

## Abstract:

This bachelor thesis deals with the formation of an anisotropic surface Si (110) -Tl, which will serve as a substrate for the deposition of organic molecules of copper phthalocyanines. The aim was to identify relevant preparation parameters and optimize the producing process of surface Si (110) with the reconstruction (16x2), to find the best parameters for deposition of thallium on this surface so as to produce a surface Si (110) -Tl with reconstruction (1x1) and test the suitability of this surface as a substrate for further deposition of organic molecules. In the course of the work, the apparatus used for measurements is described, the individual measurement procedures and the physical principles associated with STM operation are also described.