

# 5<sup>th</sup> Hands-On Workshop on Making Single Molecule Fluorescence (Lifetime) Measurements Simple

April 26 -28, 2010

Joint workshop between PicoQuant GmbH and the Brookhaven National Laboratory



## Monday, April 26

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| 9:00 am  | <b>Registration</b>  |
| 9:30 am  | <b>Emilio Mendez and Mircea Cotlet, BNL</b><br>Welcome & Brief Introduction to BNL   |
| 9:50 am  | <b>Rainer Erdmann, PicoQuant</b><br>Welcome & Brief Introduction to PicoQuant  |
| 10:15 am | <b>Joseph R. Lakowicz, University of Maryland, CFS</b><br>Single Molecule Detection and Photophysics Using Plasmonic Nanostructures      |
| 11:00 am | <b>Antoine Van Oijen, Harvard University</b><br>Single-Molecule Studies of Multi-Protein Complexes                                       |
| 11:45 am | <b>Denys O. Marushchak, University of Toronto Mississauga</b><br>Single Molecule Time Resolved Multiparameter FRET Measurements on dsDNA |
| 12:15 pm | <b>Lunch break</b>   |
| 1:15 pm  | <b>Rainer Erdmann, PicoQuant</b><br>Advanced FRET and FCS Measurements with Laser Scanning Microscopes Based on Time-resolved Techniques |
| 2:00 pm  | <b>Elizabeth Rhoades, Yale University</b><br>Probing the Conformations of Polymorphic Proteins   |
| 2:45 pm  | <b>Lisa Marshall, MIT</b><br>Combining FCS and Interferometry to Extract Spectral Dynamics from Single Chromophores in Solution          |
| 3:15 pm  | <b>Coffee break</b>  |
| 3:45 pm  | <b>Hands-on session 1</b>  |
| 5:15 pm  | <b>Change groups</b>   |
| 5:30 pm  | <b>Hands-on session 2</b>  |
| 7:15 pm  | <b>Poster session with Wine &amp; Cheese reception</b>   |



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### Tuesday, April 27

8:30 am	<b>Coffee</b>
9:00 am	<b>Haw Yang</b> , Princeton University Protein Large-Amplitude Conformational Transitions: Dynamics, Mechanics, and Functional Roles
9:45 am	<b>Patrick Lajoie</b> , Albert Einstein College of Medicine of Yeshiva University Monitoring Huntingtin Exon 1 Intermediate Oligomers Formation in Living Cells
10:15 am	<b>Coffee break</b>
10:45 am	<b>Peter So</b> , MIT Wide-Field Two-Photon Imaging and Microfabrication
11:30 am	<b>Rainer Erdmann</b> , PicoQuant Recent Technical Developments in Time-Resolved Microscopy down to the Single Molecule Level
12:00 pm	<b>Zhihua Xu</b> , BNL Single Molecule Fluorescence Spectroscopy Studies of Photo-induced Electron Transfer Between CdSe/ZnS Quantum Dots and Fullerene
12:30 pm	<b>Lunch break</b>
1:30 pm	<b>Ahmed A. Heikal</b> , University of Minnesota Duluth Single Molecule Diffusion Studies of MHC Class I Proteins in Fibroblast Cells
2:15 pm	<b>Michael Previte</b> , Life Technologies FRET-Based Real-Time Single-Molecule DNA Sequencing Using Protein-Chimeras
2:45 pm	<b>Thomas D. Christian</b> , Yale University Single-Molecule Measurements of Synthesis by DNA Polymerase with Base-Pair Resolution
3:15 pm	<b>Coffee break</b>
3:45 pm	<b>Hands-on session 3</b>
5:15 pm	<b>Change groups</b>
5:30 pm	<b>Hands-on session 4</b>
7:00 pm	<b>end</b>



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### Wednesday, April 28

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| 8:30 am  | <b>Coffee</b>   |
| 9:00 am  | <b>Mircea Cotlet</b> , BNL<br>All in One Protein: FRET, Kindling and Blinking in Single Proteins of HcRed   |
| 9:45 am  | <b>Samantha Fore</b> , PicoQuant Photonics North America<br>Antibunching & Time Resolved Single Molecule Emission Studies of the MEH-PPV Conjugated Polymer System  |
| 10:15 am | <b>Mathew M. Maye</b> , Syracuse University<br>Single Molecule Observation of PL Enhancement in Qdot-Nanoparticle Heterodimers  |
| 10:45 am | <b>Coffee break</b>   |
| 11:15 am | <b>Zygmunt "Karol" Gryczynski</b> , University of North Texas<br>Plasmonic Approach to Study Biological Processes   |
| 12:00 pm | <b>Anton V. Malko</b> , University of Texas at Dallas<br>Excitonic Pathways in Colloidal Nanocrystals Uncovered by Time-Resolved Single Dot Microscopy:<br>From Non-Blinking gdots to Organic/Inorganic Energy Transfer |
| 12:30 pm | <b>end</b>  |