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# Study of $CuGaTe_2$ Thin Films Fabricated by Flash Evaporation

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$CuGaTe_2$ are very promising absorber materials for thin film photovoltaic devices due to their direct band gaps, which well match with the solar spectrum and their high absorption coefficients. Thin films of about 1µm of thickness have been prepared by flash evaporation technique. The structural and optical properties of these samples were investigated. X-ray diffraction analysis revealed that the films present the chalcopyrite structure with (112) preferred orientation. Optical measurements have been carried out in the wavelength range 200-3000 nm. From the transmission measurements we have deduced an absorption coefficient and optical band gap of $4.10^4 cm^{-1}$ and 1.21eV respectively.

**Keywords:** Thin films, flash evaporation, chalcopyrite.