Electronic structure of molybdenum oxide oxidized at different pressures

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Electronic structure of molybdenum oxides obtained by the oxidation of molybdenum at an oxygen pressure of 1 Torr (thin film) and air (thick film) was studied. It was shown that a thick oxide film is formed from MoO_3 oxide, and a thin film from a mixture of MoO_3 and MoO_2 oxides, which is reflected in the form of valence band spectra. Oxygen on the surface belongs both in molybdenum oxide and in the hydroxyl group, which is associated with dissociative adsorption of water during the oxidation of molybdenum in air for a thick film.

Keywords: molybdenum oxide, oxidation, valence band, photoelectron spectroscopy.

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