



FWF SFB INFRARED OPTICAL NANOSTRUCTURES

IR-ON SEMINAR

Infrared laser gain material: from InGaAs quantum cascades to Ge on Silicon

Hans Sigg

Paul Scherrer Institut, Villigen-PSI, Switzerland

Friday, January 14th, 2011 14:00

Technische Universität Wien Seminarraum Institut für Photonik, Gußhausstrasse 27,
1040 Wien, Raum CBEG02

Optical gain is the key property for any laser material. According to its importances, quite many spectroscopic methods are known to deliver quantitative gain analyzes. I will talk about new such methods developed by our group at the Swiss synchrotron light source (SLS) over the last years to study (i) high efficient broad band quantum cascade laser devices (ii) intersubband Raman lasing in InAlAs double quantum well system, and (iii) interband gain/loss properties of tensile strained Ge layers on Si substrate.



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Vienna University of Technology

Host: K. Unterrainer
contact: barbara.weber@tuwien.ac.at