

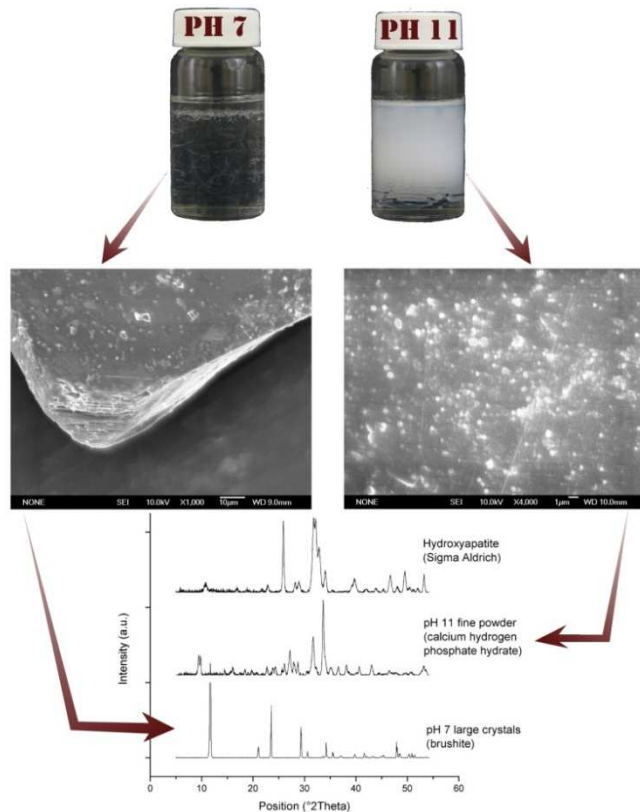
Synthesis and Characterization of Novel Biocomposites

IGERT Associate: David Griffin

PI: Prof. Surita R. Bhatia (UMass Chemical Engineering)

Biomaterials used for tissue engineering must display specific chemical, biological and mechanical properties to suitably interact with native human tissues. Our investigation focuses on the *in situ* synthesis and characterization of composites containing calcium phosphate minerals in physically associating hydrogels that have promising biomaterial and drug delivery applications.

Our investigation has shown that experimental variables, such as pH, play a vital role in determining the calcium phosphate phase, size and morphology formed in the composites. These characteristics play a vital role in influencing the composites' overall bulk physical properties and can give insight into the future biomaterial potential of these materials.



Sample composites (top), SEM micrographs of corresponding minerals (middle) and XRD analysis of mineral phases (bottom).