

O 48: Invited Talk Schmidt

Time: Thursday 10:15–11:00

Location: H36

Invited Talk

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Semiconductor nanostructures: From self-assembly to self-ordering — •THOMAS SCHMIDT — Institute of Solid State Physics, University of Bremen, Otto-Hahn-Allee 1, 28359 Bremen, Germany

The growth of well ordered, nanoscaled semiconductor structures is of high importance for many fields of application, e.g. for highly efficient light emitting devices. Different mechanisms can lead to spatial ordering of such nanostructures. In order to control their physical properties, an understanding of the ordering mechanisms is essen-

tial, which can be obtained by a detailed structural characterization. This is illustrated for CdSe/ZnSSe quantum dot stacks [1] and Ge/Si nanostructures [2] which have been investigated by grazing incidence x-ray diffraction and small angle scattering, as well as different electron diffraction and microscopy techniques.

[1] T. Passow *et al.*, Phys. Rev. B **64** (2001) 193311; Th. Schmidt *et al.*, Appl. Phys. Lett. **84** (2004) 4367; Th. Schmidt *et al.*, Phys. Rev. B **72** (2005) 195334.

[2] Th. Schmidt *et al.*, Appl. Phys. Lett. **86** (2005) 111910; Th. Schmidt *et al.*, Phys. Rev. Lett. **96** (2006) 066101.