



**Synthesis of nano titanium dioxide from natural
rutile mineral sand**

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Abstract

A new methodology was developed to synthesize titanium tetra chloride from natural rutile mineral sand. From synthesized titanium tetra chloride, titanium anatase nano crystals were synthesized by the hydrolysis of titanium chloride in sulfuric acid aqueous solutions. The samples were characterized by XRD, SEM and Particle size analyzer. Anatase nano titanium oxide crystals were confirmed by compare the actual data of anatase nano titanium oxide crystals with results from the experiment, and proved the concept of synthesis of Nano-Titanium dioxide anatase crystals from natural rutile mineral sand.