



19th International Workshop on “Single Molecule Spectroscopy and Ultra Sensitive Analysis in the Life Sciences”

September 4-6, 2013
Berlin-Adlershof, Germany

Organized by
PicoQuant GmbH



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Program

Program

(as of August 19, 2013, subject to alterations)

Thursday, September 5, 2013

Session: Methods and Techniques II

Chair: Vahid Sandoghar

- 09:00 – 09:30 *Fedor Jelezko, Ulm, Germany (Invited Paper)*
Single NV centers in diamond: quantum registers and nanoscale sensors
- 09:30 – 09:50 *Jana Berit Nieder, Castelldefels, Spain*
Femtosecond pulse-shaping spectroscopy on single light-harvesting complexes
- 09:50 – 10:10 *Swati Tyagi, Heidelberg, Germany (Student Award)*
Long-term single-molecule TIRF observation of biomolecules without immobilization
- 10:10 – 10:30 *David Bauer, Oxford, United Kingdom (Student Award)*
Nanofluidics to Enhance Single Molecule DNA Imaging: Detecting Genomic Structural Variation in Humans
- 10:30 – 11:05 COFFEE BREAK

Session: Methods and Techniques III

Chair: Christian Eggeling

- 11:05 – 11:35 *Vahid Sandoghar, Erlangen, Germany (Invited Paper)*
Fluorescence-free detection, spectroscopy and tracking of nano-objects
- 11:35 – 11:55 *Arina Rybina, Heidelberg, Germany (Student Award)*
Investigation of reaction pathways in chemical processes by means of Single-Molecule Fluorescence Spectroscopy (SMFS)
- 11:55 – 12:15 *Felix Koberling, Berlin, Germany*
With Photon Patterns Towards Species Selective Microscopy
- 12:15 – 12:35 *Jan Vogelsang, Regensburg, Germany*
Watching excitons at work in model systems of conjugated polymer materials by single-molecule spectroscopy
- 12:35 – 12:50 GROUP PICTURE
- 12:50 – 13:50 LUNCH

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Session: Methods and Techniques IV

Chair: David Millar

- 13:50 – 14:20 *Mircea Cotlet, New York, USA (Invited Paper)*
Tuning single molecule charge transfer in quantum dot-based hybrids via self-assembly
- 14:20 – 14:40 *Peter May, Oxford, United Kingdom (Student Award)*
Multi-parameter tethered fluorophore motion studies of DNA recombination
- 14:40 – 15:00 *Chen Pei-Yin, Hsinchu, Taiwan (Student Award)*
Conformation and Fluorescence Property of Ploy(3-hexylthiophene) Isolated Chains Studied by Single Molecule Spectroscopy: Effects of Solvent Quality and Regioregularity
- 15:00 – 15:35 COFFEE BREAK

Session: Biological Applications

Chair: Mircea Cotlet

- 15:35 – 16:05 *David Millar, California, USA (Invited Paper)*
Assembly and Dynamics of Nucleic Acid – Protein Complexes Probed at the Single-Molecule Level
- 16:05 – 16:25 *Aniruddha Mitra, Dresden, Germany (Student Award)*
Interpreting stepping trajectories of motor proteins on 3D microtubule lattices by characterization of microtubule rotations
- 16:25 – 16:45 *Aravindan Varadarajan, Amsterdam, The Netherlands (Student Award)*
Investigation trans-membrane protein diffusion in living Escherichia coli bacteria
- 16:45 – 18:30 POSTER SESSION II
- 19:45 DINNER

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Friday, September 6, 2013

Session: FCS/FLIM/FRET I

Chair: Jerker Widengren

- 09:00 – 09:30 *Thorsten Wohland, Singapore (Invited Paper)*
Advances in Imaging Fluorescence Correlation Spectroscopy
- 09:30 – 09:50 *Ingo Gregor, Göttingen, Germany*
Multiplex fluorescence marker quantification with spectrally-resolved Fluorescence Lifetime Imaging
- 09:50 – 10:10 *Ralf Kühnemuth, Düsseldorf, Germany*
Tuning microfluidic mixers for ultrasensitive kinetic measurements using FCS and numerical methods
- 10:10 – 10:30 *Eliina Staaf, Stockholm, Sweden*
NK cell education: advanced microscopy-based methods for assessing dynamics and interactions at single molecule level
- 10:30 – 10:50 *Thomas Niehörster, Würzburg, Germany (Student Award)*
Advanced Multicolor Imaging by Spectrally Resolved Fluorescence Lifetime Imaging
- 10:50 – 11:25 COFFEE BREAK

Session: Superresolution Microscopy II

Chair: Fedor Jelezko

- 11:25 – 11:55 *Don Lamb, Munich, Germany (Invited Paper)*
MFD-PIE, PIE-FI, 3cPIE: Learning more with Pulsed-Interleaved Excitation
- 11:55 – 12:15 *Olaf Schulz, Göttingen, Germany*
Fast 3D Multicolor Super-Resolution Imaging using Confocal Spin Disk Imaging Scanning Microscopy
- 12:15 – 12:35 *Simon Hennig, Bielefeld, Germany*
Super-resolution imaging of cellular structures labelled by nanoinjection of fluorescent probes
- 12:35 – 12:55 *Christof Gebhardt, Ulm, Germany*
Single Molecule Imaging and Quantification in the Cell Nucleus by Reflected Light Sheet Microscopy
- 12:55 – 13:05 *Rainer Erdmann, Berlin, Germany*
Presentation of "Student Award"
- 13:05 – 14:05 LUNCH

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Session: FCS/FLIM/FRET II

Chair: Don Lamb

- 14:05 – 14:35 *William Eaton, Bethesda, USA (Invited Paper)*
Toward observing transition paths in protein folding by single molecule fluorescence
- 14:35 – 14:55 *Daniel Nettels, Zurich, Switzerland*
Influence of Singlet-Singlet Annihilation on Single-Molecule FRET experiments
- 14:55 – 15:15 *Alexandre Fürstenberg, Genève, Switzerland*
Improved super-resolution imaging in heavy water
- 15:15 – 15:35 *Alexey Chizhik, Göttingen, Germany*
Metal-induced energy transfer for novel applications in imaging and spectroscopy
- 15:35 – 15:55 *Kohki Okabe, Tokyo, Japan*
Imaging of temperature in a living cell using a fluorescent polymeric thermometer and fluorescence lifetime imaging microscopy
- 15:55 – 16:15 *Don Lamb, Munich, Germany*
Concluding Remarks
- 16:15 End of Workshop

Contact

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For all details visit our website:
www.picoquant.com/_workshop.htm