

SPP 1243  
**1. Midterm Meeting**  
June 24<sup>th</sup> – 27<sup>th</sup>, Jacobs University Bremen

**Sunday, June 24<sup>th</sup>:**

**Dinner and informal get-together, Jacobs University Faculty Club**

**Monday, June 25<sup>th</sup>:**

**1. Break-junction and STM experiments:**

- **8:45 - 9:00:** Greetings and Introduction (Thomas Frauenheim, Ulrich Kleinekathöfer)
- **9:00 - 9:45:** Single Molecule Transport Experiments with Optimized Structural Control (Stefan Tautz, invited speaker).
- **10:00 - 10:30:** Electronic Transport through ds-DNA Molecules in Different Environments (Elke Scheer).
- **10:30 – 10:50:** Break
- **10:50 - 11:20:** Carbon Nanotubes as Mesoscopic Gates for Molecular Electronics (Alexander Holleitner).
- **11:20 - 11:50:** Transport Measurements of Alkane Molecules (Artur Philipp Nikolaus Erbe).
- **11:50 - 12:20:** Inducing Charge States in Single-Molecule Junctions (Mario Ruben).

**Lunch**

**2. Simulation of transport and circuits in molecular electronics**

- **13:30 - 14:00:** Modelling of Molecular Systems for Circuit Applications (Paolo Lugli).
- **14:00 – 14:30:** A Single-Molecule Switch: Tuning the Conductance at the Nanoscale (Miriam del Valle).
- **14:30 – 15:00:** Conduction Channels and Propensity Rules in Inelastic Electron Tunneling Spectroscopy (Alessio Gagliardi).
- **15:00 – 15:20:** Break
- **15:20 - 15:50:** Laser-Driven Molecular Wires: Coulomb Repulsion Effects in the Shot Noise (Franz-Josef Kaiser).
- **15:50 - 16:20:** Vibronic Effects on Resonant Electron Conduction through Single Molecule Junctions (Claudia Benesch).

**Poster session: 16:20 – 18:20**

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**Tuesday, June 26<sup>th</sup>:**

**1. Theoretical developments in molecular transport**

- **9:00 – 9:30:** Heat Dissipation in Molecular Junctions (Alessandro Pecchia, invited speaker).
- **9:30 - 10:00:** Vibrational Absorption Sidebands in the Coulomb Blockade Regime (Felix von Oppen).
- **10:00 - 10:30:** Iterative Path-Integral Simulations of Molecular Quantum Transport (Michael Thorwart).
- **10:30 – 10:50:** Break
- **10:50 - 11:20:** Correlated Transport through Single Molecules (Dmitry Ryndyk).
- **11:20 - 11:50:** Nonadiabatic Electron Heat Pump (Miguel Rey Mazón)
- **11:50 - 12:20:** Limits of the Wingreen Meir and Lee Approximation (Andrea Donarini).

**Lunch**

**2. STM and STS measurements**

- **13:30 - 14:00:** An Electrical Approach to Single Molecular Conductance Measurements (Thomas Wandlowski).
- **14:00 - 14:30:** Transport through Single Ferrocene Molecules in Between Ultra-Thin Metallic Ag Contacts (Christoph Tegenkamp).
- **14:30 - 15:00:** Local Control of Single-Molecule Conductivity Probed by Scanning Tunneling Microscopy and Spectroscopy (Lucia Vitali).
- **15:00 - 15:20:** Break
- **15:20 - 15:50:** Aspects of Electron Transport through Fullerenes (Gunnar Schulze)
- **15:50 – 16:20:** Carboxylic Acids on Cu(110) (Nicolae Atodiresei).

**Poster session:            16:20 – 18:00**

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**Wednesday, June 27<sup>th</sup>:**

**1. Conduction measurements in organic molecules and theory of transport**

- **9:00 – 9:30:** Electronic Quantum Transport from First-Principles (Georgos Fargas, invited speaker)
- **9:30 - 10:00:** Electronic Transport Measurements through Organic Molecules (Daniel Secker).
- **10:00 – 10:30:** DFTB Hopping Parameter to Investigate DNA Conduction (Marcus Elstner).
- **10:30 - 10:50:** Break
- **10:50 - 11:20:** Quasi-Molecular Orbitals and Transport (Laurent Chaput).
- **11:20 - 11:50:** Transport Induced Non-Equilibrium Vibrations in Single Molecules (Martin Leijnse).
- **11:50 - 12:20:** Coherent Laser Control of the Current through Molecular Junctions (GuangQi Li).
- **12:20 – 12:40:** Final Remarks (Klaus Richter, Heiko Weber, Thomas Frauenheim).

**Lunch**

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**Some general information:**

- All meals will take place in the servery of Mercator College!  
(Expect the dinner on Sunday evening which takes place in the University Club.)

The opening hours are as follows:

Breakfast	8:00-9:30 am
Lunch	12:00-1:00 pm
Dinner	6:00-7:00 pm

- cold and hot beverages are included -

**Please wear your name tag while eating in the servery!!**

- The lectures take place in the lecture hall of Research III.  
Posters can be displayed during the whole meeting in the Foyer of Research III.
- Terminals with internet access are available in the Information Resource Center (IRC) on the first floor.  
Wireless internet access is possible in Research III and wired access in your rooms in Mercator college.  
A limited number of ethernet cables can be borrowed at the registraion desk (10 Euro deposit).
- On the day of your departure your room has to be cleared after lunch.  
**Please return the keys to the porter!**