Physikalisches Kolloquium

Institut für Optik und Atomare Physik

Dr. Stephan Strohmaier

TRUMPF Laser GmbH, Niederlassung Berlin, Berlin, Germany

"Advanced Diode Laser R&D and High Power Lasers"

High power Laser technology offers almost unlimited sustainable benefits for current and future needs of society. It enables better medical solutions not only for operations but is also, for example, used to create stents, pacemakers or artificial joints and bones. Furthermore it enables the next generation of computer chips creating 13 nm wavelength radiation. In car manufacturing up to 100 kg of materials can be saved per car using high power Lasers. Similarly beneficial effects for the environment can be achieved in aerospace and ship building. Even consumer goods from washing machines to smart phones many products would not be producible without Laser technology.

Almost all future high power Laser systems use Diode Lasers either as pump sources or directly as the core component. In the past large scale projects like the US American SHEDS program have strongly driven the development in this field. TRUMPF Berlin in conjunction with leading institutes among them different groups from and institutes associated to the TU Berlin have taken the the challenge to find solutions to the fundamental questions in this field. This talk will give an overview of the current state of high power laser technology and present world record Laser performance developed and realized in Berlin.

Thursday, 15.11.18 · 16:15h · EW 202

Technische Universität Berlin · Institut für Theoretische Physik · Hardenbergstraße 36 · 10623 Berlin