

Density of vapor deposited amorphous Ge films

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Abstract

The density of vapor-deposited amorphous Ge films (a-Ge) was determined by spectrophotometry combined with Rutherford backscattering spectroscopy. It was found to be $0.99 \pm 3\%$ of the bulk value for crystalline Ge (c-Ge). This density is in agreement with the Lorentz–Lorenz law which, based upon the existing infrared data on the index of refraction of a-Ge, suggests that the density of a-Ge should be close (within 4%) to that of c-Ge.
