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COLLEGE OF BIOLOGICAL AND PHYSICAL SCIENCES  
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DETERMINATION OF OPTICAL PROPERTIES OF NANOSTRUCTURED TiO<sub>2</sub> THIN  
FILMS.

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## ABSTRACT

This work presents some results on deposition and investigation of optical properties of TiO<sub>2</sub> thin films. Thin films of TiO<sub>2</sub> were deposited onto optical glass substrates by doctor blade technique and the crystallization of TiO<sub>2</sub> coating was then achieved through thermal annealing at a temperature of 400°C in a programmable furnace. The optical properties were by DUV spectrophotometer in the spectral range of 300-3000 nm. The optical properties were systematically studied by using the optical transmittance and reflectance data. The absorptance and energy band gap were evaluated. The energy band gap of TiO<sub>2</sub> is found to be 3.3eV for the indirect band gap and 3.2eV for the direct band gap.