

Supporting Information

Biologically-Inspired, Catechol-Coordinated, Hierarchical Organization of Raspberry-like Calcium Phosphate Nanospheres with High Specific Surface Area

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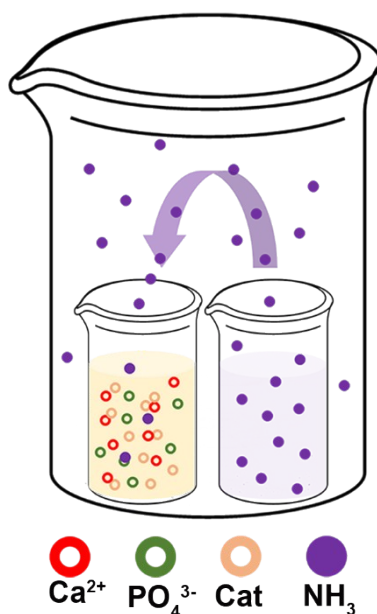


Figure S1. The diagrammatic sketch of the preparation of Control CaP, CaP/Cat 0.2~CaP/Cat 2.0 samples by ammonia diffusion method.

Table S1. Key Parameters of Samples. Control CaP, CaP/Cat-0.2, CaP/Cat-0.5, CaP/Cat-1.0 and CaP/Cat-2.0. (*We give the approximate productivity dividing the obtained mass by the theoretical yield 20.08 mg.)

CaP/Cat Nanospheres	Concentration of catechol (% w/v)	Concentration of Ca ²⁺ (mM)	Concentration of H ₂ PO ₄ ⁴⁻ (mM)	Yield (mg)	Productivity* (%)	Zeta potential (mV)	Size (nm)
Control CaP	0	2	1.2	14.8	73.70	+0.4	/
CaP/Cat-0.2	0.2	2	1.2	12.8	63.74	-11.8	189.3
CaP/Cat-0.5	0.5	2	1.2	10.5	52.29	-14.0	262.7
CaP/Cat-1.0	1.0	2	1.2	7.2	35.86	-14.6	312.4
CaP/Cat-2.0	2.0	2	1.2	3.2	15.94	-10.1	331.5

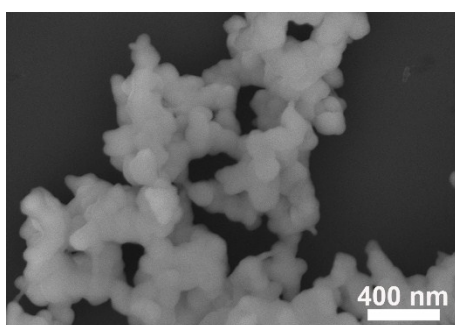


Figure S2. The SEM image of the Control CaP.

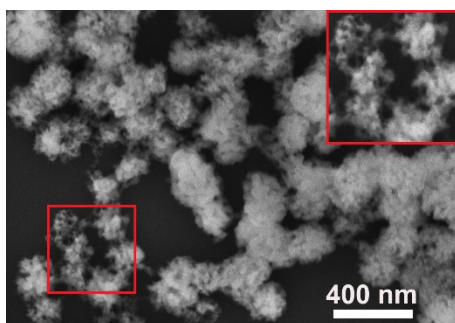


Figure S3. The SEM image of CaP/Cat-2.0. (the top right inset is the magnified view of the area marked by red square in the bottom left)

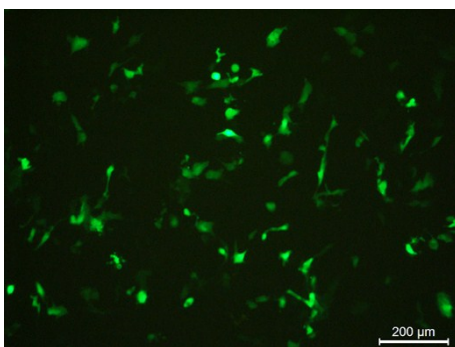


Figure S4. The EGFP fluorescence microscopy images of MG63 cells transfected with PEI_{25k} nanospheres (Transfected cells appear green as a whole).



Figure S5. The digital images of the powder of CaP. (A) Control CaP, (B) CaP/Cat-1.0.