

Exercise 3.3-1

Quick Questions to

3.3 Nucleation and Growth

Here are some class exercises and quick questions:

- What happens when first incoming atoms hits the surface of the substrate? Give at least 4 different possibilities.
- Where would you expect the first incoming atoms to be solidly bound? Use the proper terminology.
- Define "sticking coefficient". Discuss the dependenc of the sticking coefficient for a given system on the precise substrate condition for a given substrate.
- Explain briefly the major methods for investigations of the nucleation of thin films on substrates.
- Explain how you get from interface energies to forces, and from forces to the wetting angle Θ
- Discuss and name the two major growth mode following from extreme values of Θ
- Discuss and name a third major growth mode

