

## Sunday, 28 September

### Session 1

- Chair: Martin Quack, ETH Zürich
- 19:30 – 20:15 Jürgen Troe, Göttingen  
Reaction Dynamics with Wavepackets, Adiabatic Channels and Classical Trajectories
- 20:15 – 21:00 Martin Jungen, Basel  
What is a muon doing in atoms or molecules ?

## Monday, 29 September

### Session 2

- Chair: Werner Kutzelnigg, Bochum
- 08:30 – 09:15 Wim Klopper, Karlsruhe  
Explicitly correlated calculations of excitation energies
- 09:15 – 10:00 David Luckhaus, Göttingen  
Direct Multi-Arrangement Quantum Dynamics: From Vibrations to Reactions
- 10:00 – 10:30 Coffee Break

### Session 3

- Chair: Peter Botschwina, Göttingen
- 10:30 – 11:15 John P. Maier, Basel  
Electronic Spectroscopy of Carbon Chains and Such: Relevance to Astrophysics and Nanoscience
- 11:15 – 12:00 Frédéric Merkt, ETH Zürich  
High-Resolution VUV Spectroscopy, Rydberg States and Cations
- 12:00 – 14:00 Lunch Break

### Session 4

- Chair: Wilfried Meyer, Kaiserslautern
- 14:00 – 14:45 Hans-Joachim Werner, Stuttgart  
Explicitly correlated local wavefunctions: LMP2-R12 with density fitting
- 14:45 – 15:30 Jeppe Olsen, Aarhus  
Coupled Cluster Expansions with Quadruple and Higher Excitations
- 15:30 – 16:00 Coffee Break

### Session 5

- Chair: Jürgen Hinze, Bielefeld
- 16:00 – 16:45 Gernot Frenking, Marburg  
The Nature of the Chemical Bond - Old Questions, New Answers
- 16:45 – 17:30 Kimihiko Hirao, Tokyo (PCCP Lecture)  
Recent advances in electronic structure theory
- 18:00 – 19:30 Dinner Break
- Mounting of Posters
- 19:30 – 22:00 Poster Session (EVEN numbered)

Tuesday, 30 September

Session 6

Chair: Walter Thiel, Mülheim  
08:30 – 09:15 N.N. (Hellmann Prize)

09:15 – 10:00 Tom Rizzo, Lausanne  
State-resolved molecule surface reactions - a challenge for theoreticians

10:00 – 10:30 Coffee Break

Session 7

Chair: Hans-Peter Lüthi, ETH Zürich

10:30 – 11:15 Roberto Marquardt, Marne-la-Vallée  
Vibrational and Rotational Wave Packet Motion in Polyatomic Molecular Systems

11:15 – 12:00 Regina de Vivie-Riedle, München  
Analysis and coherent control of ultrafast molecular processes

12:00 – 14:00 Lunch Break

Afternoon: Posters / Discussions / Free / Excursion

19:00 BBQ Dinner

Wednesday, 1 October

Session 8

Chair: Dirk Schwarzer, Göttingen

08:30 – 09:15 Sam Leutwyler, Berne  
Excited-state H-atom transfer along a hydrogen-bonded "wire"

09:15 – 10:00 Martina Havenith, Bochum  
Hydrogen Bonds: New Answers to old Questions

10:00 – 10:30 Coffee Break

Session 9

Chair: W.H. Eugen Schwarz, Siegen

10:30 – 11:15 Marius Lewerenz, Paris  
Vibrational Dynamics and Structure in Molecular and Ionic Clusters

11:15 – 12:00 Walter Thiel, Mülheim  
Ab Initio Vibration-Rotation Spectroscopy

12:00 – 14:00 Lunch Break

Session 10

Chair: Frédéric Merkt, ETH Zürich

14:00 – 14:45 Martin Suhm, Göttingen  
Vibrational Dynamics of Molecular Handshakes

14:45 – 15:30 Tomasz Wesolowski, Geneva  
Electron density partitioning as a route towards accurate multi-scale modeling of complex molecular systems and materials

15:30 – 16:00 Coffee Break

Wednesday, 1 October (continued)

- Session 11** Chair: Kim Baldrige, Zürich  
16:00 – 16:45 Joachim Sauer, Berlin  
Calculations on transition metal oxides - from gas phase clusters to solid catalysts  
16:45 – 17:30 Claude Daul, Fribourg  
Modelling magnetic and spectroscopical properties of coordination compounds  
17:30 – 18:00 Mitgliederversammlung: Arbeitsgemeinschaft für Theoretische Chemie  
18:00 – 19:30 Dinner Break  
  
Mounting of Posters  
  
19:30 – 22:00 Poster Session (ODD numbered)

Thursday, 2 October

- Session 12** Chair: Jürgen Stohner, Winterthur  
08:30 – 09:15 Jürgen Gauss, Mainz  
Rovibrational Spectroscopy and Quantum Chemistry  
09:15 – 10:00 Markus Reiher, Erlangen  
Mode-Tracking: A new method for the calculation of pre-selected molecular vibrations  
10:00 – 10:30 Coffee Break  
  
**Session 13** Chair: Ralph Jaquet, Siegen  
10:30 – 11:15 Lorenz Cederbaum, Heidelberg  
Intermolecular decay and ultrafast energy transfer in clusters and weakly bound systems  
11:15 – 12:00 William H. Miller, Berkeley  
Using the Initial Value Representation of Semiclassical Theory to Add Quantum Effects to Classical Molecular Dynamics Simulations  
12:00 – 14:00 Lunch Break  
  
**Session 14** Chair: Dominik Marx, Bochum  
14:00 – 14:45 Nikos Doltsinis, Bochum  
Excited state tautomerism of the DNA base guanine  
14:45 – 15:30 Michele Parrinello, Zürich/Lugano  
Calculation of free energy surfaces in classical and *ab-initio* molecular dynamics  
15:30 – 15:35 Closing of the Meeting  
  
Departure

# 39<sup>th</sup> Symposium on Theoretical Chemistry MOLECULAR SPECTROSCOPY AND DYNAMICS

## 28 September to 2 October 2003

Gwatt, Lake Thun, Switzerland

*Organized by H.-P. Lüthi, M. Quack and J. Stohner*

	Time	Sunday, 28 Sep	Monday, 29 Sep	Tuesday, 30 Sep	Wednesday, 1 Oct	Thursday, 2 Oct	Time		
<b>Morning Session</b> <b>8:30-12:00</b>	8:30-9:15	Arrival and Registration (from 3 pm)	Klopper Luckhaus	N.N. (Hellmann Lecture) Rizzo	Leutwyler Havenith	Gauss Reiher	8:30-9:15		
	9:15-10:00		<b>C o f f e e</b>		<b>B r e a k</b>		10:00-10:30		
10:00-10:30	Maier Merk		Marquardt de Vivie-Riedle	Lewerenz Thiel	Cederbaum Miller	10:30-11:15			
10:30-11:15			<b>L u n c h</b>		<b>B r e a k</b>		11:15-12:00		
11:15-12:00	Werner Olsen		Excursion or free		Suhm Wesolowski	Doltsinis Parrinello	12:00-14:00		
12:00-14:00					<b>C o f f e e</b>		AGTC Meeting <b>D i n n e r</b>		14:00-14:45
14:00-14:45	Frenking Hirao (PCCP Lecture)		BBQ Dinner		Departure				14:45-15:30
14:45-15:30							<b>D i n n e r</b>		15:30-16:00
<b>Afternoon Session</b> <b>14:00-18:00</b>	15:30-16:00		Troe Jurgen		Poster Session (even numbered)		Poster Session (odd numbered)		16:00-16:45
	16:00-16:45								16:45-17:30
<b>Evening Session</b> <b>19:30-22:00</b>	16:45-17:30	Troe Jurgen		BBQ Dinner		Poster Session (odd numbered)		17:30-18:00	
	17:30-18:00							18:00-19:30	18:00-19:30
	18:00-19:30	Troe Jurgen		BBQ Dinner		Poster Session (odd numbered)		19:30-20:15	
	19:30-20:15							20:15-21:00	

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