

ELECTRICAL CONDUCTIVITY MEASUREMENTS ON
n-Cu₂O SEMI-CONDUCTOR FILMS

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It is known that Cu₂O exhibits some interesting Semi-Conducting properties and that this material produces only the p-type electrical conductivity. However, recently it was reported¹ that n-type conductivity in Cu₂O is possible provided that the material is prepared by the electrodeposition technique. We report the results of electrical conductivity measurements on the electrodeposited Cu₂O films prepared on Cu substrates. Our results reveal that there exists a donor level at 0.04 eV below the conduction band which might be responsible for the observed n-type conductivity. The low ionization energy suggests that the interstitial atoms would result in the donor level, rather than the substitutional atoms.

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Reference

1. Siripala, W. and Jayakody, J.R.P. (1986) Solar Energy Materials - in Press.