Air-oxidation of Nb Nano-Films

© A.V. Lubenchenko¹, A.A. Batrakov¹, D.A. Ivanov¹, O.I. Lubenchenko¹, I.A. Lashkov¹, A.B. Pavolotsky², B. Schleicher³, N. Albert³, K. Nielsch³

 ¹ National Research University MPEI, 111250 Moscow, Russia
² Chalmers University of Technology, 41296 Goteborg, Sweden
³ IFW Dresden, Institute for Metallic Materials, 01069 Dresden, Germany
E-mail: LubenchenkoAV@mpei.ru

X-ray photoelectron spectroscopy (XPS) depth chemical and phase profiling of air-oxidized niobium nanofilms has been performed. It is found that oxide layer thicknesses depend on the initial thickness of the niobium nanofilm. The increase in thickness of the initial Nb nano-layer is due to increase in thickness of an oxidized layer.