

# The Electrical Resistivity of Ultra-Thin Copper Films

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The resistivity of ultra-thin metal films is much higher than theoretically predicted by the scattering hypothesis. The effect is discussed with respect to the variation of film thickness for copper films deposited under ultra-high vacuum conditions on glass substrates. The interpretation on the basis of a statistical model leads to reasonable results even when the variation of temperature is included into consideration. Additional information is obtained from photoelectric and field effect measurements.

*Key words:* Ultra-Thin Films; Electrical Resistivity.