

**Electronic Supplementary Materials (ESI) for Biomaterials Science**

**Supporting Information**

**Preparation of pH-responsive mesoporous hydroxyapatite  
nanoparticles with intracellular controlled release  
anticancer drug**

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## Experimental

### Measurement of phosphorus concentration by the molybdenum blue method

10 mg of DOX@MHAPNs and DOX@PAA-MHAPNs were mixed with acetate buffer solutions (10 mM, 4 mL, pH 5.0, 6.5 or 7.4). After stirring for 1 h at 37 °C, the solution was taken out and diluted to 100 mL. 0.8 mL of DOX@MHAPNs and DOX@PAA-MHAPNs solution were added to 50 mL tube, next 10 mL of the molybdenum solution was added, respectively. After reaction for 24 and 48 h, the absorption at 880 nm was read to determine the concentration of the phosphorus. The calibration curve was done using  $\text{KH}_2\text{PO}_4$  as a reference. Every experiment was repeated for three times. (Table S1 and Fig. S2)

## Results and Discussion

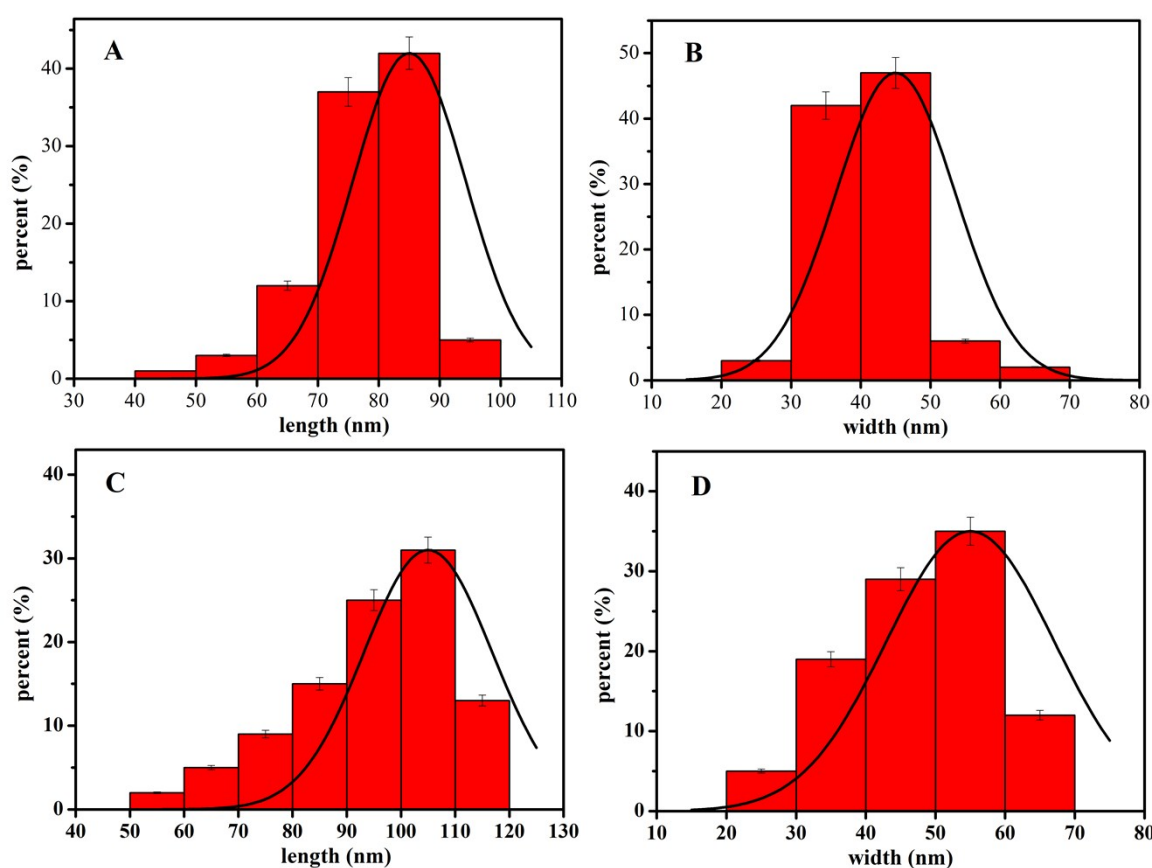


Fig. S1. The standard deviation of both the length and width measurement of MHAPNs (A and B) and PAA-MHAPNs (C and D).

Table S1 Value of standard operating curve

Mass concentration of Phosphorus ( $\mu\text{g}/50\text{ mL}$ )	Absorption value
0	183.46
5	0.00
10	0.0562
30	0.3289
50	0.5612
70	0.7323
90	0.9431

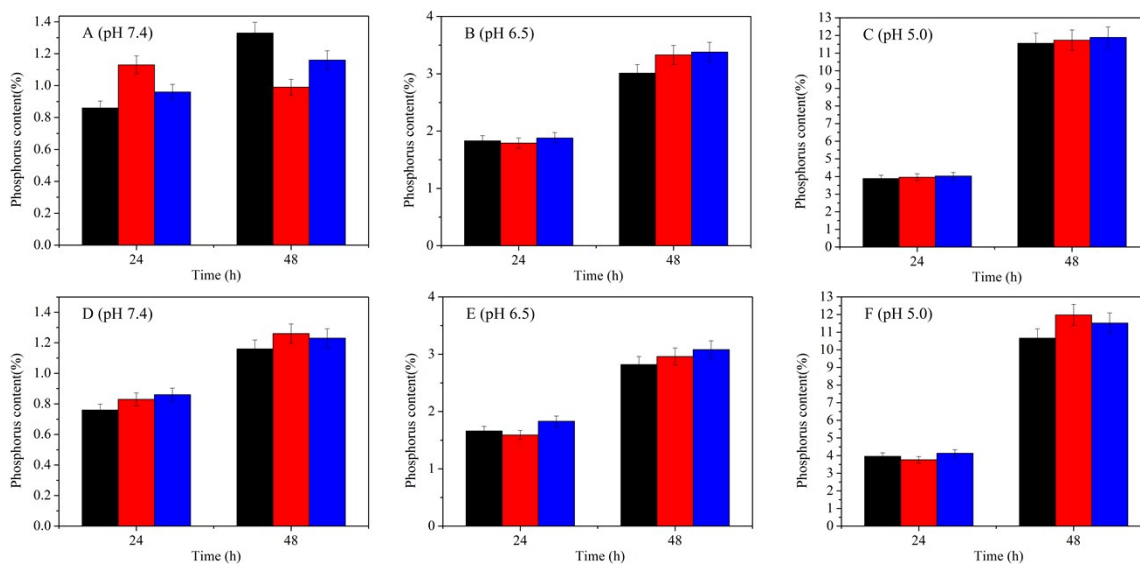


Fig. S2. The measurement results of phosphorus content for DOX@MHAPNs (A, B and C) and DOX@PAA-MHAPNs (D, E and F) (n=3)