Bachelor thesis

UV Nanoimprint Lithography for the fabrication of MBE growth substrates

UV nanoimprint lithography (UV-NIL) is a rather new lithographic technique for nanostructuring substrate surfaces. It defers from standard lithography techniques (such as photolithography, electron-beam lithography….) with its ability to pattern large areas (4” wafers) with nanometer-sized (well below 100 nm) structures in a fast manner, making it highly interesting for our research on SiGe islands grown on pre-patterned substrates.

Within this thesis, you will be familiarized with the UV-NIL technique including pattern transfer by reactive-ion etching, molecular-beam epitaxy of SiGe islands and atomic force microscopy. Most of the work will be done inside the cleanroom and thus you will learn important steps of nanofabricaton and nanocharacterization.

If you are interested or want to obtain more detailed information, please feel free to contact us or just visit us in the semiconductor building, ground floor, office 017!

Duration: 6 weeks
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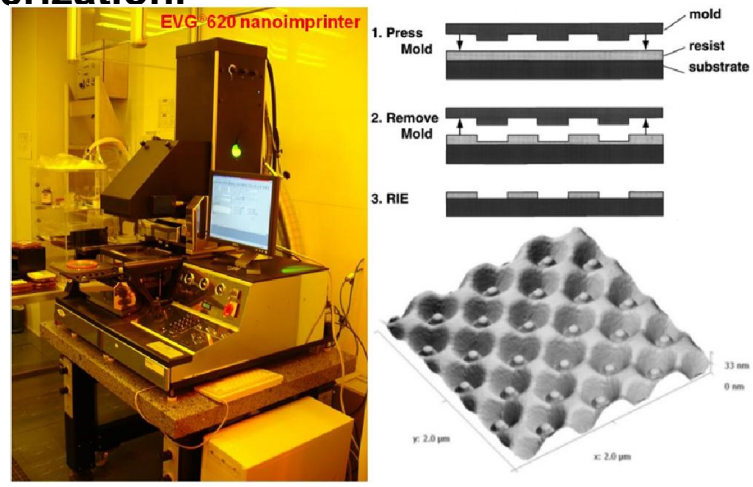

Nanoimprinter, UV-NIL process and ordered SiGe islands