

50th Anniversary of the Laser: A Silent Revolution

KIT Birthday Event with Nobel Prize Winners at the Stadthalle Karlsruhe on June 24

The first microwave quantum amplifier or “maser” developed by Charles H. Townes in 1954 lit the way for analog systems for light amplification, that is, lasers. The first laser was built experimentally by T.H. Maiman fifty years ago. Today, everyday life cannot be imagined without lasers used in CD/DVD devices, in eye-catching advertising or entertainment presentations or as modern pointers.

Lasers for telecommunication and data transmission, for materials processing and astronomy are far more significant. Confocal microscopy lasers provide new insights into medical and biological research. Besides, they allow analyses to be performed of processes occurring in the femtoseconds and attoseconds ranges and open the way to extreme forms of matter, from ultracold Bose-Einstein condensates to hot fusion plasmas of several million degrees Centigrade.

The Karlsruhe Institute of Technology (KIT) invites you to take part in an event on June 24 celebrating the 50th anniversary of the laser. Lectures will be presented by Nobel Prize winners Charles H. Townes (“The Laser - How New Things Happen”) and Theodor W. Hänsch (“Adventures in Laser Spectroscopy”). Demonstrations of a ruby laser will be run by 95-year-old Townes and by Dr. Marc Eichhorn of the KIT Department of Electrical Engineering and Information Technology.

50th Anniversary of the Laser, Stadthalle Karlsruhe (Festplatz 9), Thursday, June 24, 2010, tickets available at EUR 5.00, or on advance sale at the Information Center Studentenwerk Karlsruhe in the refectory lounge at the Adenauerring (Campus South), the Canteen Shop (Campus North), the KIT Library and the Tourist Information Office at the Market Square Karlsruhe (further information: Institute of Photonics and Quantum Electronics, Phone: ++49 721/608-2482, E-Mail: andrea.riemensperger@kit.edu).

More information on the history and scientific background of laser technology can be found in an [essay](#) by Dr. Marc Eichhorn, University Lecturer in Laser Physics at the KIT Department of Electrical Engineering and Information Technology and Head of the “Directed Photonics and Quantum Electronics” Division at the German-French Research Institute Saint-Louis (ISL).

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