Supporting Information

Fabrication of heparinized hierarchically hollow hydroxyapatite microspheres as bone substitute for controlled growth factors delivery

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Equation S1. The chemical reaction equation of hydroxylcarbonte apatite.

\[
(10-x-y/2)\text{CaCO}_3 + (6-y)\text{Na}_2\text{HPO}_4 \rightarrow \text{Ca}_{4(8-x-y/2)}(\text{HPO}_4)_{6(6-x-y/2)}(\text{CO}_3)_y(\text{OH})_{2-x} + (4-x-y/2)\text{CO}_2 + (6-y)\text{Na}_2\text{CO}_3 + (2-y/2)\text{H}_2\text{O}
\]
Figure S1. TEM images of pure CaCO$_3$ particles after soaking in emulsion solution for 24 h.
Figure S2. EDX spectra of HHAMs-HP converted from CCPs-HP by treatment with emulsion solution for 24 h.
Figure S3. TEM (a) and fluorescence (b) images of CaCO$_3$ particles with FITC-labeled heparin after soaking in emulsion solution for 24 h.
Figure S4. CD spectra acquired at 20 °C of bFGF.