

Abstract:

This bachelor thesis is focused on a preparation of the anisotropic surface Si(100)-In(4x3) followed by a deposition of the Copper-Phthalocyanine molecules. The objective of this thesis is to find the best preparation parameters of this surface and to determine the emergence of one-dimensional chains on the surface while using the combination of the substrate and the organic molecules. The measured data were gathered by a scanning tunnelling microscope. The measurements were conducted under an ultra-high vacuum. During the experimental work we found a suitable method of the surface preparation with a minimum of defects, and we also discovered an emergence of chains during a deposition of a small amount of molecules. The main impact of this thesis is the finding of an easy method of preparation of one-dimensional chains of organic molecules.