



4TH CONFERENCE ON ELEMENTARY PROCESSES IN ATOMIC SYSTEMS

CLUJ-NAPOCA, ROMANIA, JUNE 18-20, 2008

Conference Program

June 17

- 17.00 – 20.00 Registration,
Hotel Universitas
- 19.00 Welcome party,
Restaurant near Hotel Universitas
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June 18

- 9.00 – 9.30 Opening, Central Building, Aula Magna

Chair: Takeshi Mukoyama – Central Building, Aula Magna

- 9.35 – 10.10 Dénes Berényi,
Fundamental information in atomic physics
- 10.10 – 10.30 Karl-Ontjes Groeneveld
Planetary orbits in atomic physics
- 10.30 – 11.00 Coffee break

Chair: Robert DuBois – Central Building, Aula Magna

- 11.00 – 11.35 Michael Schulz,
Kinematically complete experiments in atomic collisions
- 11.35 – 12.10 Stefan Schippers,
Relativistic, QED and nuclear effects in highly charged ions revealed by resonant electron-ion recombination in storage rings
- 12.10 – 12.35 Adnan Naja,
Fully differential experiments for electron impact ionisation of small atoms and molecules
- 12.35 – 12.55 Angela Braeuning-Demian,
SPARC's flair at FAIR: new perspectives for atomic physics research with highly charged ions and antiprotons at the future FAIR facility
- 12.55 – 14.30 Lunch break

Chair: Stefan Facsko – Central Building, Aula Magna

- 14.30 – 15.05** Yasunori Yamazaki,
Interaction of charged particles with insulators
- 15.05 – 15.30** John R. Sabin,
Molecular fragmentation on swift ion collision
- 15.30 – 15.55** Oksana Plekan,
Photoemission spectroscopy of DNA base tautomers
- 15.55 – 16.15** Coffee break

Chair: Raul Barrachina – Central Building, Aula Magna

- 16.15 – 16.50** John Tanis,
Interferences in coherent electron emission from diatomic molecules
- 16.50 – 17.15** Jean-Yves Chesnel,
Fast oscillating structures in electron spectra following slow $He^{q+} + He$ collisions: search for electron interferences
- 17.15 – 17.40** Francois Fremont,
Young interferences using a single electron source and an atomic-size two center interferometer
- 17.40 – 19.10** Poster session
- 19.15** Meeting of the Scientific Committee and Organizing Committee,
Pyramid Restaurant

June 19

Chair: Günther Werth – Central Building, Aula Magna

- 8.45 – 9.20** Fernando Martin,
The role of nuclear dynamics in H_2 ionization and dissociation by synchrotron radiation and laser pulses
- 9.20 – 9.45** Robert Moshhammer,
Atomic and molecular fragmentation dynamics in intense laser fields
- 9.45 – 10.10** Juan Fiol,
Detailed description of collision dynamics in atomic ionization processes
- 10.10 – 10.35** Zejun Ding,
Monte Carlo simulation of electron interaction with solids and surfaces
- 10.35 – 11.05** Coffee break

Chair: Viorica Florescu – Central Building, Aula Magna

- 11.05 – 11.40** Joachim Burgdorfer,
Atomic dynamics on the attosecond scale: photons and charged particles
- 11.40 – 12.15** Mihai Gavrilă,
Atomic stabilization in superintense LASER fields, then and now

- 12.15 – 12.40 Matjaz Zitnik,
X-ray resonant Raman scattering from noble gas atoms and beyond
- 12.40 – 13.00 Sándor Borbély,
Over-the-barrier ionization of the hydrogen atom by intense ultrashort laser pulses
- 13.00 – 14.30 Lunch break

Chair: Gheorghe Popa – Central Building, Aula Magna

- 14.30 – 15.05 Friedrich Aumayr,
Highly charged ion-induced nanostructures on surfaces
- 15.05 – 15.40 Nikolaus Stolterfoht,
Scaling laws for guided transmission of highly-charged ions through nanocapillaries in a PET polymer
- 15.40 – 16.05 Fumihiko Koike,
Temporal aspects in atomic ionizations initiated by electron or photon impact
- 16.05 – 16.25 Juana L. Gervasoni,
Dispersion relation and plasmon excitation in nanostructures by charged particles
- 16.25 – 17.55 Poster session
- 18.15 Visit of the Art Museum of Cluj-Napoca (Bánffy Palace)
- 19.00 Concert, Flauto Dolce Ensemble

June 20

Chair: Titus Beu – Central Building, Aula Magna

- 8.45 – 9.20 Colm Whelan,
Fragmentation processes
- 9.20 – 9.55 Udo Buck,
The solvated electron in recent cluster experiments
- 9.55 – 10.20 Kevin Prince,
Inner shell spectroscopy and the shapes of biomolecules
- 10.20 – 10.40 Edward Parilis,
Interaction of Highly Charged Clusters with Surface
- 10.40 – 11.20 Coffee break

Chair: Ákos Kövér – Central Building, Aula Magna

- 11.20 – 11.55 James Walters,
Atomic Collisions Involving Antimatter
- 11.55 – 12.20 Gaetana Laricchia,
Ionizing collisions by positrons and positronium impact
- 12.20 – 12.45 Radu Campeanu,
Positron impact ionization of atoms and molecules
- 12.45 – 13.10 Helge Knudsen,

- Ionization of noble gas atoms in slow antiproton collisions*
13.10 – 13.30 Alexander Glushkov,
QED theory of radiation emission and absorption lines for atoms and ions in a strong laser field

13.30 – 15.00 Lunch break

SPARC – Chair: Stephan Fritzsche – Central Building, Aula Magna

- 15.00 – 15.25** Alex Gumberidze,
X-ray spectroscopy of highly-charged heavy ions at FAIR
- 15.25 – 15.50** Christopher Kozhuharov,
Ultra-cold electron target for recombination experiments at the new experimental storage ring, NESR
- 15.50 – 16.15** Andrey Surzhykov,
Recent theoretical progress in studying x-ray emission from highly-charged, heavy ions
- 16.15 – 16.40** Daniel Ursescu,
High power lasers and X-ray lasers for experiments within SPARC collaboration
- 16.40 – 17.05** Daniel Fischer,
Reaction Microscopes in heavy-ion storage rings - results and prospects
- 19.00** Banquet, Pyramid restaurant
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