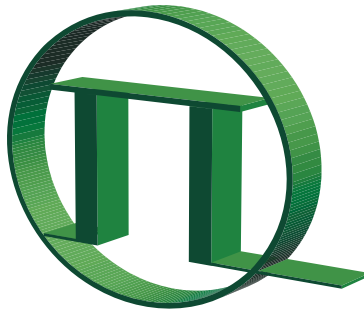


# **12<sup>th</sup> International Workshop on “Single Molecule Spectroscopy and Ultrasensitive Analysis in Life Sciences”**

Organized by  
PicoQuant GmbH



**PICOQUANT** GmbH  
Unternehmen für optoelektronische  
Forschung und Entwicklung

## **Program**

September 20 - 22, 2006  
at WISTA Campus  
Berlin-Adlershof (Germany)

## Program (subject to alterations)

### Wednesday, 20<sup>th</sup> September 2006

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

Chair: Rainer Erdmann

12.30 - 12.45 Rainer Erdmann, Berlin  
Opening Remarks

12.45 - 13.20 Michel Orrit, Leiden (**Invited Paper**)  
New Methods and Labels for Single Molecule Microscopy

13.20 - 13.45 Carsten Henkel, Potsdam  
Single Molecule (Non)radiative Decay Near a Metallic Nanoparticle

13.45 - 14.10 Erwin Gaubitzer, Vienna (*Students Award*)  
Intracellular Particle Dynamics Using Single Molecule Brightness Information

14.10 - 14.35 Philip Tinnefeld, Bielefeld  
Dissecting Photophysical Phenomena of Semiconductor Nanocrystals

14.35 - 15.00 Benoit Muls, Louvain-la-Neuve (*Students Award*)  
Unravelling Energy Transfer Pathways in Conjugated Polymers by Defocused Wide-field Microscopy

15.00 - 15.35 COFFEE BREAK

Chair: Gerd Ulrich Nienhaus

15.35 - 16.10 Adam E. Cohen, Stanford (**Invited Paper**)  
Trapping and Manipulating Single Molecules in Solution

16.10 - 16.35 Volodymyr Nechyporuk-Zloy, Münster (*Students Award*)  
Tracking of Single Potassium Channel Proteins in Migrating Cells by Quantum Dot Labeling

16.35 - 17.00 Arne Gennerich, San Francisco  
Force- and Structure-dependent Stepping Behavior of Cytoplasmic Dynein Observed by Single-Molecule Fluorescence and Optical Trapping Microscopy

17.00 - 17.25 Josef Madl, Linz (*Students Award*)  
Combined Optical and Force Microscopy - From Simultaneous Imaging to Fluorescence-guided Force Spectroscopy

17.25 - 17.50 Joost van Mameren, Amsterdam (*Students Award*)  
Tension-dependent Linear Dichroism Measurements of Intercalating Dyes on Single DNA Molecules

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## Program (subject to alterations)

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17.50 - 18.15 Rachel Owen, Berlin  
Combining Bio-AFM with Advanced Optical Techniques – CLSM, FCS and Tip-enhanced Optics

18.15 Move to „Wista Corner“

18.45 RECEPTION („Wista Corner“)

### Thursday, 21<sup>st</sup> September 2006

Chair: Andreas Zumbusch

08.45 - 09.20 Achillefs N. Kapanidis, Oxford (**Invited Paper**)  
Dissecting Molecular Machines Using Alternating-Laser Excitation (ALEX) Spectroscopy

09.20 - 09.45 Samantha Fore, Sacramento  
Single Molecule Biological PIE-FRET Experiments Inside Reduced Volume Apertures

09.45 - 10.10 Peter Schluesche, München  
The Mechanism of Gene Repression Revealed by spFRET Investigations of TBP-NC2 Complexes

10.10 - 10.45 COFFEE BREAK

Chair: Adam E. Cohen

10.45 - 11.20 Jerker Widengren, Stockholm (**Invited Paper**)  
Use of Fluorescence Flicker – For Monitoring Proton Transport in Membranes, Biomolecular Interactions, and for Achieving Ultrahigh Resolution in Light Microscopy.

11.20 - 11.45 Felix Koberling, Berlin  
Recent Advances in Time-Resolved Confocal Fluorescence Microscopy

11.45 - 12.10 Thomas Dertinger, Jülich (*Students Award*)  
Two-Focus-FCS - Monitoring Structural Changes of Biomolecules

12.10 - 12.35 Aleš Benda, Prague (*Students Award*)  
Fluorescence Lifetime Correlation Spectroscopy Combined with Lifetime Tuning: New Perspectives in Supported Phospholipid Bilayers' Research

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## Program (subject to alterations)

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12.35 - 13.00 Stefen Rüttinger, Berlin  
Quantitative FCS: Determination of the Confocal Volume by FCS and  
Bead Scanning

13.00 - 13.10 GROUP PICTURE

13.10 - 14.10 LUNCH

Chair: Andong Xia

14.10 - 14.35 Ralf Kühnemuth, Düsseldorf  
Multiparameter-Fluorescence Spectroscopy and Imaging-Squeezing  
Information out of Individual Fluorophores

14.35 - 15.00 Jana Humpolícková, Prague (*Students Award*)  
Employing Z-scan Method in Lateral Diffusion Measurements by  
Means of Fluorescence Correlation Spectroscopy: Model Systems  
and Cellular Applications

15.00 - 15.25 Hannes Neuweiler, Bielefeld  
Dynamics of Unfolded Polypeptide Chains: A Fluorescence  
Correlation Spectroscopy Study

15.30 - 18.30 POSTER SESSION and PRODUCT PRESENTATION

20.00 DINNER

## Friday, 22<sup>nd</sup> September 2006

Chair: Achillefs N. Kapanidis

08.45 - 09.20 Gerd Ulrich Nienhaus, Ulm / Urbana (**Invited Paper**)  
Single Molecule FRET Studies of Protein Folding

09.20 - 09.45 Monika G. Düser, Stuttgart (*Students Award*)  
Proton-Driven Rotation Within the Fo-Motor of a Single ATP Synthase

09.45 - 10.10 Erwin J.G. Peterman, Amsterdam  
Kinesin Motor Proteins Walking Through the Spotlight

10.10 - 10.35 David Grünwald, Bonn (*Students Award*)  
Protein Translocation Through the Nuclear Pore Complex in Living  
Cells: Analyzed One Molecule at a Time

10.35 - 11.10 COFFEE BREAK

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## Program (subject to alterations)

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Chair: Jerker Widengren

11.10 - 11.45 Andreas Zumbusch, Konstanz (**Invited Paper**)  
Imaging the Intracellular Dynamics of Single Gene Transfer  
Nanoparticles

11.45 - 12.10 Cristina Flors, Heverlee  
Characterization of the Reversible Photoswitching of Dronpa Mutants  
at the Single-Molecule Level

12.10 - 12.35 Iris von der Hocht, Jülich (*Students Award*)  
Calcium Dependent Binding of Recoverin to Giant Unilamellar  
Vesicles

12.35 - 13.00 Mario Brameshuber, Linz (*Students Award*)  
Observation of Nanometer-Sized Stable Structures Diffusing in the  
Plasma Membrane of Jurkat T cells

13.00 - 13.25 Jaroslav Jacak, Linz (*Students Award*)  
Oligonucleotide Microarray Analysis with Single Molecule Sensitivity

13.25 - 14.25 LUNCH

Chair: Michel Orrit

14.25 - 15.00 Andong Xia, Beijing (**Invited Paper**)  
Shape Specific Detection Based on Fluorescence Resonance Energy  
Transfer Using a Flexible Water-Soluble Conjugated Polymer

15.00 - 15.25 Christian Eggeling, Göttingen  
Far-Field Microscopy with Sub-Diffraction Resolution

15.25 - 15.50 Florian Kulzer, Leiden  
Temperature-Cycle Microscopy and Single-Molecule Dynamics

15.50 - 16.15 Alper Kiraz, Istanbul  
An Individual Water Microdroplet Standing on a Superhydrophobic  
Surface as a Largely-Tunable Optical Microcavity

16.15 - 16.40 Denis Dörr, Düsseldorf  
Fluorescence Spectroscopy of Dyes Integrated in Synthetic Polymers

16.40 - 16.50 Rainer Erdmann, Berlin  
Presentation of "Students Award"

16.50 - 17.00 Concluding Remarks