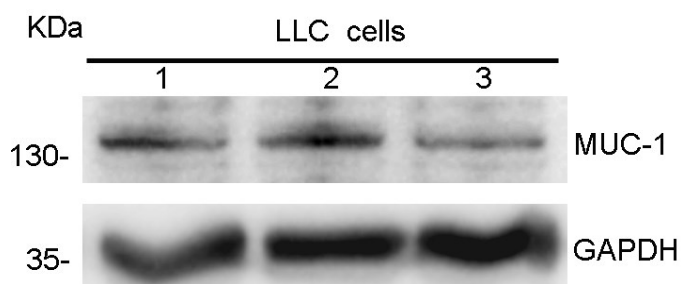
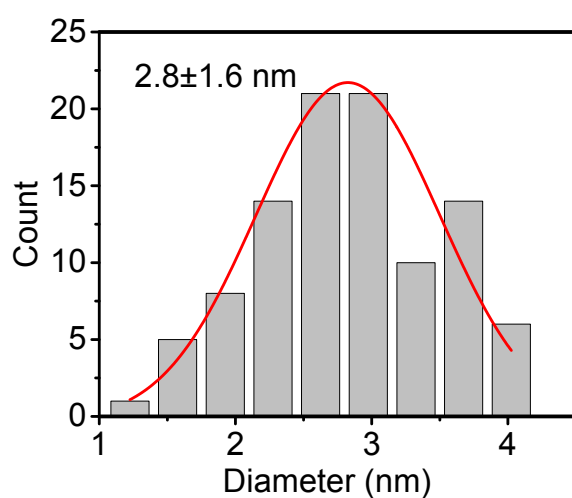


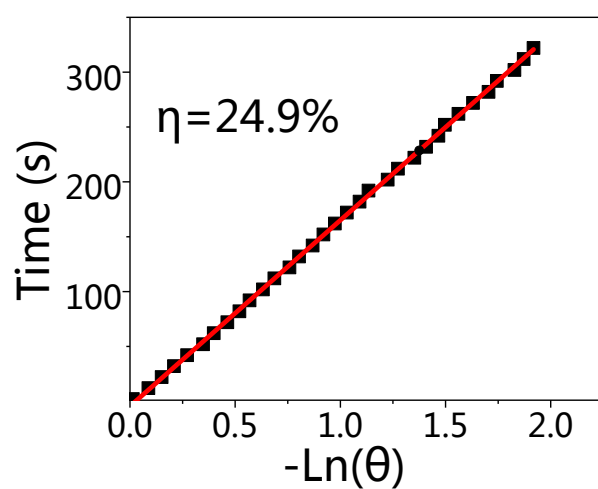
# Supplementary material



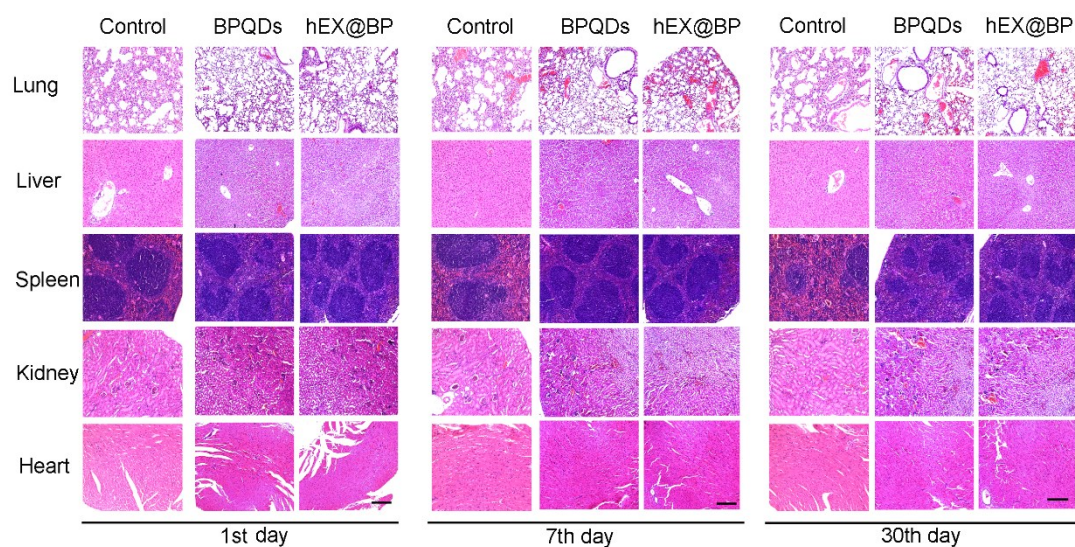
**Fig. S1.** Western blot analysis of MUC-1 in LLC cells.



**Fig. S2.** Statistical analysis of the lateral size of 100 black phosphorus quantum dots measured by transmission electron microscopy.



**Fig. S3.** The linear relationship between  $-\ln \theta$  and time obtained from the cooling stage of pure BPQDs



**Fig. S4.** *In vivo* toxicity of black phosphorus quantum dots (BPQDs) and hEX@BP within main organs. H&E staining of the lung, spleen, kidney, liver, and heart from control, BPQDs (5 mg/kg BPQDs/mouse) or hEX@BP (5 mg/kg BPQDs/mouse)-treated mice at the 1<sup>st</sup>, 7<sup>th</sup>, and 30<sup>th</sup> day post-injection (scale: 100  $\mu$ m). Mice in the control group were injected with PBS.