APATITES Nanocrystalline apatite platelets, the mineral component of bone, form from an amorphous precursor through a complex biomineralization process. Here, A. Guagliardi and co-workers use citrate-bio-inspired apatites as a system model and, by cross-coupling the results on crystal domains provided by X-ray total scattering modeling with atomic force microscopy observations, they reconstruct the amorphousto-crystal transformation mechanism and clarify the origin of the platy morphology breaking the hexagonal crystal symmetry. WILEY-VCH