

Nanostructured Surfaces

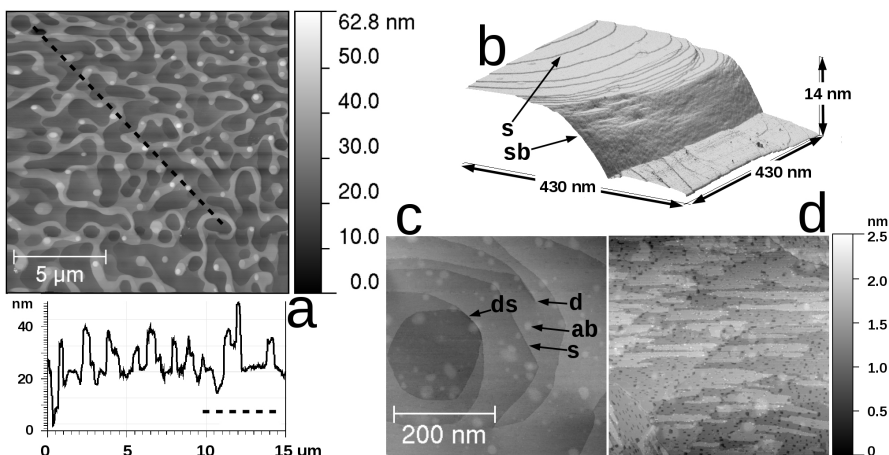
The nanostructuring of atomically flat Ru(0001) along oxidation and reduction routes

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The oxidation of ruthenium and in particular Ru(0001) is widely studied nowadays due to importance of RuO₂ both as an industrial and a model catalyst [1].



In this contribution we employ a scanning tunneling microscopy in ultra-high vacuum to study the transformation from an atomically flat Ru(0001) to heterogeneous Ru-RuO₂ nanostructured surface and investigate its morphological changes as a result of interaction with O₂, CO and Cl₂.

1. Over H. Surface chemistry of ruthenium dioxide in heterogeneous catalysis and electrocatalysis: from fundamental to applied research // Chem.Rev. -2012.-112.-P. 3356-3426.