

Supporting Information

Octacalcium phosphate microscopic superstructure self-assembly and evolution by dual-mediating combination

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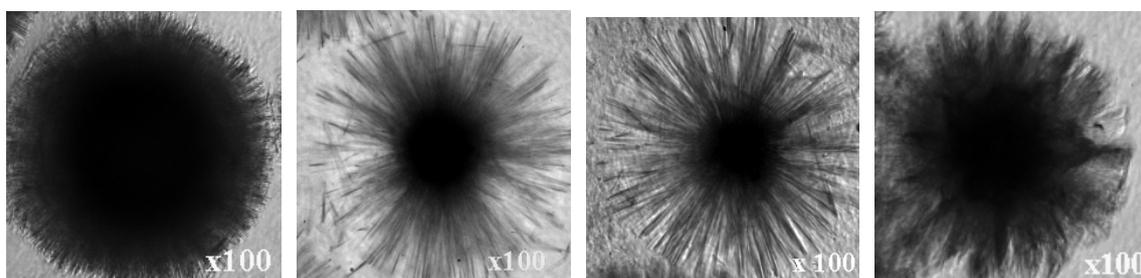


Figure S1. Growth patterns of OCP nanocrystal individuals along the core in the aqueous solution by PASP/CTAB dual-mediating combination (from left to right: No. 6, No. 7, No. 8 and No. 9). The optical images confirm a relatively slow process of intergrowth from a core enabling the structure evolution with increasing R value, and further the elongated one-dimensional nanoplates have been aligned toward the center of dandelion-like sphere.

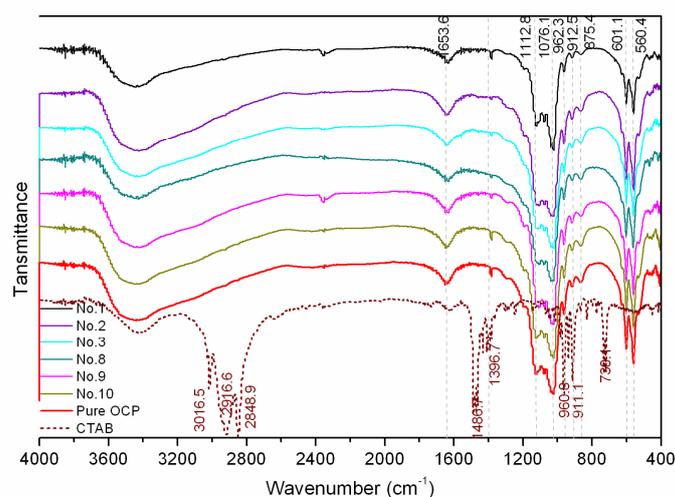


Figure S2. FTIR spectra of OCP samples synthesized from a dual-mediating approach in the aqueous solution with different R values, in contrast with the pure OCP and CTAB. The spectra exhibited a bending mode of H_2O at 1653cm^{-1} . The adsorption band at 1076 cm^{-1} can be assigned to the stretching mode of the P–O bond. The shoulders at $960\text{--}964$ and $1090\text{--}1120\text{ cm}^{-1}$ can be attributed to the presence of PO_4^{3-} and/or HPO_4^{2-} groups. The bands at 601 and 560 cm^{-1} correspond to bending modes of the O–P–O bonds. The band at 875 cm^{-1} can be attributed to the P–OH stretch vibration of HPO_4^{2-} ions.