FUNDAMENTALS OF NUCLEATION, CRYSTAL GROWTH AND EPITAXY

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2. Atomistic considerations of crystal surfaces – the concepts of kinks and “mean separation work”. Equilibrium structure of monatomic steps.
5. Kinetics of nucleation. Classical (capillary) and atomistic theories for the rate of nucleation.
9. Equilibrium structure of epitaxial interface between two misfitting crystals. One-dimensional model of Frank and van der Merwe for thin overlayers. Model of van der Merwe for infinitely thick crystals.

The lectures will take place every working day beginning September 15, 2008 to September 26, 2008.