Program

Sunday, August 24th

16.30–18.30 Registration
17.30–18.30 Reception
18.40–18.50 Welcome – Gunnar Nyman
18.50–19.00 Welcome – Dean of Science, Elisabet Ahlberg

Chair: Dag Hanstorp
19.00–20.00 I1: Richard Zare, *Preparation of Molecular Hydrogen in a Controlled Superposition of $|vJM\rangle$ States*
20.00–21.00 I2: David Manolopoulos, *Photochemistry, semiclassical spin dynamics, and the avian navigation problem*

Monday, August 25th

Theory, Chair: Sture Nordholm

09.00 I3: Uwe Manthe, *State-resolved quantum dynamics of polyatomic reactions*
09.40 I4: Irene Burghardt, *Quantum dynamics of exciton migration and dissociation in functional organic polymer materials*
10.20 C1: Rita Prosmiti, *The role of large-amplitude motions in the IR spectra of H_5^+/D_5^+ cations*
10.40 Coffee
11.10 I5: Stuart C. Althorpe, *Is there a quantum transition-state theory?*
11.50 I6: Nandini Ananth, *Novel Path-Integral Based Dynamics for Photochemistry*
12.20 C2: Jeremy O. Richardson, *Nonadiabatic ring-polymer molecular dynamics rate theory*

12.40–14.00 Lunch

Experiments, Chair: Mats Larsson

14.00 I7: Kopin Liu, *Effects of reagent rotational excitation on Cl + CH_4/CHD_3 reactions*
14.40 I8: Ian Sims, *Radical reactivity at very low temperatures*
15.10 C3: Astrid Bergeat, *Crossed-beam inelastic scattering experiments at energies approaching the cold regime*
15.30 Coffee
16.00 I9: Gerard Meijer, *Taming beams of neutral molecules*
16.40 I10: Mark Brouard, *The stereodynamics of inelastic scattering of NO(X) by the rare gases*
17.20 C4: Matthew Costen, *Probing the surface of ionic liquids through collisions with gas-phase atoms*
17.40 C5: Thomas Pino, *Intramolecular processes revealed using UV-Laser-Induced IR-Fluorescence of the first electronic transition of Benzene*

Monday evening – City of Gothenburg reception 19.00–20.30

Tuesday, August 26th

Astrochemistry/astrophysics, Chair: Stefan Andersson

09.00 I11: Eric Herbst, *Gas-Grain Chemical Simulations of Star-forming Regions*
09.40 I12: Liv Hornekær, *Polycyclic aromatic hydrocarbons as catalysts for interstellar chemical complexity*
10.10 C6: Victor Herrero, *Vibrational spectroscopy and kinetics of the astronomically relevant ArH^+ ion in Ar/H_2 cold plasmas*
10.30 Coffee
11.00 I13: Laurent Wiesenfeld, *Molecular collisions for Astrophysics: theory and experiments*
11.40 I14: Herma Cuppen, *Kinetic Monte Carlo simulations of interstellar grain surface chemistry*
12.10 C7: Nathalie de Ruette, *Merged beam studies for astrobiology*

12.30–14.00 Lunch

Theory, Chair: Magnus Gustafsson

14.00 I15: Donghui Zhang, *Differential Cross Sections for the H+CD_4 and H+SiH_4 reactions*
14.40 I16: Octavio Roncero, *State-to-state reactive collisions with H_2 of astrophysical interest*
15.10 C8: Judith Rommel, *Chemisorption on Metal Surfaces: The Role of Quantum Tunnelling*
15.30 Coffee
16.00 I17: Tamar Seideman, *Control of Transport and Mechanical Motions in Junctions with Coherent light*
16.40 I18: Terry Frankcombe, *New Gaussian basis set methods for quantum systems*
17.10 I19: Anthony Meijer, *Quantum dynamics studies of surface-catalysed H atom recombination*
17.40 C9: Jens Poulsen, *The Classical Wigner model and the ensemble conserving problem*
18.15–19.30 Dinner
19.30–21.30 Poster session (odd numbered posters)

Wednessday, August 27th

Experiments, Chair: Raimund Feifel

09.00 I20: Murthy Gudipati, *Chemical Reaction Dynamics in Cryogenic Ices in Our Galaxy*
09.40 I21: Henrik Cederquist, *Fragmentation of polycyclic aromatic hydrocarbons and their clusters and ion storage in DESIREE*
10.10 C10: Alexandre Perret, *Temperature dependence of dissolved CO_2 diffusion in Champagne wines: a theoretical and experimental investigation*
10.30 Coffee
11.00 I22: Lars H. Andersen, *Time-resolved action spectroscopy in ion storage rings*
11.40 I23: Vitali Zhaunerchyk, *Site-specific fragmentation of varying size molecules induced by resonant K-shell excitation*
12.10 C11: David Bonhommeau, *Structure and stability of multiply-charged clusters: Application to charged droplets produced by electrospray ionisation*

Wednesday afternoon – boat excursion with lunch 13.30–16.30

17.00–19.00 Poster session (even numbered posters)

Thursday, August 28th

Atmospheric chemistry, Chair: Matthew Johnson

09.00 I24: Kristie A. Boering, *Reaction dynamics and kinetics of oxygen isotope exchange reactions: Insights into unusual isotope effects and their applications in earth and planetary science*
09.40 I25: Johan A. Schmidt, *On the origin of the high levels of Br radicals in tropical free troposphere*
10.10 I26: Theo Kurtén, *Exploring atmospheric autoxidation using quantum chemistry*
10.40 Coffee
11.10 C12: Ad van der Avoird, *In depth experimental and theoretical studies of molecular collisions*
11.30 C13: Morgane Vacher, *Coupled electron-nuclear dynamics following photoionisation of benzenes*
11.50 C14: Luís Viegas, *Exploring the influence of water in ozone depletion through the HO_2 + nH_2O + O_3 reaction: from a single water molecule to a water cage*
12.10 C15: Gábor Czakó, *Dynamics of polyatomic chemical reactions on ab initio potential energy surfaces*

12.30–14.00 Lunch

Control/Cold, Chair: Jens Poulsen

14.00 I27: Dmitry Shalashilin, *Multidimensional quantum mechanics with trajectory guided basis sets of Coherent States. From nonadiabatic photochemical reactions to dynamics of electrons in strong laser field.*
14.40 I28: Åsa Larson, *Molecular dynamics involving electronic resonant states of HeH*
15.10 C16: Adam Kirrander, *Theory and simulations for ultrafast x-ray scattering*
15.30 Coffee
16.00 I29: Olivier Dulieu, *Radiative formation of cold molecular ions in an ion/atom hybrid trap*
16.30 I30: Andreas Osterwalder, *Penning Ionization Reactions of Polyatomic Molecules at Low Temperature*

17.00 C17: Alberto García-Vela, *Resonant detection of the signature of control on a resonance state lifetime using a pumpprobe scheme*
18.00 Theater play: Lise Meitner
19.30 Conference dinner

Friday, August 28$^{\mathbf{th}}$ – departure