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DFG Priority Programme SPP 1840

CFEL SCIENCE

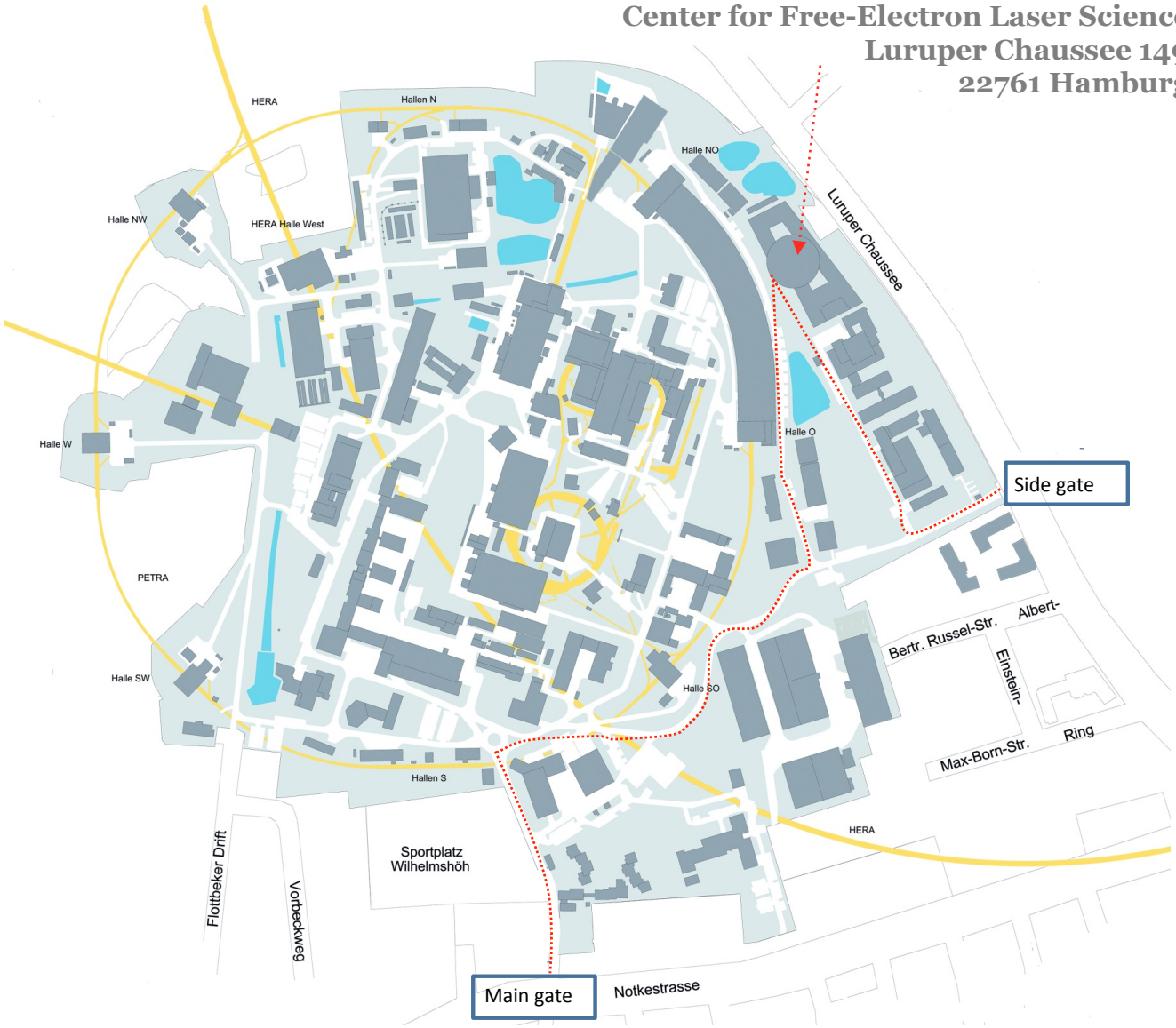
DESY

QUTIF

Quantum Dynamics in Tailored Intense Fields

Annual Workshop 2018
Hamburg
14–16 February 2018

Venue:
CFEL, building 99
Center for Free-Electron Laser Science
Luruper Chaussee 149
22761 Hamburg



Program

Wednesday, 14 February 2018

12:00–12:50 *Registration & refreshments*

12:50–13:00 ***Welcome***

Chirality 1 ***Chair: Jamal Berakdar***

13:00–13:40 *Twists and turns, ups and downs of a walk through chiral photoionization*
Ivan Powis

13:40–14:00 *Control of spatially resolved spin polarization of photoelectrons produced from nitric oxide*
Kunlong Liu

14:00–14:20 *Interaction of vortex fields with atoms*
Carlos Granados

14:20–14:40 ***Young Scientists Meeting***

Coffee break *14:20–15:10*

Attosecond 1 ***Chair: Arnaud Rouzée***

15:10–15:40 *Attosecond reversible and irreversible electron dynamics in strong optical fields*
Yi-Jen Chen

15:40–16:00 *Laser induced inter-site spin transfer*
Sangeeta Sharma

16:00–16:20 *Strong-field ionization of laser-aligned molecules*
Andrea Trabattoni

16:20–16:40 *Control of attosecond light polarization in two-color bicircular fields*
Álvaro Giménez-Galán

16:40–17:00 *Analysis and control of attosecond electron dynamics with near-fields*
Thomas Fennel

Poster session 1 *17:00–19:00*

Thursday, 15 February 2018

Attosecond 2 ***Chair: Adrian Pfeiffer***

09:00–09:40 *Coherent control and multicolor synthesis at FERMI*
Giuseppe Sansone

09:40–10:00 *Signatures of attosecond-scale electron dynamics in low-frequency harmonics by photoionization of noble gases*
Ihar Babushkin

10:00–10:20 *Coupled electron-nuclear dynamics following ionization of propiolic acid*
Alexander Kuleff

10:20–10:40 *Terahertz-induced ultrafast symmetry control in condensed matter: water and silicon*
Oliver Mücke

Coffee break *10:40–11:10*

Chirality 2 ***Chair: Sascha Schäfer***

11:10–11:40 *Climbing the rotational ladder to chirality*
Alec Owens

11:40–12:00 *Electron vortices*
Matthias Wollenhaupt

12:00–12:20 *Chiral dichroism in high-order harmonic generation*
David Ayuso

12:20–12:40 *Chiral recognition in the gas phase using polarization-tailored two-color ionization*
Alexander Kastner

12:40–13:00 *Strong field physics with twisted light*
Willi Paufler

Lunch *13:00–14:20*

Nanoscale ***Chair: Manfred Lein***

14:20–15:20 *Do tailored light fields match tailored careers for female scientists?*
Cornelia Denz

15:20–15:40 *Femtosecond spin-dependent charge transfer at Co/Cu(001) interfaces*
Andrea Eschenlohr

15:40–16:00 *Space-, time-, and energy-resolved observation of charge dynamics in a single nanostructure*
Petra Gross

Poster session 2 *16:00–18:00*

Transfer to Conference Dinner *18:15–18:45*

Conference Dinner *19:00–22:00*
Restaurant La Vela, Große Elbstraße 27, 22767 Hamburg

Friday, 16 February 2018

Molecular Dynamics ***Chair: Sebastian Trippel***

09:00–09:40 *Strong laser field control of the dynamics and stereodynamics of molecular photodissociation*
Luis Bañares

09:40–10:00 *A closer look at bond softening and Lochfrass effects*
Alejandro Saenz

10:00–10:20 *Coherent control of ionic yields after tailored multiphoton excitation in atoms and molecules*
Tom Ring

10:20–10:40 *Fragmentation dynamics of HeH^+ in ultrashort intense laser fields*
Philipp Wustelt

Coffee break *10:40–11:10*

Strong-field Ionization ***Chair: Claus Ropers***

11:10–11:40 *Molecular orbital imprint in laser-driven electron recollision*
Jochen Mikosch

11:40–12:00 *Strong-field control with minimally tailored laser pulses*
Ulf Saalmann

12:00–12:20 *Single-shot electron imaging of NIR-induced He nanoplasmas*
Marcel Mudrich

12:20–12:40 *Subcycle dynamics of strong-field ionization*
Manfred Lein

Conclusions *12:40–12:50*

Lunch and departure *12:50–13:30*

Further Information

Meeting 2018:	https://indico.desy.de/indico/event/18894/
Program:	https://indico.desy.de/indico/event/18894/timetable/#20180214.detailed
QUTIF webpage:	http://www.qutif.de
Talk durations:	contributed: 15+5 min, invited: 25+5 min, keynote: 35+5 min

Poster Presentations

Terahertz radiation out of an optical parametric oscillator
Christian Markus Dietrich

Ultra long-range ab initio calculations
Tristan Müller

Non-adiabatic ponderomotive shift in strong-field photoemission from nanostructures
Johannes Schötz

Attosecond streaking with twisted X waves
Birger Böning

Attosecond delays in the photoemission from the layered, centrosymmetric Bi2Te3 and non-centrosymmetric BiTeCl crystals
Sergej Neb

Interaction of light carrying orbital angular momentum with matter
Jonas Wätzel

Optimization of field-free 3D alignment of asymmetric top molecules
Terry Mullins

Controlling the directionality of photoemission from M- vs. N-photon ionization with CEP stable polarization-tailored bichromatic fields
Stefanie Kerbstadt

Iterative time ordering for optimal control of open quantum systems
Lutz Marder

Single shot velocity map imaging of electrons from dopand-induced helium nanoplasmas in strong near-infrared laser pulses
Dominik Schomas

A non-linear mapping from photo-electron spectra to pulse shape
Sajal Kumar Giri

Strong-field polarization-state control of higher harmonics generated in crystalline solids
Nicolai Klemke

Attosecond timing with spectral resolution near resonances
Anne Harth

Spatial separation of chiral molecules with electric fields
Andrey Yachmenev

Noncollinear UV pulse generation
Jan Reislöhner

Optimization of field-free alignment of molecules for imaging experiments
Evangelos Karamatskos

Free-electron quantum state reconstruction by SQUIRRELS
Katharina Priebe

The bicircular attoclock
Nicolas Eicke

Imprints of the molecular electronic structure in the photoelectron spectra of strong-field ionized asymmetric triatomic model molecules
Matthias Paul

Strong-field-induced dynamical rotation and ionization of HeH+
Lun Yue

Coherent control of photoemission from nanostructures with synthesized two-color fields - an update
Timo Paschen

Effects of the Coulomb potential in strong-field holography with photoelectrons
Nikolay Shvetsov-Shilovskiy

Subcycle interference upon tunnel ionization by counterrotating circularly polarized two-color laser fields
Sebastian Eckart

Charge migration in propiolic acid and its dephasing by the coupling to the nuclear motion
Victor Despré

Efficient time evolution of thermal ensembles by Hilbert space sampling
Marec Heger

Spatiotemporal filament characterization - Towards transient atom dynamics
Christoph Jusko

The ionization times of harmonic emission from asymmetric molecules
Bing Zhang

Strong-field Ionization of HeH^+
Florian Oppermann