

Physicochemical Properties of Melts Used for the Electrodeposition of Niobium

Blanka Kubikova^a, Vladimir Danek^a, and Marcelle Gaune-Escard^b

^a Institute of Inorganic Chemistry SAS, Dúbravská cesta 9, 845 36 Bratislava, Slovakia

^b École Polytechnique, IUSTI, U.M.R – C.N.R.S 6595, Technopôle de Château Gombert, 5 rue Enrico Fermi, 13453 Marseille Cedex 13, France

Reprint requests to B. K.; Fax: 00421 2 59410414; E-mail: uachkubi@savba.sk

Z. Naturforsch. **62a**, 540 – 544 (2007); received April 4, 2007

Presented at the EUCHEM Conference on Molten Salts and Ionic Liquids, Hammamet, Tunisia, September 16 – 22, 2006.

Formation of oxyfluoroniobium compounds in the binary systems $\text{KF-Nb}_2\text{O}_5$ and $\text{K}_2\text{NbF}_7\text{-Nb}_2\text{O}_5$ and in the ternary system $\text{KF-K}_2\text{NbF}_7\text{-Nb}_2\text{O}_5$ has been expected. Therefore the phase equilibrium and surface tension of the above systems have been determined. The three systems have only been investigated up to 20 mol% Nb_2O_5 because of its limited solubility. The obtained results have confirmed the formation of oxyfluoroniobium compounds.

Key words: Phase Equilibrium; Surface Tension; Molten Salts; Refractory Metal; Oxyfluoroniobium Compounds.