Synthesis and Characterization of Calcium Fluoride Particles

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Calcium fluoride particles were synthesized by potassium fluoride and calcium chloride. The synthesized particles were characterized by X-ray diffraction (XRD), scanning electron microscopy (SEM), energy dispersive spectrometer (EDS). The XRD patterns with 6 highest peaks in the graph indicate a typical cubic phase (space group: FM3M). Furthermore, the morphological features as studied using SEM revealed that the synthesized particles were hexahedron shape. In addition, it was found that the reaction conditions such as feeding rate, PH, and reaction temperature influence particle growth.