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Calcium phosphate and hydroxyapatite nanofiber fabrication

Our research efforts are aimed at exploring different phases and morphologies of calcium phosphate compounds. Calcium phosphate compounds are abundant in nature, including in the human body. By controlling the shape and dimensions of these crystals we can tailor their properties for specific uses. We have tested various precipitation reaction methods for synthesizing these compounds and the effects of such variables as concentration, pH, and temperature on the product. Using images taken from a scanning electron microscope (SEM), we are able to compare the crystalline structures from each experiment and determine the impact that a variable has on the system. The results indicate that a range of calcium phosphate phases can be created by varying just a few properties of the system.