

THE EFFECT OF OPERATING PRESSURE ON THE PROPERTIES OF COPPER FILMS AT MAGNETRON DEPOSITION*

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The effect of operating pressure and additional electron injection during magnetron deposition on the properties of copper films in the range of extremely low operating pressure (low than 0.1 Pa) is investigated. The planar magnetron with a copper target with a diameter of 125 mm was used. The power of the magnetron discharge was 500 W in continuous mode. The effect of the reflector electrode on plasma uniformity, deposition rate and radial uniformity of films is shown. The measurements of the mass-to-charge composition and plasma concentration at the deposition regimes were carried out.

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