



CO.CO.MAT

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

Seminar

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(Uni Heidelberg)

Radio frequency dressed state potentials for neutral atoms

Trapping potentials for atoms can be created by external fields acting on properties like magnetic moment, charge, polarizability, or by oscillating fields which couple internal states. The most prominent realization of the latter is the optical dipole potential formed by coupling ground and electronically excited states of an atom with light.

In this talk, we present potentials derived from radio-frequency (RF) coupling of electronic ground states. The coupling is magnetic and the vector character allows the design of versatile microscopic state dependent potential landscapes. The implementation of these RF potentials on an atom chip is discussed and various experiments based on this technique are discussed.

Wann? Dienstag, 10.10.2006, 10:00 Uhr

Wo? Universität Stuttgart, NWZ II, Raum 2.136