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2.13 Oxidation patterns due to bombardment under variable incidence of copper monocrystals by oxygen ions

M. MEYER and C. MARELLE, *Laboratorie Rayons, C.N.R.S. Bellevue, France.*
P. HAYMANN, *Faculté des Sciences de Rouen. Rouen X, France*

2.14 Microtopography of metal surfaces eroded by ion bombardment

I. A. TEODORESCU, *Institute for Atomic Physics, Bucharest, Romania*

2.15 On the origin of surface topography on ion bombarded metal samples

N. HERMANNE and A. ART, *Physique des Surfaces, Faculté des Sciences, Université libre de Bruxelles, Brussels, Belgium*

Our replica and transmission EM studies on ion (Argon) bombarded Cu samples (dose: 10^{16} ions/cm^2)[1] and the observations of several other authors[2] enables us to propose a model for the formation of the surface structure which appears on the surface of ion-bombarded metal samples.

The fact that our experiments on bombarded bulk material and bombarded thin foils (electropolished before bombardment) give exactly the same results as far as relief structure is concerned, proves firstly that the obtained features are independent of the preparation methods[1] before bombardment of both type of samples, thus excluding electrochemical etching and thermal effects. Secondly that the mechanism must be one compatible with bulk as well as thin material, thus concerns a number of layers not exceeding a thickness of the thin films ($\simeq 150$ atomic layers).

On the other hand, due to the values of the sputtering yield[3] that correspond to the crystal orientation of the grains on which this surface structure