11th International Workshop on “Single Molecule Spectroscopy and Ultrasensitive Analysis in Life Sciences”

Organized by
PicoQuant GmbH

Program

September 21 - 23, 2005
at WISTA Campus
Berlin-Adlershof (Germany)
Wednesday, 21st September 2005

11.30 - 12.30 REGISTRATION (Conference room: Max Born Saal)

Chair: Rainer Erdmann

12.30 - 12.45 Rainer Erdmann, Berlin
Opening Remarks

Dynamics of Single GABAA Receptors in Nerve Growth Cones: From Molecular Interactions to Axonal Guidance

13.20 - 13.45 Gregory Harms, Würzburg
Activation of Cytokines and Receptors: Single-Molecule Studies

13.45 - 14.10 Julian D. Langer, Heidelberg (Students Award)
Studying Coatomer Receptor Interactions using Single-Molecule FRET

14.10 - 14.35 Hubert Piwonski, Warsaw (Students Award)
Tautomerisation in a Single Molecule

14.35 - 15.00 Andreas Biebricher, Bielefeld (Students Award)
Emission from Multie exciton States and Radiative Rate Constant Fluctuations of Single Semiconductor Nanocrystals

15.00 - 15.25 F. D. Stefani, Mainz
Surface Plasmon Mediated Single Molecule Fluorescence through a Thin Metallic Film

15.25 - 15.55 COFFEE BREAK

Chair: Maxime Dahan

15.55 - 16.30 Shimon Weiss, Los Angeles (Invited Paper)
In-vitro and In-vivo Single Molecule Imaging and Spectroscopy

16.30 - 16.55 Alexander Krieg, Oxford
Towards Single Molecule DNA Sequencing: Addressing the problem of Non-specific Background

16.55 - 17.20 Gregor Jung, Saarbruecken
Effective Brightness of Autofluorescent Proteins in Microscopy

17.20 - 17.45 Johannes Hohlbein, Halle (Students Award)
Single Molecule Detection in Ordered, Porous Alumina

Thursday, 22nd September 2005

Chair: Joachim D. Müller

08.45 - 09.20 Claus A. M. Seidel, Düsseldorf (Invited Paper)
Single-Molecule FRET Measurements with High Accuracy

09.20 - 09.45 Joachim Ross, Bielefeld (Students Award)
Single-Molecule-Multistep FRET for the Analysis of Competing Transfer Pathways

09.45 - 10.10 Steffen Rüttinger, Berlin (Students Award)
Improving Single Molecule Förster Resonant Energy Transfer Measurements by Pulsed Interleaved Excitation and Fluorescence Correlation Spectroscopy

10.10 - 10.40 COFFEE BREAK

Chair: Shimon Weiss

10.40 - 11.15 Benjamin Schuler, Zürich (Invited Paper)
Peptide Dynamics and Protein Folding Trajectories from Single Molecule FRET

11.15 - 11.40 Felix Koberling, Berlin
Time-resolved Confocal Fluorescence Microscopy: Novel Technical Features and Applications for FRET, FLIM & FCS

11.40 - 12.05 Samantha Fore, Livermore / Davis (Students Award)
Application of Single Molecule FRET Photon-Correlation Spectroscopy to Studying DNA-Protein Interactions

12.05 - 12.30 Ralf Steinmeyer, Würzburg
Combined FRET, Anisotropy, and Single-Molecule Measurements Synchronized with Patch Clamping

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Program (subject to alterations)

12.30 - 12.55 Alexander Gansen, Heidelberg (Students Award)
Dynamics of Mononucleosomes Studied with Single Molecule FRET in Solution

12.55 - 13.05 GROUP PICTURE

13.05 - 14.05 LUNCH

Chair: Paul Selvin
14.05 - 14.30 Kai Hassler, Lausanne (Students Award)
Single Molecule Detection with Total Internal Reflection Fluorescence Correlation Spectroscopy (TIR-FCS) in epi-illumination Configuration

14.30 - 14.55 Barbara K. Müller, München (Students Award)
Determination of FRET-Efficiencies Using PIE-FCCS

14.55 - 15.20 Ingo Gregor, Jülich
Using Fluorescence Lifetime in Fluorescence Correlation Spectroscopy

15.20 - 18.30 POSTER SESSION and PRODUCT PRESENTATION

20.00 DINNER

Friday, 23rd September 2005

Chair: Benjamin Schuler
08.45 - 09.20 Joachim D. Mueller, Minneapolis (Invited Paper)
Fluorescence Fluctuation Spectroscopy in Cells

09.20 - 09.45 Jaques Derouard, Saint Martin d'Hères
Measurement of Surface Concentration of Fluorophores Using Fluorescence Fluctuation Spectroscopy

09.45 - 10.10 Thomas Dertinger, Jülich (Students Award)
Applications for a Multi-focus Confocal Microscope for Single Molecule Studies

10.10 - 10.35 Hannes Neuweiler, Bielefeld
Direct Observation of Mini-protein Folding Using Fluorescence Correlation Spectroscopy

10.35 - 11.05 COFFEE BREAK

11.05 - 11.40 Gerhard J. Schütz, Linz (Invited Paper)
Single Molecule Microscopy on Living Cells

11.40 - 12.05 Don C. Lamb, Munich
Dual-Color Single-Virus Tracing: Following the Entry Pathway of HIV

12.05 - 12.30 Heiko Zettl, Bayreuth (Students Award)
Single Molecule Experiments on Homo Polymers and Block Copolymers

12.30 - 12.55 Benoit Muls, Louvain-la-Neuve (Students Award)
Study of Conjugated Polymers by Wide-field Microscopy

12.55 - 13.20 Peter Zoon, Amsterdam (Students Award)
Single Molecules in Thermodynamically Unfavored Conformations: Trapping Non-equilibrium States by Rapid Spin Coating

13.20 - 14.20 LUNCH

Chair: Gerhard J. Schütz
14.20 - 14.55 Paul Selvin, Urbana (Invited Paper)
Fluorescence Imaging with One Nanometer Accuracy (FIONA):
Application to Molecular Motors

14.55 - 15.20 Danying Lin, Beijing
Imaging and Tracking Single Fluorescent Microspheres with a Nanometer Resolution Using Total Internal Reflection Technique and Gaussian Fit Algorithm

15.20 - 15.45 Antoine Delon, Saint Martin d'Hères
Spatial Fluorescence Cross Correlation Spectroscopy

15.45 - 16.10 Christian Eggeling, Göttingen
Fluorescence Fluctuation Spectroscopy in Reduced Focal Volumes Generated by Stimulated Emission Depletion

16.10 - 16.35 Wolfgang Erker, Mainz
Detection of Single Oxygen Molecules with Fluorescence Labelled Hemocyanins

16.35 - 16.45 Rainer Erdmann, Berlin
Presentation of “Students Award”

16.45 - 17.00 Concluding Remarks