

International Winterschool on "Electronic Properties of Novel Materials: Molecular Nanostructures" Kirchberg/Tirol

04.03. - 11.3. 2006

Update 16.02..2006

Tentative program

SA 04.03. Evening

- 17:00 Check in for IWEPNM2006
- 21:00 Welcome, with Bürgermeister of Kirchberg

SU 05.03 Morning: Introduction, transport I:

- 08:30 AVOURIS (Yorktown Heights)
[Carbon nanotube electronics and optoelectronics](#)
- 09:30 FUHRER (College Park)
[Electronic properties of semiconducting carbon nanotubes](#)
- 10:00 Coffee break
- 10:30 BACHTOLD (Bellaterra)
[Four-point resistance of nanotubes](#)
- 11:00 HARUYAMA (Kanagawa)
[High-Tc superconductivity in entirely end-bonded carbon nanotubes](#)
- 11:30 KIM (New York)
[Electric transport phenomena in nanotubes and graphene](#)

Afternoon: Miniworkshops

- 17:00-18:30 Dinner

Evening: Transport II

- 18:30 KOUVENHOVEN (Delft)
[Quantum Transport in Nanowires and Nanotubes](#)
- 19:00 STRUNK (Regensburg)
[Aharonov-Bohm effects in multiwall carbon nanotubes](#)
- 19:30 SCHÖNENBERGER (Basel),
[Observation of an oscillating magnetoresistance with gate voltage in carbon-nanotube based TMR devices](#)
- 20:00 FUJII (Kasuga)
[Measurements of thermal conductivity of individual carbon nanotubes](#)

MO 06.03. Morning: Preparation

- 08:30 HATA (Tsukuba)
[From super growth to DWNT forests, CNT solids, flexible transparent CNT films and super-capacitors and much more](#)
- 09:00 KONG (Cambridge, US)
[Towards chirality controlled synthesis of single-walled carbon nanotubes](#)
- 09:30 PAPADIMITRAKOPULOS (Storrs)
[Utilizing the inherent redox differences of single wall carbon nanotubes to fractionalize them according to diameter and metallicity](#)
- 10:00 Coffee break
- 10:30 HAUGE (Houston),
[Studies of the role of atomic hydrogen in the growth of SWNT and vertically aligned carbon nanotubes](#)
- 11:00 RÜMMELI (Dresden)
[Novel catalysts, room temperature and the importance of oxygen for the synthesis of single wall carbon nanotubes](#)

11:30 KAUPINEN (Espoo)
Fullerene-functionalised carbon nanotubes - novel hybrid nanomaterial

Afternoon: Miniworkshops

17:00-18:30 Dinner

Evening : Application I, electronic

18:30 WEISMAN (Houston)
Near-infrared fluorescence of single-walled carbon nanotubes: applications

19:00 HONE (New York)
Transport measurements in nanotubes with known (n,m) indices

19:30 BAUGHMAN (Dallas),
Solid-state fabrication, structure, and multifunctional applications of carbon nanotube yarns and transparent sheets

20:00 CAROLL (Winston-Salem),
Novel mesophase nanocomposite organic photovoltaics

20:30 HORNOSTL (Stuttgart)
Single-walled carbon nanotube polymer composites: properties and implications for practical use

TU 07.03. Morning: Optical excitation

08:30 HEINZ (New York)
Recent advances in the optical spectroscopy of single-walled carbon nanotubes

09:30 LOUIE (Berkeley)
Excitons and the optical response of nanotubes and nanowires

10:00 Coffee break

10:30 MAULTZSCH (Berlin),
Excitons in carbon nanotubes

11:00 KONO (Houston)
Magneto-optical spectroscopy of excitons in carbon nanotubes

11:30 HERTEL (Nashville),
Exciton dynamics in carbon nanotubes

Afternoon:

15:00 Miniworkshop: Scientific supplies and industrial needs:
The commercialization of carbon nanophases
Please contact M. Hulman at: martin.hulman@univie.ac.at

17:00-18:30 Dinner

Evening: Raman spectroscopy and luminescence

18:30 JORIO (Belo Horizonte),
Intensity issues and screening of excitons in quasi-one-dimensional carbon nanotubes and resonance profile of one-dimensional carbon chains

19:00 NOVOTNY (Rochester)
Nanoscale spectroscopy with optical antennas

19:30 MARUYAMA (Tokyo),
Photoluminescence studies of cross-polarized absorption of single-walled carbon nanotubes

Poster I (poster A – L)

WE 08.03. Morning: Template grown nanomaterials

08:30 SUENAGA (Tsukuba),
HR-TEM imaging of molecules and ions trapped inside carbon nano-spaces

09:00 SLOAN (Oxford),
Structural correlation of band-gap modifications induced in mercury telluride by dimensional constraint in single walled carbon nanotubes

09:30 PFEIFFER (Wien)
Tube-tube interaction in template grown single wall carbon nanotubes

10:00 Coffee break

10:30 ALLOUL (Orsay)

[NMR evidence for uniform electronic properties in a macroscopic set of DWCNT](#)

11:00 FORRO (Lausanne)

[Conduction electron spin resonance of single wall carbon nanotubes](#)

11:30 SIMON (Budapest)

[C₅₉N monomer spins inside single-wall carbon nanotubes: rotational dynamics, charge transfer, and local density of states.](#)

Afternoon: Miniworkshops

17:00-18:30 Dinner

Evening: Nanomechanics

18:30 RUDOLF (Groningen)

[Macroscopic transport by synthetic molecular machines](#)

19:00 MEYER (Stuttgart)

[Nano-electromechanical devices based on single-walled carbon nanotubes](#)

19:30 PEKKER (Budapest),

[Rotor-stator phases of fullerenes with cubane derivatives : A novel family of heteromolecular crystals](#)

20:00 Break

Night: Celebration 20th IWEP:

20:10 MEHRING (Stuttgart)

[Twenty International Winterschools in Kirchberg: How come?](#)

20:50 IIJIMA (Nagoya)

[Nano-carbon materials: formation, characterization, and applications](#)

TH 09.03. Morning: Theory

08:30 MACHON(Berlin)

[Electron phonon coupling in carbon nanotubes](#)

09:00 FERRARI (Cambridge, UK)

[Electron phonon coupling, Raman spectra and electron transport in nanotubes](#)

09:30 MAURI (Paris)

[Hot phonons in carbon nanotubes and superconductivity in Ca intercalated graphite](#)

10:00 Coffee Break

10:30 SAITO (Tokyo),

[Superconductivity in carbon: from C₆₀ to diamond](#)

11:00 REICH (Cambridge, US)

[Chirality control of carbon nanotubes by epitaxial growth](#)

11:30 CARLSSON (Berlin)

[Structural and electronic properties of vacancies in nanotubes](#)

Afternoon: Miniworkshops

17:00-18:30 Dinner

Evening: Application II, chemistry

18:30 SCHLÖGL (Berlin)

[Surface chemistry & heterogeneous catalysis of carbon nanostructures](#)

19:00 HIRSCH (Erlangen)

[Chemical functionalization of fullerenes and carbon nanotubes](#)

19:30 WONG (Stanford),

[Exploiting the intrinsic properties of single-walled carbon nanotubes for transport and delivery of biological cargos and triggering cell death](#)

Poster II (poster M – Z)

FR 10.3. **Morning: Single molecule experiments & non carbon nanophases**

- 08:30 V D ZANT (Delft)
[Three-terminal transport through molecular junctions](#)
- 09:00 YACOBY (Rehovot)
[Measurement of the conductance of single conjugated molecules](#)
- 09:30 VON OPPEN (Berlin),
[Pair tunneling through single-molecule junctions](#)
- 10:00 Coffee break
- 10:30 LOISEAU (Chatillon)
[C-N and C-BN single wall nanotubes: growth and structural properties](#)
- 11:30 DÜSBERG (Dresden)
[Silicon nanowires as electronic devices: CVD growth and characterisation](#)
- 12 :00 PRINZ (Novosibirsk)
[Ultra-precise molecularly thin semiconductor shells: from nanotubes to nanocorrugated quantum Systems](#)

Afternoon: Miniworkshops

Evening: Application III, biology

- 17:00 BRUININK (St. Gallen)
[In vitro evaluation of possible adverse effect of nanosized materials](#)
- 17:30 JOHNSON (Philadelphia),
[DNA-decorated carbon nanotubes for chemical sensing](#)
- 18:00 ARTUKOWICH (Los Angeles),
[Carbon nanotube networks as a material for probing biological interactions](#)
- 18:30 PICHLER (Dresden)
[Summary](#)
- 20:30 **Bauernbuffet, fare well**

SA 11.3. Departure