

# Program

**Sunday, 29 May 2011**

17:00 – 21:00 Registration

from 18:30 *BUFFET SUPPER / informal get together*

20:00 – 20:45 Jan Peter Toennies **Some old and new ideas about quantum fluid clusters**

**Monday, 30 May 2011**

7:30 *BREAKFAST*

8:30 – 8:45 Wolfgang Ernst **Welcome and opening remarks**

8:45 – 9:00 Ernst Dreisigacker **About the Wilhelm and Else Heraeus Foundation**

9:00 – 9:45 William Stwalley **Collision dynamics in cold environments**

9:45 – 10:15 Kevin Lehmann **Helium nanodroplets for study of chemical reactions of importance in astrochemistry**

10:15 – 10:45 *COFFEE BREAK*

10:45 – 11:30 David Chandler **Atoms and molecules that aren't quite collisionally cooled**

11:30 – 12:15 Franco Gianturco **Microstructural effects in confined bosonic helium: ionic and neutral dopants in small droplets**

12:15 – 12:30 Klaus von Haeften **The electronically excited states of helium clusters investigated by time-resolved fluorescence spectroscopy**

12:30 **Conference Photo** (in the front of the Physikzentrum)

12:35 *LUNCH*

# Program

**Monday, 30 May 2011**

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|---------------|------------------------------------|---|
| 14:00 – 14:45 | Carlo Callegari                    | <b>Spectroscopy in He nanodroplets, from microwaves to soft X-rays</b>  |
| 14:45 – 15:00 | Robert Hinde                       | <b>Solvation in helium nanodroplets: The role of three-body interactions</b>  |
| 15:00 – 15:45 | Giorgio Benedek                    | <b>Localized collective excitations in helium nanodroplets probed by chromophore optical transitions</b>                                    |
| 15:45 – 16:15 | <i>COFFEE BREAK</i>                |   |
| 16:15 – 17:00 | Robert Zillich /<br>Alexandra Viel | <b>Dynamics of atoms and molecules in helium</b>  |
| 17:00 – 17:15 | Marcel Drabbels                    | <b>Evidence of an unusual Rydberg system: A positively charged helium nanodroplet with orbiting electron</b>                                |
| 17:15 – 17:30 | Florian Lackner                    | <b>Experimental investigation of <math>nS</math>, <math>nP</math> and <math>nD</math> Rydberg series of Cs atoms on helium nanodroplets</b> |
| 17:30 – 18:15 | Marius Lewerenz                    | <b>Quantum simulations of helium with charged and open shell dopants</b>  |
| 19:00         | <i>CONFERENCE DINNER</i>           |   |

*Followed by a social evening on invitation  
of the Wilhelm and Else Heraeus Foundation  
in the Physikzentrum*

# Program

**Tuesday, 31 May 2011**

7:30	<i>BREAKFAST</i>	
8:30 – 9:15	Gerard Meijer	<b>Taming molecular beams</b>
9:15 – 10:00	Frédéric Merkt	<b>Electronically excited cold molecules</b>
10:00 – 10:15	<b>Discussion</b>	
10:15 – 10:45	<i>COFFEE BREAK</i>	
10:45 – 11:30	Martina Havenith	<b>Rock and Roll at 0.37 K</b>
11:30 – 11:45	Friedrich Huisken	<b>Oxidative reactions of group IIA and IIIA elements in helium droplets</b>
11:45 – 12:30	Nadine Halberstadt	<b>Dynamics of doped helium droplets: New method and new results</b>
12:30	<i>LUNCH</i>	

# Program

**Tuesday, 31 May 2011**

- |               |                                      |   |
|---------------|--------------------------------------|---|
| 14:00 – 14:45 | Josef Tiggesbäumker                  | <b>Strong field ionization of xenon clusters in helium droplets: From systematic studies to control</b>                 |
| 14:45 – 15:00 | Nikolai Kryzhevoi                    | <b>Strong impact of helium atoms on the relaxation dynamics of their ionized neighbors: From dimers to nanodroplets</b> |
| 15:00 – 15:45 | Paul Scheier                         | <b>Ion chemistry in doped He nanodroplets</b>   |
| 15:45 – 16:15 | <i>COFFEE BREAK</i>                  |   |
| 16:15 – 17:00 | Frank Stienkemeier                   | <b>Helium droplets and other cryogenic matrices: Properties and short time dynamics</b>                                 |
| 17:00 – 17:15 | Markus Koch                          | <b>Electron spin resonance on helium nanodroplets as diagnostic tool for magnetic properties and spin dynamics</b>      |
| 17:15 – 18:00 | Manuel Barranco                      | <b>Desorption of alkali atoms from <math>^4\text{He}</math> nanodroplets</b>  |
| 19:00         | <i>DINNER</i>                        |   |
| 20:00         | <b>Poster session and discussion</b> |   |

# Program

Wednesday, 1 June 2011

7:30	<i>BREAKFAST</i>	
8:30 – 9:15	Andrey Vilesov	<b>Helium droplet experiments: From nano- to micro-droplets</b>
9:15 – 10:00	Vitaly Kresin	<b>Evaluation of critical sizes for the submersion of alkali clusters into liquid helium; state densities of droplet bulk and surface excitations</b>
10:00 – 10:15	Marcel Mudrich	<b>Femtosecond spectroscopy of alkali (K,Rb) trimers and picosecond spectroscopy of RbHe exciplexes formed on He nanodroplets</b>
10:15 – 10:45	<i>COFFEE BREAK</i>	
10:45 – 11:30	Jean-Michel Mestdagh	<b>Dynamics of highly excited barium atoms deposited on large argon clusters</b>
11:30 – 11:45	Takamasa Momose	<b>Methane in He nanodroplets: A probe of the dynamical response of superfluid</b>
11:45 – 12:30	Wolfgang Jäger	<b>Spectroscopy of hydrogen peroxide embedded in helium nanodroplets</b>
12:30	<i>LUNCH</i>	

# Program

**Wednesday, 1 June 2011**

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|---------------|---|---|
| 14:00 – 14:45 | Alkwin Slendczka  | <b>Electronic spectroscopy and photochemistry of molecules doped into superfluid helium nanodroplets: Prospects and limitations</b> |
| 14:45 – 15:00 | Frank Filsinger /<br>Gert von Helden                    | <b>Proteins in the fridge: Embedding biomolecular ions in liquid helium droplets</b>  |
| 15:00 – 15:45 | Wei Kong  | <b>Structures of biological molecules in superfluid helium droplets: Spectroscopy and diffraction</b>                               |
| 15:45 – 16:00 | Gary Douberly   | <b>Rovibrational spectroscopy of aluminum carbonyl clusters in helium nanodroplets</b>  |
| 16:00         | <b>Discussion, concluding remarks and poster awards</b> |   |

## **End of the seminar and departure**

- 18:30      *DINNER for participants leaving on Thursday morning  
(public holiday in Germany: Christi Himmelfahrt / Ascension Day)*