



CO.CO.MAT

CONTROL OF QUANTUM CORRELATIONS IN TAILORED MATTER
SFB/TR 21 – STUTTGART, ULM, TÜBINGEN

Kolloquium

Prof. Dr. Werner Wegscheider
(Universität Regensburg)

Fabrication of atomically precise low-dimensional structures with cleaved edge overgrowth

Cleaved edge overgrowth (CEO) - a molecular beam epitaxy (MBE) technique which allows the fabrication of monolayer precise low-dimensional structures - was employed to fabricate quantum wires, quantum dots and modulated two-dimensional electron systems. Experimental results, both in optics and transport are presented which demonstrate the effects of the reduced dimensionality on these objects. These include excitonic lasing, Luttinger liquid behavior, artificial atom and molecule formation as well as indications of Bloch oscillating electrons. In addition, the requirements for highest purity MBE will be reviewed.

Wann? Donnerstag, 19.01.2006, 17:15 Uhr

Wo? Universität Stuttgart, Raum 2.136