

25th



anniversary
workshop!

25. International Workshop on

**Single Molecule
Spectroscopy and Super-resolution
Microscopy in the Life Sciences**

Berlin, Germany
September 3-6, 2019

www.single-molecules.org



PICOQUANT

Program overview

	Monday, Sep 2	Tuesday, Sep 3	Wednesday, Sep 4	Thursday, Sep 5	Friday, Sep 6
Morning		Registration			
		Biological applications	FCS	FRET	Biological applications & methods / techniques 1
		Coffee break	Coffee break	Coffee break	Coffee break
Noon		Super-resolution microscopy 1	Methods and techniques 2	Super-resolution microscopy 3	Biological applications & methods / techniques 2
		Poster flash talks 1	Poster flash talks 3	Lunch break	Lunch break
		Lunch break	Group picture + Lunch break	Lunch break	Lunch break
Afternoon		Methods and techniques 1	Super-resolution microscopy 2	Super-resolution microscopy 4	Methods and techniques 4
		Poster flash talks 2	Coffee break	Open Afternoon	
		Coffee break	Methods and techniques 3	Anniversary party @ Stadium „An der Alten Försterei“ Socialize and dine	
Evening		Poster session 1 (odd numbered)	Poster flash talks 4		Student award ceremony
	Registration	Poster session 2 (even numbered) with beer & pretzels	Poster session 2 (even numbered) with beer & pretzels		Coffee break
		Welcome reception			Methods and techniques 5
					Closing remarks

Program

Monday, September 2

17:00 - 18:00 Registration

Tuesday, September 3

07:30 - 09:00 Registration

09:00 - 09:20 Opening Remarks by **Rainer Erdmann**, Berlin, Germany

Session: Biological applications

Chair: Shimon Weiss

09:20 - 10:05 **Sunney Xie**, Beijing, China (Keynote Talk)
Insights from High Precision Single Cell Genomics

10:05 - 10:25 **Peter Jomo Walla**, Braunschweig, Germany
A new light-harvesting material for efficient collection of solar energy

10:25 - 10:45 **Steffen Mühle**, Göttingen, Germany (Student Award)
Loop Formation and Translational Diffusion of Intrinsically Disordered Proteins

10:45 - 11:20 COFFEE BREAK

Session: Super-resolution microscopy 1

Chair: Claus Seidel

11:20 - 11:45 **Katrin I. Willig**, Göttingen, Germany (Invited Talk)
Intravital STED microscopy of the synapse

11:45 - 12:05 **Gerti Beliu**, Würzburg, Germany (Student Award)
Bioorthogonal labeling with tetrazine-dyes for super-resolution microscopy

12:05 - 12:25 **Stefan Wieser**, Castelldefels, Barcelona, Spain
SIMPLE: Structured illumination based point localization with enhanced precision

12:25 - 13:00 POSTER FLASH TALKS 1
Joshua Botha, Julia Heiby, Lucas Herdly, Maria Hoyer, Ilanila Ilangumaran Ponmalar, Koen Martens, Siegfried Musser

13:00 - 14:15 LUNCH BREAK

Session: Methods and techniques 1

Chair: Katrin Willig

- 14:15 - 14:40 **Claus A.M. Seidel**, *Duesseldorf, Germany (Invited Talk)*
Super-resolution FRET microscopy reaches molecular resolution
- 14:40 - 15:05 **Shimon Weiss**, *Los Angeles, United States (Invited Talk)*
Advances in inorganic voltage nanosensors
- 15:05 - 15:25 **Jelle Hendrix**, *Diepenbeek, Belgium*
Single-molecule FRET analysis of retroviral replication using
multicolor PIE-FLIM
- 15:25 - 15:45 **Johann Bohlen**, *München, Germany (Student Award)*
Single-molecule experiments of graphene fluorescence quenching
enabled by DNA origami nanopositioners
- 15:45 - 16:05 **Jan-Hendrik Budde**, *Düsseldorf, Germany (Student Award)*
Resolving single-molecule FRET under stimulated emission depletion
by using STED-MFIS microscopy
- 16:05 - 16:45 POSTER FLASH TALKS 2
Aneesh Chandrasekharan, Thorben Cordes, Subhabrata Ghosh,
Joelle Goulding, Nikos S Hatzakis, Maximiliaan Huisman, Emmanuel
Margeat, Felix Wiggers
- 16:45 - 17:05 COFFEE BREAK
- 17:05 - 18:50 POSTER SESSION 1 and PRODUCT PRESENTATION
(odd numbered posters)
- 20:00 - ... WELCOME RECEPTION

Wednesday, September 4

Session: FCS

Chair: Michel Orrit

- 08:30 - 09:00 **Christian Eggeling, Jena, Germany (Invited Talk)**
Dissecting molecular membrane organization - a super-resolution fluorescence spectroscopy story
- 09:00 - 09:20 **Mariano Gonzalez Pisfil, Berlin, Germany**
Scanning FCS and Super-Resolution Microscopy on 2D Lipid Membranes
- 09:20 - 09:40 **Lukas Lau, Heidelberg, Germany (Student Award)**
Opening up Imaging Fluorescence (Cross-) Correlation Spectroscopy to Förster Resonance Energy Transfer Analysis
- 09:40 - 10:00 **Pamina M. Winkler, Castelldefels, Spain (Student Award)**
Planar plasmonic antenna arrays resolve transient nanoscopic heterogeneities in biological membranes
- 10:00 - 10:35 COFFEE BREAK and PRODUCT PRESENTATION

Session: Methods and techniques 2

Chair: Ron Walsworth

- 10:35 - 11:00 **Jörg Wrachtrup, Stuttgart, Germany (Invited Talk)**
Nanoscale quantum sensing for life science
- 11:00 - 11:20 **Mo Lu, Cologne, Germany (Student Award)**
Watching a single fluorophore molecule walk into a plasmonic hotspot
- 11:20 - 11:40 **Philip Tinnefeld, Munich, Germany**
DNA nanotech to improve single-molecule biophysics
- 11:40 - 12:15 POSTER FLASH TALKS 3
Alexey Chizhik, Frederike Erb, Dorota Kostrz, Andrey Naumov, David Nobis, Dmitry Tabakaev, Johannes Vandaele
- 12:15 - 12:35 GROUP PICTURE
- 12:35 - 13:45 LUNCH BREAK

OPEN AFTERNOON

Session: Super-resolution microscopy 2

Chair: Jörg Enderlein

- 13:45 - 14:05 **Rainer Erdmann**, Berlin, Germany
Welcome
- 14:05 - 14:50 **Stefan W. Hell**, Göttingen, Germany (Keynote Talk)
Optical microscopy: the resolution revolution
- 14:50 - 15:15 **Hari Shroff**, Bethesda, United States (Invited Talk)
Accelerating deconvolution and multiview registration in fluorescence microscopy
- 15:15 - 15:35 **Arindam Ghosh**, Goettingen, Germany (Student Award)
Graphene Based Metal Induced Energy Transfer for Sub -
Nanometer Optical Localization
- 15:35 - 16:10 COFFEE BREAK and PRODUCT PRESENTATION

Session: Methods and techniques 3

Chair: W.E. Moerner

- 16:10 - 16:35 **Michel Orrit**, Leiden, Netherlands (Invited Talk)
Optical Studies Of Single Molecules With Single Gold Nanoparticles
- 16:35 - 17:00 **Ronald Walsworth**, Cambridge, United States (Invited Talk)
Quantum diamond sensors for life sciences applications
- 17:00 - 17:20 **Tim Schröder**, Muenchen, Germany (Student Award)
Following the Fate of Excitons in Multi-Chromophoric Nanoparticles
- 17:20 - 18:00 POSTER FLASH TALKS 4
Hatice Didar Ciftci, Charly Kusch, Robert B. Quast, Adariani Soheila
Rezaei, Jan Schlegel, Magdalena Schneider, Jan Christoph Thiele
- 18:00 - 19:45 POSTER SESSION 2 with BEER & PRETZELS and
PRODUCT PRESENTATION
(even numbered posters)

Thursday, September 5

Session: FRET

Chair: Markus Sauer

- 08:30 - 09:00 **Ben Schuler**, Zurich, Switzerland (*Invited Talk*)
Probing Intrinsically Disordered Proteins and Their Interaction Mechanisms With Single-Molecule Spectroscopy
- 09:00 - 09:25 **Jörg Enderlein**, Göttingen, Germany (*Invited Talk*)
Metal Included Energy Transfer (MIET) Imaging
- 09:25 - 09:45 **Niels Zijlstra**, Planegg-Martinsried, Germany
Angstrom precision distance measurements within dynamic protein structures with single-molecule Förster-resonance energy transfer
- 09:45 - 10:05 **Anders Barth**, Düsseldorf, Germany
Studying complex biomolecular dynamics by single-molecule FRET
- 10:05 - 10:25 **Maria Dienerowitz**, Jena, Germany
Trapping individual membrane proteins in solution to examine their conformational changes with single-molecule FRET
- 10:25 - 10:55 COFFEE BREAK and PRODUCT PRESENTATION

Session: Super - resolution microscopy 3

Chair: Ben Schuler

- 10:55 - 11:00 **Rainer Erdmann**, Berlin, Germany
Introducing W.E. Moerner
- 11:00 - 11:45 **W.E. Moerner**, Stanford, United States (*Keynote Talk*)
Thirty Years of Single Molecules, from Early Low Temperatures to 3D Super-Resolution Nanoscopy and Tracking in Cells: What's Next?
- 11:45 - 12:10 **Johan Hofkens**, Leuven, Belgium (*Invited Talk*)
Identifying microbiome species by single-molecule superresolved DNA mapping and resampling statistics
- 12:10 - 12:30 **Luciano A. Masullo**, Buenos Aires, Argentina (*Student Award*)
MINFLUX nanoscopy with pulsed interleaved excitation
- 12:30 - 12:50 **Christian Franke**, Dresden, Germany
Correlative triple-colour SMLM and electron tomography reveals endosome nanoscale domains
- 12:50 - 14:00 LUNCH BREAK

Session: Super-resolution microscopy 4

Chair: Johan Hofkens

- 14:00 - 14:25 **Markus Sauer**, Würzburg, Germany (*Invited Talk*)
Single-Molecule Localization Microscopy: Where Next?
- 14:25 - 14:50 **Paul French**, London, United Kingdom (*Invited Talk*)
Multidimensional and super-resolved fluorescence imaging and high content analysis
- 14:50 - 15:10 **Simon Hennig**, Hannover, Germany
Electrophoretic Nano-injection and Points Accumulation for Imaging in Nanoscale Topography (eN-PAINT)
- 15:10 - 15:30 **Christoph Spahn**, Frankfurt, Germany
Bleaching-independent STED microscopy with exchangeable fluorescent probes
- 15:30 - 15:50 **Uri Rossman**, Rehovot, Israel (*Student Award*)
Super-resolution enhancement by quantum image scanning microscopy
- 15:50 – 16:00 General remarks regarding Anniversary Party
- 16:15 joint departure to the Anniversary Party
- 17:00 - 00:00 ANNIVERSARY PARTY @ Stadium „An der Alten Försterei“
Socialize and dine

Friday, September 6

Session: Biological applications & Methods/techniques 1 Chair: Gerhard Schütz

- 08:30 - 09:00 **Sang-Hee Shim**, Seoul, Korea, Republic Of (Invited Talk)
Ultrastructural dynamics of genomic loci in live cells
- 09:00 - 09:25 **Thomas Schmidt**, Leiden, Netherlands (Invited Talk)
Repetitive switching between DNA binding modes enables target finding by the glucocorticoid receptor
- 09:25 - 09:45 **Frank Mieskes**, München, Germany (Student Award)
3D Orbital Tracking: Now in Color
- 09:45 - 10:05 **Jakob Schedlbauer**, Regensburg, Germany (Student Award)
Ultrafast excited state relaxation monitored by single molecule photon statistics
- 10:05 - 10:25 **Kristyna Holanova**, Prague, Czech Republic (Student Award)
Revealing single-protein function by high-speed tracking of individual domains
- 10:25 - 11:00 COFFEE BREAK

Session: Biological applications & Methods/techniques 2 Chair: Thomas Schmidt

- 11:00 - 11:45 **Toshio Yanagida**, Osaka, Japan (Keynote Talk)
Single molecule study on how muscle works.
- 11:45 - 12:10 **Manfred Auer**, Edinburgh, United Kingdom (Invited Talk)
The linear phase of α -synuclein oligomerization, key driver of Parkinson's disease, revealed by a confocal fluorescence on-bead assay and by single molecule microscopy
- 12:10 - 12:30 **Lei Zhang**, München, Germany
Photostability with a click: linker molecules for simple biolabeling with self-healing fluorophores
- 12:30 - 12:50 **Alessandro Rossetta**, Genoa, Italy (Student Award)
Time-resolved Fluorescence Detection With Single-Photon-Avalanche-Diode Array – Applications In Life Sciences
- 12:50 - 14:00 LUNCH BREAK

Session: Methods and techniques 4**Chair: Sang-Hee Shim**

- 14:00 - 14:25 **Gerhard Schütz**, Vienna, Austria (*Invited Talk*)
Single molecule microscopy to measure forces in the immunological synapse
- 14:25 - 14:45 **Gregor Jung**, Saarbruecken, Germany
Visualization of Chemical Reactions on the Single-Molecule Level
- 14:45 - 15:05 **Kunihiko Ishii**, Saitama, Japan
Independent fluorescence component analysis: blind separation of overlapped fluorescence signals from a heterogeneous sample
- 15:05 - 15:25 **Johan Hummert**, Heidelberg, Germany
Quantitative fluorescence microscopy for in situ protein counting
- 15:25 - 15:35 STUDENT AWARD CEREMONY
- 15:35 - 16:10 COFFEE BREAK

Session: Methods and techniques 5**Chair: Manfred Auer**

- 16:10 - 16:35 **Aleksandra Radenovic**, Lausanne, Switzerland (*Invited Talk*)
A Nanoscopy of 2D materials
- 16:35 - 17:00 **Rudolf Rigler**, Stockholm, Sweden (*Invited Talk*)
Single Molecules, Fluctuations and Memory
- 17:00 - 17:20 **Widengren Jerker**, Stockholm, Sweden
Transient state (TRAST) imaging of local cellular redox conditions and intermittent protein-lipid interactions in cellular membranes
- 17:20 - 17:40 **Don C. Lamb**, München, Germany
PIE: The Impact of a Lifetime
- 17:40 - 17:50 **W.E. Moerner**, Stanford, USA
Closing Remarks
- aprox. 17:50 END OF WORKSHOP

ORAL PRESENTATIONS (in alphabetical order)

Presenter	Titel
Auer, Manfred	The linear phase of α -synuclein oligomerization, key driver of Parkinson's disease, revealed by a confocal fluorescence on-bead assay and by single molecule microscopy
Barth, Anders	Studying complex biomolecular dynamics by single-molecule FRET
Beliu, Gerti	Bioorthogonal labeling with tetrazine-dyes for super-resolution microscopy
Bohlen, Johann	Single-molecule experiments of graphene fluorescence quenching enabled by DNA origami nanopositioners
Budde, Jan-Hendrik	Resolving single-molecule FRET under stimulated emission depletion by using STED-MFIS microscopy
Dienerowitz, Maria	Trapping individual membrane proteins in solution to examine their conformational changes with single-molecule FRET
Eggeling, Christian	Dissecting molecular membrane organization - a super-resolution fluorescence spectroscopy story
Enderlein, Jörg	Metal Included Energy Transfer (MIET) Imaging
Franke, Christian	Correlative triple-colour SMLM and electron tomography reveals endosome nanoscale domains
French, Paul	Multidimensional and super-resolved fluorescence imaging and high content analysis
Ghosh, Arindam	Graphene Based Metal Induced Energy Transfer for Sub - Nanometer Optical Localization
Hell, Stefan W.	Optical microscopy: the resolution revolution
Hendrix, Jelle	Single-molecule FRET analysis of retroviral replication using multicolor PIE-FLIM
Hennig, Simon	Electrophoretic Nanoinjection and Points Accumulation for Imaging in Nanoscale Topography (eN-PAINT)
Hofkens, Johan	Identifying microbiome species by single-molecule superresolved DNA mapping and resampling statistics

Presenter	Titel
Holanova, Kristyna	Revealing single-protein function by high-speed tracking of individual domains
Hummert, Johan	Quantitative fluorescence microscopy for in situ protein counting
Ishii, Kunihiko	Independent fluorescence component analysis: blind separation of overlapped fluorescence signals from a heterogeneous sample
Gonzalez Pisfil, Mariano	Scanning FCS and Super-Resolution Microscopy on 2D Lipid Membranes
Jung, Gregor	Visualization of Chemical Reactions on the Single-Molecule Level
Lamb, Don C.	PIE: The Impact of a Lifetime
Lau, Lukas	Opening up Imaging Fluorescence (Cross-) Correlation Spectroscopy to Förster Resonance Energy Transfer Analysis
Lu, Mo	Watching a single fluorophore molecule walk into a plasmonic hotspot
Masullo, Luciano A.	MINFLUX nanoscopy with pulsed interleaved excitation
Mieskes, Frank	3D Orbital Tracking: Now in Color
Moerner, W.E.	Thirty Years of Single Molecules, from Early Low Temperatures to 3D Super-Resolution Nanoscopy and Tracking in Cells: What's Next?
Mühle, Steffen	Loop Formation and Translational Diffusion of Intrinsically Disordered Proteins
Orrit, Michel	Optical Studies Of Single Molecules With Single Gold Nanoparticles
Radenovic, Aleksandra	A Nanoscopy of 2D materials
Rigler, Rudolf	Single Molecules, Fluctuations and Memory
Rossetta, Alessandro	Time-resolved Fluorescence Detection With Single-Photon-Avalanche-Diode Array – Applications In Life Sciences

Presenter	Titel
Rossmann, Uri	Super-resolution enhancement by quantum image scanning microscopy
Sauer, Markus	Single-Molecule Localization Microscopy: Where Next?
Schedlbauer, Jakob	Ultrafast excited state relaxation monitored by single molecule photon statistics
Schmidt, Thomas	Repetitive switching between DNA binding modes enables target finding by the glucocorticoid receptor
Schröder, Tim	Following the Fate of Excitons in Multi-Chromophoric Nanoparticles
Schuler, Ben	Probing Intrinsically Disordered Proteins and Their Interaction Mechanisms With Single-Molecule Spectroscopy
Schütz, Gerhard	Single molecule microscopy to measure forces in the immunological synapse
Seidel, Claus A.M.	Super-resolution FRET microscopy reaches molecular resolution
Shim, Sang-Hee	Ultrastructural dynamics of genomic loci in live cells
Shroff, Hari	Accelerating deconvolution and multiview registration in fluorescence microscopy
Spahn, Christoph	Bleaching-independent STED microscopy with exchangeable fluorescent probes
Tinnefeld, Philip	DNA nanotech to improve single-molecule biophysics
Walla, Peter Jomo	A new light-harvesting material for efficient collection of solar energy
Walsworth, Ronald	Quantum diamond sensors for life sciences applications
Weiss, Shimon	Advances in inorganic voltage nanosensors
Jerker, Widengren	Transient state (TRAST) imaging of local cellular redox conditions and intermittent protein-lipid interactions in cellular membranes
Wieser, Stefan	SIMPLE: Structured illumination based point localization with enhanced precision
Willig, Katrin I.	Intravital STED microscopy of the synapse

Presenter	Titel
Winkler, Pamina M.	Planar plasmonic antenna arrays resolve transient nanoscopic heterogeneities in biological membranes
Wrachtrup, Jörg	Nanoscale quantum sensing for life science
Xie, Sunney	Insights from High Precision Single Cell Genomics
Yanagida, Toshio	Single molecule study on how muscle works.
Zhang, Lei	Photostability with a click: linker molecules for simple biolabeling with self-healing fluorophores
Zijlstra, Niels	Angstrom precision distance measurements within dynamic protein structures with single-molecule Förster-resonance energy transfer

POSTER FLASH TALKS (in alphabetical order)

Presenter	Day Session	Nr.	Titel
Botha, Joshua	TUE 1	P7F	Phycobilisomes' Rich Hidden Life Revealed By Single Molecule Fluorescence Spectroscopy
Chandrasekharan, Aneesh	TUE 2	P9F	Real-time 3D lifetime imaging to visualize intracellular calcium heterogeneity in cancer cell-lines using genetically encoded fluorescent proteins
Chizhik, Alexey	WED 3	P12F	MIET: when nanometer axial resolution is a standard
Ciftci, Hatice Didar	WED 4	P14F	Single Transport Recordings of Glutamate Transporter Homologue Show Static Disorder Modulated by Mutations
Cordes, Thorben	TUE 2	P15F	Self-healing dyes – keeping the promise?!

Presenter	Day Session	Nr.	Titel
Erb, Frederike	WED 3	P20F	Fluorescent nanodiamonds as a nanoscopic magnetic field detector
Ghosh, Subhabrata	TUE 2	P25F	Excitation and Emission Transition Dipoles of Type-II Semiconductor Nanorods
Goulding, Joelle	TUE 2	P27F	Fluorescence Correlation Spectroscopy to study the effect of single nucleotide polymorphisms on the organisation of the endogenous Beta2-Adrenergic receptor within differentiated human stem cell lines
Hatzakis, Nikos S	TUE 2	P31F	Direct observation of CRISPR-Cas12 as conformational sampling reveals how Conformational Activation Promotes Catalysis and Resetting of the Endonuclease Activity
Heiby, Julia	TUE 1	P29F	Methionine in a protein hydrophobic core drives tight interactions required for assembly of spider silk
Herdly, Lucas	TUE 1	P33F	Tuneable photoswitches for chromatic aberration-free multichannel super-resolution imaging
Hoyer, Maria	TUE 1	P35F	Elucidating the microscopic mechanisms of actin oligomerization using zero-mode waveguides
Huisman, Maximiliaan	TUE 2	P37F	Meta-Max: An Easy-To-Use Calibration Tool To Maximize The Value Of Fluorescence Microscopy Data
Ilangumaran Ponmalar, Ilanila	TUE 1	P39F	Lipid diffusivity as a signature of structural oligomer of a pore forming protein Listeriolysin O
Kostrz, Dorota	WED 3	P48F	A novel molecular tweezer for the universal study of protein-protein interactions by single-molecule force spectroscopy

Presenter	Day Session	Nr.	Titel
Kusch, Charly	WED 4	P50F	Superresolution microscopy of platelet receptor regulation mechanisms
Margeat, Emmanuel	TUE 2	P55F	Structural dynamics of single metabotropic glutamate receptors in solution
Martens, Koen	TUE 1	P57F	Visualisation of dCas9 target search in vivo using an open-microscopy framework
Musser, Siegfried	TUE 1	P61F	Dynamics within Nuclear Pores and Phase-Separated Droplets
Naumov, Andrey	WED 3	P62F	Microrefractometry and local fields mapping by multiparameter fluorescence nanoscopy of single molecules and quantum dots
Nobis, David	WED 3	P64F	Multiphoton Single-Molecule Microscopy of DNA
Quast, Robert B.	WED 4	P68F	Improving the accuracy of smFRET measurements through site-specific protein labeling using two distinct non-canonical amino acids with orthogonal reactivity
Soheila Rezaei, Adariani	WED 4	P72F	Time-resolved Fluorescence Spectroscopy Captures Excited States Of A Membrane Associated Protein
Schlegel, Jan	WED 4	P76F	Super-resolution microscopy of sphingolipids in health and disease
Schneider, Magdalena	WED 4	P78F	Overcoming Blinking Artifacts in Nanocluster Detection with Two-Color STORM
Tabakaev, Dmitry	WED 3	P84F	Entangled two-photon absorption as a non-perturbative tool for microscopy and sensing
Thiele, Jan Christoph	WED 4	P86F	Combining localisation based super-resolution microscopy with Metal-Induced Energy Transfer

Presenter	Day Session	Nr.	Titel
Vandaele, Johannes	WED 3	P92F	Studying structural heterogeneities and dynamics of novel biomimetic polymer gels using fluorescence microscopy.
Wiggers, Felix	TUE 2	P95F	Explaining elasticity in cell-cell connections: Mapping microsecond flexibility in an extremely tight adherens junction complex

POSTER PRESENTATIONS (in alphabetical order)

Presenter	Day	Nr.	Titel
Anandamurugan, Abhinaya	TUE	P1	Strategies and challenges of studying in vivo conformational dynamics of Hsp90 using HILO microscopy and single molecule FRET
Balakrishnan, Ashwin	WED	P2	Quantifying Diffusion Dynamics Of β 2-Adrenergic Receptor Using Time Resolved Fluorescence Spectroscopy
Barulin, Aleksandr	TUE	P3	Towards single protein autofluorescence detection in the UV
Bodner, Clara	WED	P4	Determining the oligomeric state of G-protein-coupled receptors via single-molecule fluorescence microscopy
Börner, Richard	TUE	P5	MASH-FRET: A software package for next generation analyzing of single-molecule fluorescence data.
Botha, Joshua	WED	P6	The relationship between partial fluorescence blinking and photoprotection in the main plant light-harvesting complex.

Presenter	Day	Nr.	Titel
Silva, Tarcio de Castro	WED	P8	Selective and reversible emission evolution from highly fluorescent Ag nanoclusters embedded fluorophosphate glasses for white-light-emitting-diodes (W-LED)
Chen, Tao	WED	P10	Plasmon-driven Reaction Pathway Variation and Catalytic kinetics Revealed on Individual Pt-Modified Au Nanorods
Chizhik, Alexey	TUE	P11	Carbon dots: a new label for super-resolution imaging
Chizhik, Alexey	TUE	P13	Plasmonic Nanocavity: a new Tool for Absolute Fluorescence Quantum Yield Measurement in Complex Nanoscopic Systems
Coucke, Quinten	WED	P16	Characterization of cellular forces using FRET-based sensors with FLIM
Danaf, Nader Al	TUE	P17	Europium(III)-containing Methanol Dehydrogenase Investigated via Luminescence
Demirbay, Baris	WED	P18	Transient State (TRAST) monitoring for flow cytometry
Deng, Chunchu	TUE	P19	Studying the Role of BDNF/TrkB in Regulation of Local Protein Translation in Axon Terminals of Smn Deficient Motoneurons
Folz, Julian	TUE	P21	Determination of setup properties and calibration parameters using DNA
Fontana, Mattia	WED	P22	Illuminating Auxin Response Factor (ARF) binding equilibrium and kinetics at the single-molecule level
Fucikova, Anna	TUE	P23	Study of individual silicon nanocrystals with ultra narrow emission linewidth
Vesga, Arturo G	WED	P24	Binding Affinity Of Membrane-Inserted Epitope To HIV-1 Antibody And Its Dependency On Lipids Quantified By Fluorescence Correlation Spectroscopy

Presenter	Day	Nr.	Titel
Grabenhorst, Lennart	WED	P26	Plasmonic hotspots for single-molecule biophysics
Hammer, Mathias	WED	P28	A TIER SYSTEM for META-DATA
Handa, Anoushka	WED	P32	3D Super-resolution imaging of biological tissue
Harris, Paul D	WED	P30	Photon by Photon Hidden Markov analysis Reveal Rigidity of DNA Single Stranded Break Structures
Holm, Thorge	WED	P34	Supercontinuum Laser based Pulsed Interleaved Excitation
Hübner, Kristina	WED	P36	Visualizing the emission directivity of fluorescent dyes coupled to optical antennas by defocused wide-field imaging
Isbaner, Sebastian	WED	P38	Axial Localization with MIET-PAINT
Jang, Hongje	WED	P40	3D deconvolution of multiplane wide-field microscopy data
Jusuk, Ija	TUE	P41	Fluorescence enhancing self-assembled optical antennas for single-molecule DNA sequencing
Kallenberg, Christina J. L.	WED	P42	Using smFRET to investigate inter-loci complex formation of M.tuberculosis WXG100 proteins
Katti, Aditya	TUE	P43	Measuring rotational diffusion of fluorophores using Fluorescence Correlation Spectroscopy (FCS) with polarization detection, fluorescence anisotropy and dark field microscopy
Khrenova, Maria	WED	P44	Components of FRET pairs based on the iLOV protein and its derivatives
Knigge, Xenia	TUE	P45	Parallel Single Molecule Immobilization by Dielectrophoresis
Koch, Julian	WED	P46	Specificity of phase separation for murine guanylate binding proteins in live cells

Presenter	Day	Nr.	Titel
Kopanchuk, Sergei	TUE	P47	Effect of specific agonists on Sigma-1 receptor sub-diffractional colocalization
Kühnemuth, Ralf	TUE	P49	Single-molecule FRET detects intermediates and fast dynamics of DNA Holliday junctions
Lee, Seoungjun	TUE	P51	Single molecule nucleocytoplasmic transport dynamics in intact live cells
Lerner, Eitan	WED	P52	Diffusion-enhanced photon inference (DEPI):Accurate retrieval of distance distributions in single-molecule FRET experiments
Li, Yichen	TUE	P53	Uptake and Localization of Aminoglycoside Antibiotics in Live Escherichia coli
Liu, Haichun	WED	P54	Stimulated emission depletion microscopy using lanthanide upconversion nanoparticles
Matsuoka, Satomi	WED	P56	Mutual inhibition between anterior and posterior signaling molecules in motile cells revealed by single-molecule imaging
Meub, Mara	WED	P58	Super-resolution microscopy of platelet receptor regulation mechanisms
Moradi, Mehri	TUE	P59	Characterization of defective presynaptic active zone components in Spinal Muscular Atrophy (SMA)
Moradi, Amin	WED	P60	A highly sensitive single-molecule probe for optical detection of a single electron
Nevskyi, Oleksii	TUE	P63	Correcting orientation-induced artifacts in single molecule localization microscopy
Noffke, Mareike	TUE	P65	Deterministic Singling of Enzyme Molecules on Nanoelectrode Arrays
Oleksiievets, Nazar	WED	P66	Nanobody Detection of Standard Fluorescent Proteins Enables Multi-Target DNA-PAINT with High Resolution and Minimal Displacement Errors

Presenter	Day	Nr.	Titel
Port, Fabian	TUE	P67	Investigation of the dynamics of focal adhesion associated actin using Metal Induced Energy Transfer
Rajab, Suhaila	TUE	P69	Dynamics of ionotropic glutamate receptor ligand-binding domains revealed by fluorescence correlation spectroscopy
Rakhmatulina, Aigerim	WED	P70	Single molecule dynamics of hematopoietic stem cells homing
Rebehn, Lydia	TUE	P71	Metal Induced Energy Transfer reveals focal adhesion structural dynamics on micropatterns via actin stress fiber analysis
Ridderbeek, Korneel	TUE	P73	Measuring Rapid, Transient Nano-Bio Interactions using Plasmon-Resonance-Scattering Photon-Correlation Fourier Spectroscopy
Rohilla, Sumeet	WED	P74	Multi-target immunofluorescence using spectral FLIM-FRET for separation of undesirable antibody cross-labelling
Sandberg, Elin	TUE	P75	Laser-scanning transient state (TRAST) imaging/spectroscopy
Schmauder, Ralf	TUE	P77	Following single molecule ligand binding and binding stoichiometries on native membranes at moderate affinities
Schubert, Jonathan	TUE	P79	Local conformational changes of the molecular chaperone Hsp90 observed in single molecules
Segura-Ruiz, Jaime	WED	P80	Nano-XEOL mapping at the ID16B hard X-ray nanoprobe beamline of the ESRF
Sharma, Akshita	TUE	P81	Leaflet-dependent diffusion in lipid bilayers using Metal-Induced Energy Transfer and Fluorescence Lifetime Correlation Spectroscopy (MIET-FLCS)
Stach, Oliver	WED	P82	Resolving dynamics of dsRNA-protein complexes with single molecule fluorescence

Presenter	Day	Nr.	Titel
Steiner, Florian	TUE	P83	A new diagnostic tool based on self-assembled plasmonic DNA origami nanoantennas
Thédié, Daniel	TUE	P85	A simple strategy for suppression of blinking-induced artifacts in quantitative PALM
Tiwari, Ashish	TUE	P87	Carbon coated core–shell multifunctional fluorescent SPIONs for single particle fluorescence imaging and magnetic resonance imaging
Tsukanov, Roman	WED	P88	Probing Conformational Dynamics with Metal-Induced Energy Transfer
Ugwuoke, Luke	TUE	P89	Fluorescence enhancement of a single light-harvesting complex near a gold nanorod: theory and experiment
Vaghefikia, Farzaneh	WED	P90	Impact of Molecular Mass and the Structural Compactness of Crowder Molecules on Translational Mobility of Biological Macromolecules
Voort, Nicolaas T.M. van der	TUE	P91	Resolution on all scales: protein clusters with FRET to cells with STED
Srambickal, Chinmaya Venugopal	TUE	P93	Protein distribution studies using Fluorescence Nanoscopy
Vollmar, Leonie	WED	P94	Quantitative comparison of a sCMOS and an EMCCD Camera for detection of smFRET dynamics
Winkelmann, Hauke	WED	P96	Quantifying cytokine receptor dimerization in the plasma membrane by single molecule FRET
Xu, Longfu	TUE	P97	Visualization of single-stranded DNA binding protein (SSB) displacement by DNA polymerase at single-molecule level
Yang, Tianjin	WED	P98	Rapid droplet-based microfluidic mixing for single-molecule kinetics

Presenter	Day	Nr.	Titel
Yi, Hua-Wei	TUE	P99	Phosphorylation affects the structure of the K48-linked ubiquitin chain and thereby inhibits the ubiquitin-proteasome system
Yukhnovets, Olessya	WED	P100	Brightness-Gated Two-Color Coincidence Detection for Determination of Molecular Binding Fraction
Zalami, Daniel	TUE	P101	Single-Particle Orbit Tracking: Non-invasive study of the three-dimensional structure of nanoporous membranes

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