

The NBFC2024 Conference Program

Day 1

Wednesday 10.07.24

| Time | Event |
|---|---|
| 12:00 | Registration & Posters up |
| 13:30 | Welcome words – Leho Ainsaar, Dean, Faculty of Science and Technology |
| Chair of the session - Leonas Valkunas (Vilnius University) | |
| 13:40 | Donatas Zigmantas-invited (Lund University) Using coherence signals to expose vibronic mixing in chlorophylls |
| 14:20 | Mikas Vengris (Vilnius University) Singlet fission in lycopene aggregates: the ultrafast consequences of red tomatoes |
| 14:35 | Albin Hedse (Lund University) Pulse overlap artifacts and double quantum coherence spectroscopy |
| 14:50 | Marius Navickas (Vilnius University) Concurrent ultrafast twisting and proton transfer reactions in new pyrano[2,3-c]pyrazole derivatives |
| 15:05 | Edoardo Amarotti (Lund University) Excitation dynamics in perovskite solar cells probed by photocurrent detected 2D spectroscopy |
| 15:20 | Stepas Toliautas (Vilnius University) Fine-tuning BODIPY molecular sensors by means of computational models |
| 15:35 | Janne Ihalainen (University of Jyväskylä) Photoisomerization of bacteriophytochromes in crystals and in solutions - a time-resolved study |
| 15:50 | Thorsten Hansen (University of Copenhagen) Towards a quantum dynamical model of charge separation in the photosystem II reaction center |
| 16:05 – 18.00 | Welcome party– Conference venue (W. Ostwaldi 1, Tartu 50411) |

Day 2

Thursday 11.07.24

| Time | Event |
|---|---|
| 8:45 | Registration |
| Chair of the session - Janne Ihalainen (University of Jyväskylä) | |
| 9:00 | Kristoffer Haldrup-invited (Technical University of Denmark, Kongens Lyngby) Ultrafast structural characterization of solvation dynamics with X-Ray Solution Scattering |
| 9:40 | Leonas Valkunas (Vilnius University) Fluorescence quenching in aggregates of fucoxanthin-chlorophyll protein complexes: Interplay of fluorescing and dark states |
| 9:55 | Junsheng Chen (University of Copenhagen) Ultrafast energy transfer in fluorescent organic nanoparticles |
| 10:10 | Asmus O. Dohn (University of Iceland) Intertwined solute-solvent dynamics: computational insights and advances |
| 10:25 | Refreshments |
| 10:50 | Darius Abramavicius-invited (Vilnius University) Coherent multiphoton spectroscopy for Hamiltonian reconstruction |
| 11:30 | Verena Markmann (Technical University of Denmark, Kongens Lyngby) Light-induced bond-dissociation and aquation dynamics |
| 11:45 | Weihua Lin (Lund University) Photo-induced hot carrier cooling in two-dimensional perovskite single crystal |
| 12:00 | Qi Shi (Lund University) AI-enhanced high resolution functional imaging reveals trap states and charge carrier recombination pathways in perovskite |
| 12:15 | Conference photo & Lunch |
| Chair of the session - Arvi Freiberg (University of Tartu) | |
| 14:00 | Special event intro – Arvi Freiberg (University of Tartu) |
| 14:10 | Jaak Kikas-invited (University of Tartu) 50 years of persistent spectral hole burning |
| 14:50 | Peeter Saari-invited (University of Tartu) Spectral holes in time representation—from ultrafast pulse shaping to time-space holography |
| 15:30 | Tõnu Reinot-invited (Kansas State University) Modeling of fluence-dependent hole-burned spectra and hole-growth kinetics using multiple two-level systems |
| 16:10 – 17.10 | Poster discussions with refreshments |
| 18:30 – 22.15 | Conference dinner at Emajõgi Barge Society (Ujula 98, Tartu 51008) |

Day 3

Friday 12.07.24

| Time | Event |
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| 8:45 | Registration |
| Chair of the session - Tõnu Pullerits (Lund University) | |
| 9:00 | Gerrit Groenhof-invited (University of Jyväskylä) Can we control chemistry with a cavity? Insights from molecular dynamics computer simulations |
| 9:40 | Fan Wu (Lund University) Optical cavity-mediated exciton dynamics and excitation energy transfer in photosynthetic light harvesting 2 complexes |
| 9:55 | Veikko Linko (University of Tartu, Aalto University) Optically active substrates through DNA-based lithography |
| 10:10 | Jokotadeola Odutola (Tampere University) Long-lived photo-response of multi-layer N-doped graphene-based films |
| 10:25 | Tatu Kumpulainen (University of Jyväskylä) Relaxation pathways in novel semicroconaine dyes probed by ultrafast spectroscopy |
| 10:40 | Neus A. Calvet (Lund University) Exploring the intrinsic charge separation and recombination rates in ligand-to-metal charge transfer excited states of bimolecular photocycles |
| 10:55 | Sankaran Ramesh (Lund University) Electronic dynamics and coherent phonons in gold-bromide perovskite |
| 11:10 | Refreshments & Posters down |
| 11:30 | Artur Tamm (University of Tartu) Modelling ultrafast non-equilibrium processes with molecular dynamics: a case study of laser excited tungsten |
| 11:45 | Yanmei He (Lund University) Unveiling mechanism of temperature-sensitive self-trapped exciton emission in one-dimensional hybrid organic-inorganic tin halide |
| 12:00 | Vidmantas Gulbinas (Center for Physical Sciences and Technology, Vilnius) On the role of coherent charge carrier separation in all-organic solar cells |
| 12:15 | Klaus B. Møller-invited (Technical University of Denmark, Kongens Lyngby) Simulation of ultrafast dynamics and their experimental signatures |
| 12:55 | Closing words – Arvi Freiberg (University of Tartu) |
| 13:05 | Visit Institute of Physics - optional |