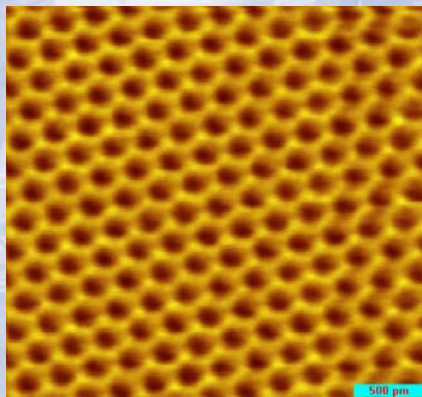


EINLADUNG ZUM
WIENER PHYSIKALISCHEN KOLLOQUIUM

**GRAPHENE:
RELATIVISTIC ELECTRONS IN FLATLAND**

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The recent discovery of graphene, a one-atom thick membrane of crystalline Carbon, has opened an extraordinary arena for new physics and applications stemming from charge carriers that are governed by quantum-relativistic dynamics. I will review the physical properties of this material and present recent experimental results obtained with scanning tunneling microscopy and magneto-transport which provided access to the unusual charge carriers in graphene. The findings include direct observation of the Landau level energy spectrum that governs the motion of the relativistic charge carriers in a magnetic field, observation of the fractional quantum Hall effect and a magnetically induced insulating phase.



Scanning tunneling microscopy image of graphene showing the honeycomb arrangement of Carbon atoms. G. Li, A. Luican, E.Y. Andrei, *Phys. Rev. Lett* **102**, (2009).

Montag, 15. März 2010, 17:30 Uhr
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