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Electrical and Structural properties of Cu₂O thin films deposited at different temperature by magnetron sputtering.RADJEHI LAMIA¹, Radjehi Lamia², Lamri Salim², Sanchette frederic.², DUCROS Cedric³, Djelloul Abedlekader⁴

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Semiconducting cuprous oxide films were deposited by dc reactive magnetron sputtering onto glass substrates at temperatures between 60° and 400°C. In this work, the effect of substrate temperature on the structural, electrical, and optical properties was investigated. The microstructure and surface morphology were determined using X-ray diffractometer and SEM. Electrical and optical properties were performed by Four point probe method; Hall effect, Raman and UV–vis–NIR spectrum measurements. Experimental results show that the crystalline orientation and the electrical properties of Cu₂O thin films deposited were influenced by the increase substrate temperature.

Keywords

PVD

cuprous oxide

resistivity