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## Elaboration and Characterization of Copper Oxide (CuO) Thin Films Deposited bythe Spray Pyrolysis Method

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**Abstract :** In this work, a copper oxide thin films were deposed by a simple and inexpensive technique (spraypyrolysis) on ordinary glass substrates at a fixed temperature  $T=500^{\circ}$ C. and different concentration of precursor 15, 30 and 45 ml made with H2O like solvent. The structural, morphological and optical properties of thin films of CuO were studied by X-raydiffraction (XRD), scanning electron microscopy (SEM) and UV-vis spectrophotometry. The Xray diffraction patterns confirm the presence of the polycrystalline phase of CuO as monoclinic structure with preferential orientation along (110), (002), (111) and (020). Their optical band gaps ranged from 3.95 to 4.02eV with a high absorbency in the visible region.

Keywords : Copper oxide, Thin films, Spray pyrolysis, Band Gaps, XRD, SEM