



## **Institutskolloquium**

**am Mittwoch, den 05.11.2003**

**Max-Born-Saal**

**es spricht**

**Dr. Tobias Hertel, Fritz-Haber-Institut, Berlin**

**über**

### **„Ultrafast Spectroscopy of Carbon Nanotubes“**

#### **Abstract**

Single-wall carbon nanotubes hold promise for application in a variety of nano-electronic and optical devices. This presentation will provide a brief general introduction to their geometric structure and how this relates to the fundamental electronic and mechanical properties that have sparked the interest and imagination of researchers worldwide. The talk will focus on the dynamics of optically excited single- and double-wall carbon nanotubes which are investigated in quasi-crystalline form – as so called nanotube ropes – or as individual entities in aqueous solution. Results from CW absorption-, time-resolved photoemission- and time-resolved photoluminescence spectroscopy provide us with a wealth of information on free-carrier- and exciton dynamics. With recent advances in nanotube processing, purification- and separation- capabilities, the current spectroscopic work is expected to constitute a first important step towards a better understanding of dynamical processes in these unique one-dimensional materials.

Interessenten sind herzlich eingeladen

Prof. W. Radloff