

HEAT EXCHANGE AND CHARGING
OF A METALLIC PARTICLE SURROUNDED
BY CONDENSED DISPERSED PHASE OF ITS OXIDE

*O.S. Chernenko, K.I. Semenov, L.A. Lyalin,
V.V. Kalinchak, O.V. Mandel*

I.I. Mechnikov Odessa National University
(2, Dvoryanskaya Str., Odessa, Ukraine;
e-mail: semenovki@te.net.ua)

S u m m a r y

The time of setting of a stationary charge of particles of copper and tantalum, heated up to the melting temperature due to the electric exchange with a condensed dispersion phase of its own oxide, is determined. It is also shown that, for every time moment, the falling metallic particle can be considered as the one having a quasistationary electric charge, due to the non-stationary heat exchange with the surrounding. Experimental data on the charge of copper particles and its cooling characteristics are presented.