



Sonderforschungsbereich 631

Festkörperbasierte Quanteninformationsverarbeitung



TECHNISCHE
UNIVERSITÄT
MÜNCHEN

SEMINARANKÜNDIGUNG

Dienstag, 12. Februar 2008

17:15 Uhr

WSI, Seminarraum S 101

“Short time thermal processing of materials – beyond electronics and photonics to pipe organ materials”

Abstract: There is a clear and increasing interest in short time thermal processing far below one second, i.e. the lower limit of RTP (Rapid Thermal Processing) called spike annealing. It is the world of processing in the millisecond or nanosecond range. This was recently driven by the need of suppressing the so-called Transient Enhanced Diffusion in advanced boron-implanted shallow pn-junctions in the front-end silicon chip technology. Meanwhile the interest in flash lamp annealing (FLA) in the millisecond range spread out into other fields related to silicon technology and beyond. This talk reports shortly about the restart in flash lamp annealing of the Rossendorf group in collaboration with other groups and further on recent experiments regarding shallow junction engineering in germanium, annealing of ITO layers on glass and plastic foil to form an conductive layer as well as investigations which we did during the last years in the field of wide band gap semiconductor materials (SiC, ZnO). Moreover recent achievements in the field of silicon-based light emission basing on Metal-Oxide-Semiconductor Light Emitting Devices will be reported. Finally it will be demonstrated that short time thermal processing features also advantages regarding the casting of lead sheets to produce organ pipes in the spirit of the 17th century - as a completely different world of materials processing!

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