

Laser ellipsometry of diamond micro-sharpened aluminum mirrors

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Copper mirrors, which were deposited by various technologies, were investigated in the work. The basis for the mirrors was a ceramic substrate made by sintering and pressing silicon carbide. The working layer of copper with a thickness of 0.25-0.30 mm was applied by vacuum or galvanic deposition. After applying the copper layer, the reflective surface was formed by diamond microturning. Different optical characteristics from the angle of incidence were found for the samples. It has been found that the method of diamond turning of specimens brings mirrors to the highest quality surface, when the thickness of the oxide layer and the roughness is less.

Key words: ellipsometry, spectroellipsometry, optical properties, transition metals, oxide films, alloys, absorption spectra, reflection spectra.

Topics

Session A. Physics of condensed matter and spectroscopy

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