

An experimental–computer modeling study of inorganic phosphates surface adsorption on hydroxyapatite particles

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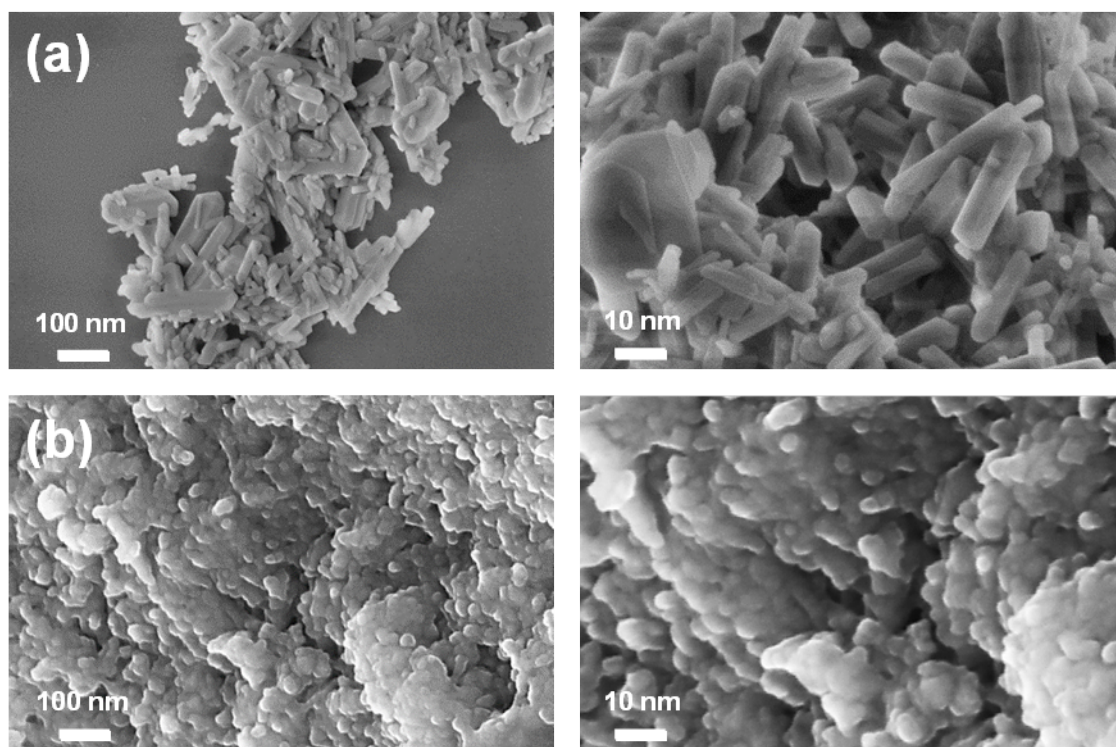


Figure S1. Morphology of particles synthesized for this study: (a) cHAp and (b) ACP. Left and right show low and high resolution SEM micrographs.

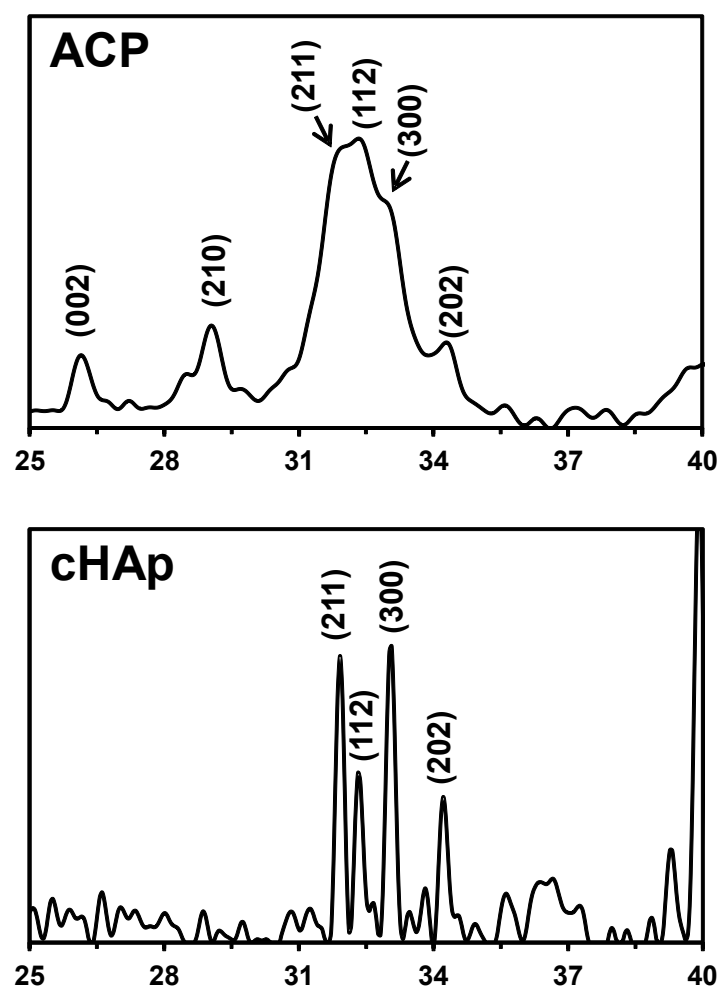


Figure S2. X-ray diffraction patterns of the HAp particles prepared in this work: ACP and cHAp. The hydroxyapatite was identified by the peaks at 2θ between 31.5° and 34.5° .

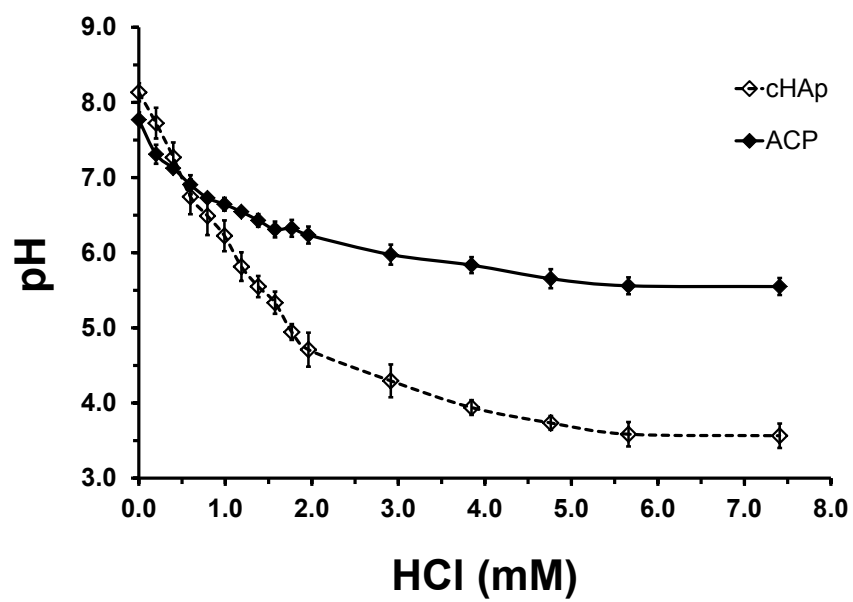


Figure S3. Proton-buffering capacity of the cHAp and ACP particles prepared in this work.

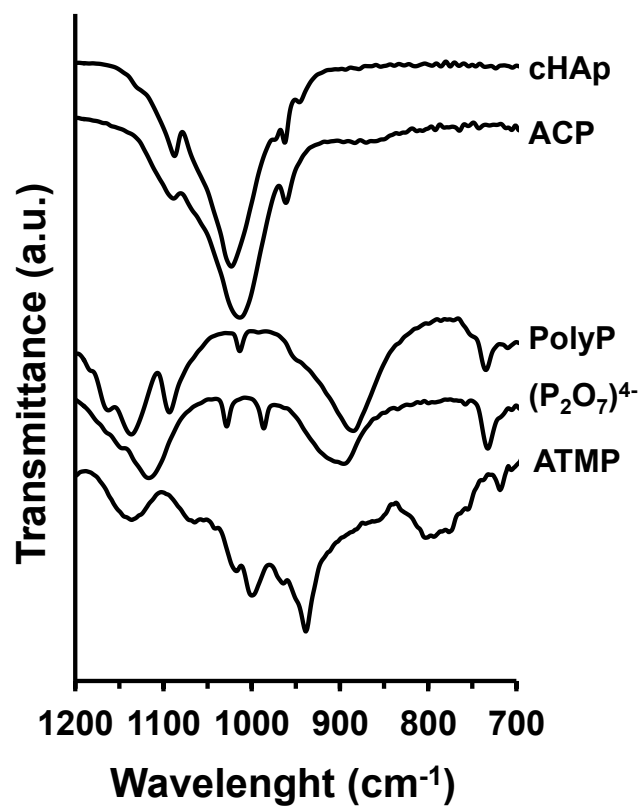


Figure S4. FTIR spectra of cHAp, ACP, polyP, $\text{P}_2\text{O}_7^{4-}$ and ATMP.

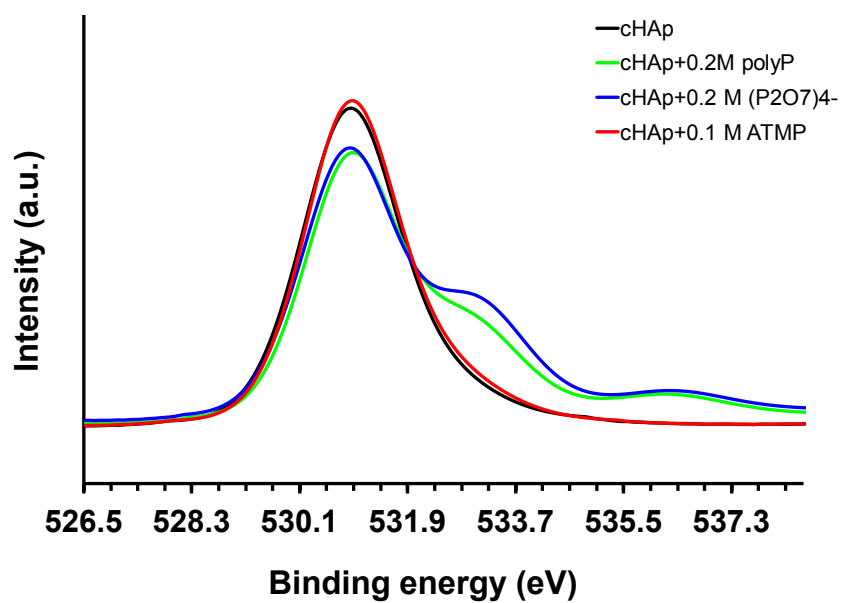


Figure S5. High-resolution XPS spectra in the O1s region for cHAp samples before and after incubation in presence of polyP (200 mM; top), $\text{P}_2\text{O}_7^{4-}$ (100 mM; middle) and ATMP (200 mM; bottom) at pH 7.

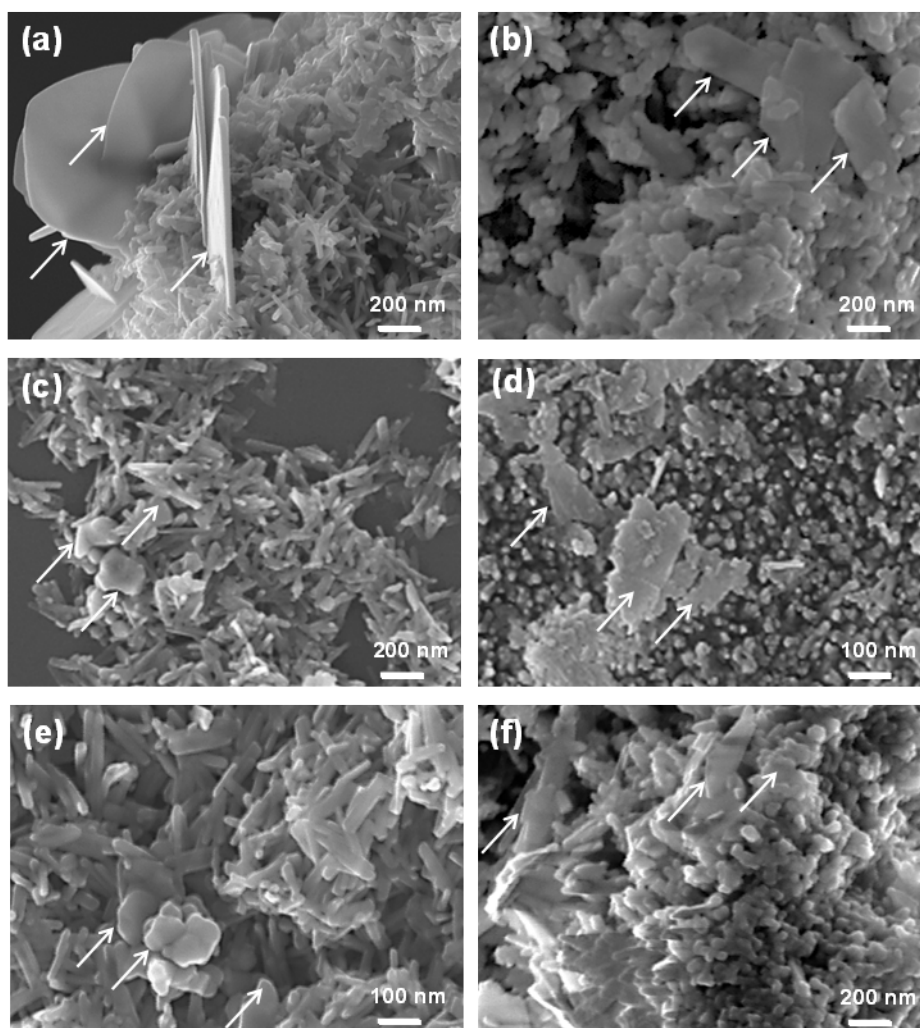


Figure S6. SEM micrographs of cHAp and ACP particles after incubation in presence of concentrated polyP (2 M), $P_2O_7^{4-}$ (1 M) and ATMP (2 M; bottom) solutions at pH 7: (a) cHAp + polyP; (b) ACP + polyP; (c) cHAp + $P_2O_7^{4-}$; (d) ACP + $P_2O_7^{4-}$; (e) cHAp + ATMP; and (f) ACP + ATMP. Crystals of polyP, $P_2O_7^{4-}$ and ATMP grown onto the surface of cHAp and ACP particles are indicated by arrows.