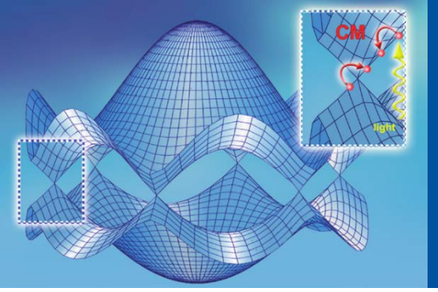

International workshop on

Many-body phenomena in graphene

Gothenburg University / Chalmers University, Origo building, PJ room, October 26-27

Workshop Motivation and Topics

The continuing trend to miniaturization of devices in modern technology reaches the fundamental physical limits of current materials. The search for novel structures with new functionalities has brought graphene into the focus of research.

The goal of workshop is to bring researchers within the Gotheburg Center of Physics and some selected leading international scientist to a smaller scale meeting with focus on further understanding of many-body phenomena in graphene and how to utilize these for future applications. The intention is to have a mix of theory and experimental researchers with the aim to initiate promising collaborations.

Topics

- Non-equilibrium dynamics
- Optics
- Transport
- Many-particle interactions
- Experimental tools
  - ARPES
  - Pump-Probe spectroscopy
  - Photoluminescence
- Theoretical methods
  - Density functional theory
  - Density matrix theory

Workshop program

Monday, October 26, 2015

13:30 Opening (Bo Hellsing)

13:45 **Jari Kinaret** (Chalmers University)
Graphene and the Graphene Flagship

14:15 **Philip Hofman** (Aarhus University)
Electronic Structure and Electron Dynamics in 2D Materials

15:00 **Thomas Frederiksen** (Donostia Internat.Physics Center)
Atomic-scale electrical contacts to sp2 carbon-STM experiments and transport simulations of single-C60 junctions

15:45 Coffee break

16.15 **Rudolph Bratschitsch** (University of Münster)
Atomically thin transition metal dichalcogenides light up

17:00 **Saroj Prasad Dash** (Chalmers)
Spintronics with two-dimensional materials and heterostructures

19.00 Dinner

Tuesday, October 27, 2015

9:00 **Stephan Winnerl** (Helmholtz-Zentrum Dresden)
Coulomb scattering in the vicinity of the Dirac point in graphene

9:45 **Florian Wendler** (TU Berlin)
Microscopic modelling of carrier dynamics in Landau-quantized graphene

10:30 Coffee break

11:00 **Tim Wehling** (University of Bremen)
From optics to superconductivity Coulomb interactions in 2D materials

11:45 **Paul Erhart** (Chalmers University)
Microscopic origin of thermal conductivity reduction in disordered van d.Waals solids

12.30 Lunch break

14:00 **Justin Wells** (Norwegian University of Science and Technology)
Towards design of 2D materials

14:45 **Craig Polley** (Lund University)
Growth and ARPES studies of topological crystalline insulator films

15:30 Closing (Ermin Malic)

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