

# 4<sup>th</sup> International Workshop on "Single Molecule Detection and Ultrasensitive Analysis in the Life Sciences"

## ~ Workshop Program ~

Due to the large number of submissions not all contributions could be fitted into the agenda for oral presentation. All authors who submitted abstracts but are not shown in the program had the opportunity to present their contributions in the poster session.

## Program

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Wednesday, 30 September 1998

- 11.30 -           REGISTRATION
- 13.00 :
- 13.15 -           R. Erdmann, Berlin
- 13.30 :           Opening Remarks
- 13.45 -           Ch. Bräuchle, München, (Invited Paper)
- 14.20 :           Optical Experiments with Single Molecules in Solid Matrices
- 14.20 -           K.O. Greulich, Jena
- 14.45 :           An Improved Preparation Technique to Study Single DNA Molecule Reactions  
                  in a Fluorescence Microscope
- 14.45 -           J. Dapprich, Princeton
- 15.10 :           Evidence for Single Molecule DNA-Digestion by Lambda-Exonuclease at 20-25  
                  Hz
- 15.10 -           H. Mathis, Jena
- 15.35 :           Sorting of Single Molecules in Solution within Silicon Microstructures
- 15.35 -           COFFEE BREAK
- 16.10 :
- 16.10 -           K. Kneipp, Berlin (Invited Paper)
- 16.45 :           Detection and Identification of Single DNA Base Molecules  
                  Using Surface-Enhanced Raman Scattering (SERS)
- 16.45 -           C. Tietz, Chemnitz
- 17.10 :           Observations of Energy Transfer Dynamics in Single Light-Harvesting  
                  Complexes
- 17.10 -           J. Köhler, Leiden
- 17.35 :           Spectroscopy of Single Light-Harvesting Complexes of Rhodospseudomonas  
                  Acidophila
- 17.45 -           M. Barnes, Oak Ridge
- 18.10 :           Confinement and Manipulation of Single Molecules in atto Liter Volumes of  
                  Solution
- 18.15 -           RECEPTION

21.00 :  
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### Thursday, 01. October 1998

09.00 - R. Rigler, Stockholm (Invited paper)  
09.35 : Single Molecule and Ensemble Behaviour:  
Death Numbers, Survival Times and Heterogeneity of Conformational transitions in DNA  
09.35 - J. Korlach, Ithaca  
10.00 : Diffusion Analysis of Individual Molecules in Model and Cell Membranes  
by Fluorescence Correlation Spectroscopy  
10.00 - C. Eggeling, Göttingen  
10.25 : Photophysical and Photochemical Aspects for an Accurate Single-Molecule  
Detection in Solution  
10.25 - COFFEE BREAK  
10.55 :  
10.55 - Pat Ambrose, Los Alamos (Invited paper)  
11.30 : Single Molecule Detection in Flow and on Surfaces  
11.30 - J. Enderlein, Regensburg  
11.55 : Single Molecule Detection in Ultrathin Capillaries: A Rigorous Electrodynamic Study  
11.55 - C. Zander, Siegen  
12.30 : DNA-Sequencing and Medical Applications  
12.30 - M. Sauer, Heidelberg  
12.55 : Detection and Identification of Individual Molecules in Microcapillaries with Pulsed Diode  
Lasers  
13.00 - LUNCH  
14.00 :  
14.15 - POSTER SESSION and PRODUCT PRESENTATION  
17.30 :  
19.00 : DINNER  
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### Friday, 2 October 1998

09.00 - W.E. Moerner, San Diego (Invited Paper)  
09.35 : Optical Probes of Single Molecules and Proteins in Aqueous Environments  
09.35 - C. Seidel, Göttingen, (Invited Paper)  
10.10 : Multidimensional Confocal Fluorescence Spectroscopy of Single Molecules in Solution  
10.10 - I. Peters, Enschede  
10.35 : Three Dimensional Tracking with Nanometer Resolution of Membrane Proteins  
10.35 - COFFEE BREAK  
11.00 :  
11.00 - S. Nie, Indiana (Invited Paper)  
11.35 : From Single Molecule Detection to Magic Nanoparticle and Medical Diagnostics  
11.35 - M. Garcia-Parajo, Enschede  
12.00 : Real Time Microsecond Single Molecule Detection using Scanning Near-Field Optical Microscopy  
(NSOM)  
12.00 - B. de Grooth, Enschede

12.25 : Binding of Proteins and Fluorescent Dyes on Single DNA Molecules  
12.25 -  
12.50 : n.n.  
12.50 -  
13.50 : LUNCH  
14.00 - H. Schindler, Linz (Invited Paper)  
14.35 : Time Resolved Single Fluorophore Imaging for the Study of Biomolecules in Intact Systems  
14.35 - M. Ishikawa, Tsukuba  
15.00 : Single-Molecule Imaging and Spectroscopy for Analytical Chemistry on Surfaces  
15.00 - M.A. Weber, Siegen  
15.25 : Single-Molecule Imaging and Spectroscopy at Room Temperature  
15.25 -  
15.50 : n.n.  
15.50 - R. Rigler, Stockholm  
16.00 : Concluding Remarks  
16.00 -  
16.30 : COFFEE BREAK  
16.30 - Hot Spots – Informal Discussion Perspectives Of Single Molecule Detection  
18.00 : (if wished by participants)  
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