

UNIVERSITY OF NAIROBI  
COLLEGE OF BIOLOGICAL AND PHYSICAL  
SCIENCES

DEPARTMENT OF PHYSICS

OPTICAL CHARACTERIZATION OF TITANIUM DIOXIDE  
NANOPARTICLES DEPOSITED USING DOCTOR BLADE  
METHOD.

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## ABSTRACT

TiO<sub>2</sub> thin films were deposited onto 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 annealed films were characterized by DUV spectrophotometer in order to determine their optical properties. The optical properties were systematically studied by using the optical transmittance and reflectance data. The absorbance, refractive index and energy band gap were evaluated.