"Statistical model of islands growth of metallic nanoclusters on a graphite surface"
Diploma thesis abstract

There are different ways to build up nanostructured systems but the most suited technique in terms of control is low energy cluster deposition. Deposited clusters are chaotically moving upon the substrate surface and forming nanoislands.

We introduce a statistical approach based on Langevin stochastic differential equation, that can be used to predict experimental results, e.g. islands size and shape. In this work we obtaine analitical and numerical solutions of that equation employing different parameters and initial conditions. In order to solve the Langevin equation we proceed to the Fokker-Plank equation.

We examine linear and non-linear growth of islands and produce an explanation of nonlinearity mechanisms.

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