

Synthesis and film investigation of titania

Abstract

Titania or titanium dioxide (TiO_2) thin film has been synthesized via sol-gel method with monoethanolamine (MEA) as a catalyst. The mixing of titanium butoxide as a precursor, ethanol as a solvent and MEA were stirred using magnetic stirrer under ambient temperature [. The TiO_2 solution prepared then was deposited on SiO_2 substrates using spin-coater and the coated films were annealed at 600°C . Finally, both before and after annealed TiO_2 thin films were characterized using Field Emission Scanning Electron Microscopy (FESEM). The obtained results show the different TiO_2 particles formation before and after annealed.

Keywords; Crystallization, Nanoparticle, Thin Film, Titanium Dioxide (TiO_2)