



Wednesday, 1 April

8am	Registration <i>Welcome Desk</i>
9am	Opening Speech <i>Auditorium</i>
9:05am	Plenary Speech <i>Auditorium</i>
9:05am	Nanopores, from single-molecule biology to single-molecule protein sequencing » Prof. Cees Dekker
9:40am	TBD » Prof. Luke Lee
10:15am	Coffee Break <i>Gallery</i>
10:45am	Plenary Speech <i>Auditorium</i>
10:45am	Topological plasmonics: Watching ultrafast vector movies of plasmonic skyrmions on the nanoscale » Prof. Harald Giessen
11:25am	Co-temporal Force and Fluorescence Measurements Reveal a Ribosome Gear-shift Mechanism of Translation Regulation by mRNA Secondary Structures » Prof. Carlos Bustamante
12pm	Lunch <i>Partner Restaurants</i>

1:30pm

Poster Session

Gallery

Plasmonic zero mode waveguide for highly confined and enhanced fluorescence emission

» [Dr. Denis Garoli](#)

Microscopy of photoactive and photoconvertible fluorescent proteins

» [Dr. Justyna Grzelak](#), Ms. Martyna Domagalska, Mr. Artur Ziółkowski, Ms. Karolina Sulowska, Dr. Joanna Niedziolka-Jonsson, Prof. Sebastian Maćkowski

Studies on adsorption of thiolated mononucleotides and single stranded DNA on gold surface by SERS

» [Ms. Edyta Pyrak](#), Dr. Aleksandra Jaworska, Prof. Andrzej Kudelski

Defects on silver nanowire for directional surface enhanced Raman scattering

» [Mr. Sunny Tiwari](#), Dr. G. V. Pavan Kumar

Upconversion nanoparticles as imaging nanosystems for nanodrugs distribution in vessels

» [Ms. Polina A. Demina](#), Ms. Natalia V. Sholina, Dr. Denis N. Karimov, Mrs. Natalya A. Arkharova, Dr. Dmitry A. Khochenkov, Dr. Roman Akasov, Dr. Andrey V. Nechaev, Mrs. Alla N. Generalova, Mr. Evgeny V. Khaydukov

Peptides as receptors for metal ions in potentiometric chemical sensors

» [Ms. Olena Synhaivska](#), Mr. Yves Mermoud, Dr. Israel Alshanski, Dr. Mattan Hurevich, Prof. Shlomo Yitzchaik, Dr. Mathias Wipf, Prof. Michel Calame

Upconversion nanoparticles for NIR-induced photopolymerization in highly turbid medium

» [Mr. Kirill V. Khaydukov](#), Ms. Polina A. Demina, Mr. Alexander G. Savelyev, Mrs. Alla N. Generalova, Mrs. Vasilina V. Rocheva, Mr. Evgeny V. Khaydukov



Continued from **Wednesday, 1 April**

Anapole modes in oxygen-vacancy-rich TiO₂ nano-resonators: tuning the absorption for photocatalysis in the visible

» [Mr. Ludwig Hüttenhofer](#), Mr. Felix Eckmann, Dr. Alberto Lauri, Dr. Javier Cambiasso, Dr. Evangelina Pensa, Dr. Yi Li, Prof. Emiliano Cortes, Prof. Ian Sharp, Prof. Stefan Maier

ForSDAT: A Fully Automated Data Analysis Toolkit for SMFS Measurements

» [Mr. Tal Duanis-Assaf](#), Prof. Meital Rechtes

Target-triggered exponential signal amplification reaction for RNA detection

» [Ms. Seoyoung Lee](#), Prof. Hyun Gyu Park

Universal miRNA detection based on target induced toehold-mediated strand displacement reactions

» [Ms. Yeonkyung Park](#), Prof. Hyun Gyu Park

A novel H-shape adaptor-mediated isothermal exponential amplification reaction (HS-EXPAR) to identify target nucleic acid

» [Ms. Hansol Kim](#), Prof. Hyun Gyu Park

Ultrasensitive insertion mutation detection by CRISPR –utilizing EXPAR in one step RT-PCR

» [Ms. Jayeon Song](#), Prof. Hyun Gyu Park

Multiplexed real-time detection of foodborne pathogens using lab-on-a-disc platform

» [Mr. Soohyun Kim](#), Mr. RaKyeom Kim, Prof. Nae Yoon Lee, Dr. Min Hwan Kim, Prof. Hyun Gyu Park

Biharmonic Problems with Computational Approaches in Technology

» [Prof. Hovik Matevossian](#), Prof. Giorgio NORDO, Prof. Tokuei Sako

2:30pm **Single-Molecule Manipulation**
Auditorium

2:30pm **TBD**
» [Prof. Felix Ritort](#)

3:04pm **Single molecule DNA sequencing and epigenetics**
» Dr. Jimmy Ouellet, Dr. Fangyuan Ding, [Prof. david Bensimon](#), Dr. Jean François Allemand, Dr. Vincent Croquette, Dr. Gordon Hamilton

3:38pm **Stereo Darkfield Stereoscopy : a linear and superresolutive 3D tracking method for diluted particles.**
» [Mr. Martin Rieu](#), Dr. Thibault Vieille, Dr. Gael Radou, Prof. Jean Francois Allemand, Prof. Vincent Croquette

3:55pm **Light-induced conformational changes of Channelrhodopsin probed by photothermal expansion mid-infrared nanospectroscopy**
» [Dr. Valeria Giliberti](#), Mrs. Raffaella Polito, Ms. Maria Eleonora Temperini, Dr. Eglof Ritter, Dr. Matthias Broser, Prof. Peter Hegemann, Dr. Ljiljana Puskar, Dr. Ulrich Schade, Dr. Leonetta Baldassarre, Prof. Michele Ortolani

2:30pm **Scattering Techniques**
Room 201

2:30pm **Label-free and real-time monitoring of functionalized surface stability via interferometric scattering microscopy (iSCAT)**
» [Ms. Katharina König](#), Dr. Francesca Nicoli, Mr. Andreas Frutiger, Prof. Vahid Sandoghdar

2:47pm **Electrophoresis with label-free single protein detection sensitivity**
» [Mr. Mahyar Dahmardeh](#), Mr. Houman Mirzaalian, Mr. Reza Gholami, Prof. Vahid Sandoghdar

3:04pm **Ultra-Sensitive High-Dynamic Range Label Free Platform for Bioparticle Detection**
» [Mr. Unai Ortiz-Orruño](#), Dr. matz liebel, Prof. Niek van Hulst

3:21pm **Nanofluidic scattering microscopy for the label-free imaging of single molecules in free motion**
» [Dr. Barbora Spackova](#), Mr. Johan Tenghamn, Dr. Joachim Fritzsche, Dr. Christoph Langhammer



Continued from **Wednesday, 1 April**

3:38pm **Probing Disulfide Redox Cycles at the Single-Molecule Level**
» [Mr. Serge Vincent](#), Mr. Sivaraman Subramanian, Prof. Frank Vollmer

3:55pm **Direct phase measurement of the light scattered by a single plasmonic nanoparticle**
» [Dr. Frank Wackenhut](#), Mr. Otto Hauler, Mr. Lukas A. Jakob, Mr. Alexander Stuhl, Dr. Florian Laible, Prof. Monika Fleischer, Dr. Kai Braun, Prof. Alfred J. Meixner

2:30pm **Single-molecule Imaging, Localisation and Microscopy**
Room 207

2:30pm **Non destructive readout camera technology for single molecule localisation**
» [Prof. Ashley Cadby](#)

2:47pm **nano-FTIR enables mapping and identification of single macromolecules and monolayer detection**
» [Dr. Philip Schaefer](#), Dr. Adrian Cernescu

3:04pm **Photochemically printed plasmonically active metallic nanostructures**
» [Dr. Marcin Szalkowski](#), Mr. Kamil Wiwatowski, Ms. Karolina Sulowska, Prof. Dawid Piątkowski, Prof. Sebastian Maćkowski

3:21pm **Widefield single-shot photothermal holography**
» [Dr. matz liebel](#), Dr. Franco Camargo, Mr. Unai Ortiz-Orruño, Prof. Niek van Hulst, Prof. Giulio Cerullo

3:38pm **High-throughput multicolor 3D localization in live cells by depth-encoding imaging flow cytometry**
» [Dr. Lucien Weiss](#), Mrs. Yael Shalev Ezra, Dr. Sarah Goldberg, Mr. Omer Adir, Prof. Avi Schroeder, Dr. Onit Alalouf, Prof. Yoav Shechtman

3:55pm **Ultrasensitive Laser Scanning Confocal Microscopy for Single Molecule Counting**
» [Dr. Alan Li](#)

4:10pm **Coffee Break**
Gallery

4:40pm **Nanopores I**
Auditorium

4:40pm **Single-molecule protein sensing using aptamer-functionalized solid state nanopore**
» [Ms. Sohini Pal](#), Mr. Ramkumar Balasubramanian, Dr. Banani Chakraborty, Dr. Akshay Naik, Dr. Prabal K. Maiti, Dr. Manoj M. Varma

4:57pm **Protein adaptor signals in a biological nanopore sensor for metabolite detection**
» [Dr. Sarah Zernia](#), Mr. Niek van der Heide, Ms. Nicole S. Galenkamp, Dr. Giorgos Gouridis, Prof. Giovanni Maglia

5:14pm **A high aspect ratio and long single nanopore development on an SOI for slow DNA translocation**
» [Dr. Hithesh Kumar Gatty](#), Dr. Xuan Chung Nguyen, Dr. Miao Zhang, Prof. Ilya Sytjugov, Prof. Jan Linnros

5:31pm **Redox-active nanopores for protein sensing**
» [Mr. Yves Mermoud](#), Dr. Peter Nirmalaraj, Prof. Michel Calame

5:48pm **Single-Molecule Sensing of Cell Secretion using Force-controlled Nanopores**
» [Mr. Til Schlotter](#), Mr. Sean Weaver, Prof. Janos Vörös, Prof. Tomaso Zambelli, Dr. Morteza Aramesh

4:40pm **Molecular Electronics I**
Room 201

4:40pm **Quantum Interference in Single-Molecule Circuits**
» [Prof. Latha Venkataraman](#)

5:14pm **Mechanical instability of single-molecule junction at 3.3 GHz**
» [Dr. Vitalii Stetsovych](#), Dr. Simon Feigl, Mr. Radovan Vranik, Prof. Stefan Müllegger



Continued from **Wednesday, 1 April**

- 5:31pm **Strategies for the fabrication of robust molecular junctions and top-contact electrodes in molecular electronic devices**
» [Dr. Lucia Herrer](#), Prof. Pilar Cea, Dr. Santiago Martín, Prof. Paul Low, Dr. José M. De Teresa, Prof. José Luis Serrano, Prof. Richard J. Nichols, Prof. Colin Lambert
- 5:48pm **Water Compatible Molecular Spectroscopy Using Self Formed Nanojunctions**
» [Dr. Prajith Karadan](#), Mr. Amir Ziv, Dr. Shira Yochelis, Prof. Yossi Paltiel, Prof. Roie Yerushalmi
- 4:40pm **DNA Nanotechnology, Molecular machines and Self-assembly I**
Room 207
- 4:40pm **Bistable oligomeric systems might become a new platform for the design of nanosensors and molecular machines**
» [Prof. Vladik Avetisov](#)
- 4:57pm **Assembling Natural Puzzle Pieces to Build Efficient Cell Biosensors**
» [Dr. Samar Damiati](#)
- 5:14pm **Putting DNA origami-based nanostructures in stable motion**
» [Prof. Michael Mertig](#), Mr. Felix Kroener, Mr. Lukas Traxler, Dr. Andreas Heerwig, Mr. Thomas Welte, Dr. Wolfgang Kaiser, Dr. Ulrich Rant
- 5:31pm **Controlling the dynamic structure of viral DNA for efficient control of origami assembly**
» [Dr. Joseph Robertson](#), Dr. Jacob Majikes, Dr. Michael Zwolak, Dr. J. Alexander Liddle
- 5:48pm **Directing Single-Molecule Emission with DNA Origami-Assembled Optical Antennas**
» [Dr. Mauricio Pilo-Pais](#), Mrs. Kristina Hübner, Dr. Florian Selbach, Prof. Tim Liedl, Prof. Philip Tinnefeld, Prof. Fernando Stefani, Prof. Guillermo Acuna

6:15pm **Flamenco Show**
Palacio Del Flamenco

Thursday, 2 April

- 8:30am **Registration**
Welcome Desk
- 9am **Plenary Speech**
Auditorium
- 9am **Nanoaperture Optical Tweezers for Single Biomolecule Studies**
» [Prof. Xiaoliang Sunney Xie](#)
- 9:40am **Force and function of proteins in-vitro and in-silico**
» [Dr. Hermann Gaub](#)
- 10:15am **Coffee Break**
Gallery
- 10:45am **Single-molecule and Nanoscale Manipulation**
Auditorium
- 10:45am **Dissecting kinesin's gait: Ultraresolution optical trapping using germanium nanospheres**
» [Prof. Erik Schaeffer](#), Mrs. Swathi Sudhakar
- 11:19am **Mechanics of the Neural Cell Adhesion Molecule from a single-molecule perspective**
» [Dr. Jessica Valle Orero](#)
- 11:36am **From an atomic-resolution mill to a new engineering solution for the climate crisis - a call to action across 17 orders of magnitude in length**
» [Dr. Ye Tao](#)



Continued from **Thursday, 2 April**

11:53am **Dissecting the mechanisms of transcription factor binding to DNA: a single molecule study**

» [Prof. Ariel Kaplan](#)

12:10pm **Biotemplated Metal Nanoparticles and Quantum Clusters for Biosensing and Theranostic Applications**

» [Dr. Yen Nee Tan](#)

10:45am **AFM and Nanomechanical Sensors**

Room 201

10:45am **Intramolecular Imaging Using Intermolecular Forces**

» [Prof. Ozgur Sahin](#)

11:19am **Single Molecule and Single Cell Force Spectroscopy method using magnetic and acoustofluidic actuators.**

» [Mr. Christopher Markwell](#), Ms. Luying Feng, Dr. Ran Tao, Dr. Steven O'Reilly, Prof. Richard Fu, Dr. Hamdi Torun

11:36am **Nonlinear nanomechanical mass spectrometry at the single-nanoparticle level using trajectory-locked loops**

» Mr. Mert Yuksel, Ms. Ezgi Orhan, Dr. Cenk Yanik, Mr. Atakan Ari, Prof. Alper Demir, [Prof. Selim Hanay](#)

11:53am **Selective spectroscopic and mechanical imaging of the components of a cellular membrane.**

» [Dr. Luca Quaroni](#)

12:10pm **Single-particle force spectroscopy: The first step in predicting selectivity using particle intrusion in porous materials**

» Dr. Mirco Sorci, Dr. Corey C. Woodcock, Prof. Joel L. Plawsky, [Prof. Georges Belfort](#)

10:45am **Plasmonic Nanosensors**

Room 207

10:45am **Single-molecule plasmon sensing guided by super-resolution microscopy**

» [Prof. Peter Zijlstra](#), Mr. Matej Horacek, Ms. Rachel Armstrong

11:19am **Luminescent gold nanoclusters as new probes in single photon and multiphoton imaging**

» [Dr. Joanna Olesiak-Banska](#), Dr. Magdalena Waszkielewicz, Ms. Anna Pniakowska, Mr. Patryk Obstarczyk, Prof. Marek Samoc

11:36am **In-Situ controlled growth of Au nanoparticles on optical whispering gallery resonators for hybrid photonic-plasmonic sensors**

» [Dr. Rithvik Gutha](#), Dr. Gema Cabello, Mr. Sivaraman Subramanian, Prof. Frank Vollmer

11:53am **Theoretical analysis of single-molecule experimental data**

» [Dr. Jesús Rubio-Jiménez](#), Prof. Janet Anders

12:10pm **Blinking of Intrinsic Light Emission from Plasmonic Nanojunctions**

» [Mr. Philippe Roelli](#), Dr. Wen Chen, Mr. Aqeel Ahmed, Prof. Tobias Kippenberg, Prof. Christophe Galland

12:25pm **Lunch**

Partner Restaurants

1:55pm **Poster session**

Gallery

Optimization of distance between the SERS label and the silver surface for effective DNA detection by enhanced Raman spectroscopy.

» Mr. Eduard Pisarev, Dr. Olesya Kapitanova, Dr. Olga Eremina, Prof. Timofey Zatsepin, [Prof. Irina Veselova](#), [Prof. Maria Zvereva](#)

A light source for quantum-enhanced single molecule detection schemes using whispering gallery modes

» [Mr. Callum Jones](#), Dr. Jolly Xavier, Prof. Frank Vollmer



Continued from **Thursday, 2 April**

Planar scanning probes for nanogap cavity microscopy

» [Mr. Paul Weinbrenner](#), Mr. Stefan Ernst, Mr. Dominik Irber, Mr. Georg Braunbeck, Dr. Friedemann Reinhard

Towards Single-Molecule Spectroscopy with Nanoelectromechanical Photothermal Sensing at Room Temperature

» [Ms. Miao-Hsuan Chien](#), Dr. Mario Brameshuber, Mr. Joschka Hellmeier, Dr. Gerhard Schütz, Dr. Silvan Schmid

Simulations of whole proteome single molecule identification

» [Mr. Shilo Ohayon](#), Mr. Arik Girsault, Prof. Amit Meller

Canonical lysine-48-linked polyubiquitin signals for proteasomal degradation attenuate the conformational dynamics of the 26S proteasome

» [Dr. Zaw Htet](#), Dr. Erik Jonsson, Dr. Ken Dong, Dr. Eric Greene, Dr. Andreas Martin

Breakdown electrochemical etching method for processing high aspect ratio nanopores in the range 10 nm

» Dr. Hithesh Kumar Gatty, Dr. Xuan Chung Nguyen, [Ms. Xi Lu](#), Dr. Miao Zhang, Prof. Jan Linnros

Single-molecule enzymology: characterising the dynamics and function of 3-phosphoglycerate kinase (3PGK) from *Geobacillus stearothermophilus* in real-time

» [Ms. simona frustaci](#), Mr. Sivaraman Subramanian, Prof. Jennifer A Littlechild, Prof. Frank Vollmer

Three-dimensional paper-based microfluidic analytical devices (3D- μ PADs) for detection of multiple biomarkers

» [Mr. Chanyong Park](#), Mr. SeungHo Baek, Prof. Sungsu Park

Measuring femto-Newton forces in enzyme turnover and its potential in highly specific pathogen diagnostics

» [Dr. Daniel Mitchell](#), [Ms. simona frustaci](#), Prof. Frank Vollmer, Prof. Neil Gow, Prof. Jennifer A Littlechild

Application of pore-forming toxin in single-molecule sensors

» [Dr. chan cao](#), Prof. Matteo Dal Peraro

Bloch surface waves in the mid-infrared for molecular sensing

» [Mrs. Raffaella Polito](#), Dr. Agostino Occhicone, Dr. Marialilia Pea, Dr. Valeria Giliberti, Dr. Alberto Sinibaldi, Dr. Francesco Mattioli, Dr. Sara Cibella, Dr. Andrea Notargiacomo, Prof. Monica De Seta, Prof. Luciana Di Gaspere, Prof. Alessandro Nucara, Prof. Francesco Michelotti, Prof. Michele Ortolani, Dr. Leonetta Baldassarre

Germanium nanospheres as high precision optical tweezers probes

» [Ms. Swathi Sudhakar](#), Prof. Erik Schaeffer

Real-time study of biomolecular coatings using one-dimensional photonic crystal based biosensors

» [Dr. Alberto Sinibaldi](#), Dr. Vanessa Montano-Machado, Dr. Norbert Danz, Dr. Peter Munzert, Dr. Francesco Chiavaioli, Prof. Diego Mantovani, Prof. Francesco Michelotti

Experimental and theoretical investigation of gold bipyramids dimers and chains formed by thiol-induced aggregation

» [Ms. Dominika Pielech](#), Mr. Radosław Deska, Mr. Patryk Obstarczyk, Dr. Joanna Olesiak-Bańska, Dr. Katarzyna Matczyszyn

2:55pm

Raman Spectroscopy and SERS

Auditorium

2:55pm

TBD

» [Prof. Ara Apkarian](#)

3:29pm

Single nanoparticle and single-molecule Raman excitation spectroscopy of porphycene derivatives

» [Dr. Sylwester Gawinkowski](#)

3:46pm

Atto-molar SERS Detection Using Broadband Trapping in Width-Graded Plasmonic Gratings

» [Mr. Moein Shayegannia](#), [Ms. Katelyn Dixon](#), [Prof. Nazir Kherani](#)



Continued from **Thursday, 2 April**

- 4:03pm **Molecular platform for frequency upconversion at the single-photon level**
» [Mr. Philippe Roelli](#), Dr. Diego-Martin Cano, Prof. Tobias Kippenberg, Prof. Christophe Galland
- 4:20pm **Using Photo-induced enhanced Raman spectroscopy (PIERS) for studying induced surface oxygen vacancy defects and trace molecule detection**
» [Mr. Daniel Glass](#), Prof. Emiliano Cortés, Dr. Sultan Ben-Jaber, Dr. Raul Quesada-Cabrera, Dr. William Peveler, Prof. Christopher Blackman, Dr. Christopher Howle, Prof. Ivan Parkin, Prof. Stefan Maier
- 4:37pm **SERS Discrimination of Single DNA Bases in Single Oligonucleotides by Electro-plasmonic Trapping**
» [Dr. Denis Garoli](#)
- 4:54pm **Hypericin: Single Molecule Spectroscopy of an Active Natural Drug**
» [Prof. Alfred J. Meixner](#), Mr. Quan Liu, Mr. Otto Hauler, Ms. Miriam Scholz, Prof. Pierre_Michel Adam, Prof. Marc Brecht, Dr. Frank Wackenhut
- 2:55pm **Nanophotonic Probes**
Room 201
- 2:55pm **Nanophotonic tools to resolve nanoscale dynamics on biological membranes**
» [Prof. Maria Garcia-Parajo](#)
- 3:29pm **Extreme laser background suppression for resonant fluorescence of a quantum emitter**
» [Ms. meryem benelajla](#)
- 3:46pm **Fiber-based optical microcavities for biosensing in liquids**
» [Mrs. Larissa Kohler](#), Dr. Christian Kern, Dr. Matthias Mader, Prof. Martin Wegener, Prof. David Hunger

- 4:03pm **Sub-wavelength on-chip optical sources towards multiplex single-molecule detection**
» [Dr. Francesco Tantussi](#), Dr. Sara Perotto, Mr. Claudio Biagini, Dr. Francesco De Angelis
- 4:20pm **Fluorescent Dye Nano-Assemblies based on Gold Nanorods for Effective Emission Enhancement**
» [Dr. Pedro M. R. Paulo](#), Mr. David Botequim, Ms. Inês I. R. Silva, Ms. Sofia G. Serra, Prof. Eduardo P. Melo, Prof. Duarte M. F. Prazeres, Prof. Sílvia M. B. Costa
- 4:37pm **Novel plasmonic nanocavities for single-particle manipulation and detection**
» [Dr. Alemayehu Nana Koya](#), Mr. Jaoa Cunha, Dr. Tianlong Guo, Dr. Andrea Toma, Dr. Denis Garoli, Prof. Tao Wang, Prof. Saulius Juodkazis, Prof. Dan Cojoc, Prof. Remo Proietti Zaccaria
- 4:54pm **Nanoscale multi-colour fluorescence cross-correlation spectroscopy on living cell membranes with plasmonic antennas**
» [Ms. Maria Sanz-Paz](#), Dr. Thomas van Zanten, Dr. Mathieu Mivelle, Dr. Carlo Manzo, Prof. Maria Garcia-Parajo
- 2:55pm **Label-free Single-Molecule Sensors and Biosensors**
Room 207
- 2:55pm **Advances in inorganic voltage nanosensors**
» [Prof. Shimon Weiss](#)
- 3:29pm **Label-Free Biosensing by Ultrasensitive Supercritical Angle Refractometry**
» [Dr. Lucien Weiss](#), Mr. Boris Ferdman, Dr. Onit Alalouf, Prof. Yoav Shechtman
- 3:46pm **The nonlinear optical response of water as label-free probe of nanoparticles/cell membranes interactions: from qualitative understandings to high sensitive nano-bio-sensor platforms**
» [Dr. Francesca Cecchet](#)



Continued from **Thursday, 2 April**

- 4:03pm **Fluorescence recovery after orientational photobleaching (FROP) at the surface of 1D photonic crystals: a new tool to study rotational diffusion kinetics of proteins bound at an interface**
» Ms. Elisabetta Sepe, Dr. Alberto Sinibaldi, Dr. Norbert Danz, Dr. Peter Munzert, [Prof. Francesco Michelotti](#)
- 4:20pm **Molecular-based coordination polymer as reversible and precise acetonitrile electro-optical readout**
» [Dr. Jose Sanchez Costa](#)
- 4:37pm **Plasmonic gold-nanoparticle clusters: Plasmon-coupling effects for Parkinson biomarker detection**
» [Prof. kuan-jiuh Lin](#)
- 4:54pm **Versatile Tools Towards Real-time, Single-molecule and Single-Cell Biology**
» [Mr. Maurice Hendricks](#), [Mr. Jordi Cabanas-Danes](#)
- 5:10pm **Coffee Break**
Gallery
- 5:30pm **Group Picture**
Gallery
- 5:40pm **Plenary Speech**
Auditorium
- 5:40pm **Proteins as mechano-chemical switches**
» [Dr. Viola Vogel](#)
- 6:15pm **New Developments in Single-Molecule Super-Resolution Imaging and Tracking**
» [Prof. W.E. Moerner](#)

7:10pm **Afterwork : Drinks and Tapas Party**
Restaurant Verne

Friday, 3 April

- 8:30am **Registration**
Welcome Desk
- 9am **Plenary Speech**
Auditorium
- 9am **Quantum Control of Nanoscale Quantum Sensors**
» [Prof. Martin Plenio](#)
- 9:40am **Detecting molecular properties with a quantum sensor**
» [Prof. Joerg Wrachtrup](#)
- 10:15am **Coffee Break**
Gallery
- 10:45am **Plenary Speech**
Auditorium
- 10:45am **Making the Tiniest Machines**
» [Prof. David Leigh](#)
- 11:25am **Molecular motors – from single myosin molecules to functional ensembles**
» [Prof. Claudia Veigel](#)
- 12pm **Lunch**
Partner Restaurants



Continued from Friday, 3 April

1:30pm

Poster session
Gallery

Analysis of peptide-chains and transport properties of polar amino-acids chains of different size.

» [Mr. Tommaso Civitarese](#), Prof. Giuseppe Zollo

Single-molecule laser

» [Dr. deshui yu](#), Dr. Samir Kashani, Prof. Frank Vollmer

Combining Ultrasensitive Single-Molecule Sensing and Super-Resolution Imaging

» [Mr. Narima Eerqing](#), Dr. Hsin-Yu Wu, Mr. Sivaraman Subramanian, Mr. Serge Vincent, Prof. Frank Vollmer

Optical Voltage Sensing on Biological Membranes

» [Mrs. Sarah Ochmann](#), Mrs. Clara Schulz, Mrs. Ece Büber, Dr. Henri Franquelim, Prof. Ulrich Keyser, Prof. Philip Tinnefeld

Modified chemi- and biorecognizing polymeric materials as the basis of optical sensor elements for the determination of diagnostic markers of oxidative stress and neurodegenerative diseases

» [Prof. Irina Veselova](#), Ms. Anastasia Mikhailova, Ms. Maria Makedonskaya, Dr. Olga Eremina, Ms. Alisa Kuropteva, Prof. Tatiana Shekhovtsova, Dr. Olesya Kapitanova

ODMR effect in spin centers of silicon carbide as sensors of magnetic fields, temperature, and mechanical stresses

» [Dr. Andrey Anisimov](#), Mr. Ilya Breev, Prof. Pavel Baranov

Single-molecule fluorescence system for determination of biogenic amines in biological samples

» [Ms. Anastasia Mikhailova](#), Ms. Maria Makedonskaya, Prof. Tatiana Shekhovtsova, Prof. Irina Veselova

Trapping and manipulation of single molecules using dielectrophoretic tweezers

» [Dr. Sergii Pud](#), Prof. Michel Orrit

Real-time sensing of neurotransmitters by a functionalized nanopore embedded in single live cell

» Mr. Ming Zhang, Ms. Xialin Zhang, Ms. Linqin Dou, Prof. Jia Geng

Study of fluid dynamics at the boundary wall of a microchannel by Bloch surface waves

» [Dr. Agostino Occhicone](#), Dr. Alberto Sinibaldi, Dr. Frank Sonntag, Dr. Norbert Danz, Dr. Peter Munzert, Prof. Francesco Michelotti

Development of a smell biosensor system for early detection of plant diseases

» [Dr. Katalin Zboray](#), Ms. Krisztina Pesti, Mr. Adam Viktor Toth, Ms. Zainab Quddoos, Mr. Matyas Csaba Foldi, Ms. Zsuzsanna Ambrozy, Mr. Kamiran Aron Hamow, Dr. Arpad Mike, [Dr. Peter Lukacs](#)

Deciphering neuronal mechanotransduction pathways through membrane tether extrusion

» [Dr. Frederic Català Castro](#), Ms. Neus Sanfeliu, Mr. Nawaphat Malaiwong, Prof. Michael Krieg

The rising ratchet: towards particle separation with nanometer-accuracy

» [Mr. Philippe Nicollier](#), Dr. Christian Schwemmer, Dr. Francesca Ruggeri, Dr. Armin Knoll

Clear Discrimination of Single-Molecule of a Single-Stranded DNA Homopolymers and Hetero-Homopolymers Through a New Mutant of MspA

» [Mrs. Huma Bhatti](#), Dr. Quanjun Liu

Polarized light two-photon microscopy of single gold bipyramids and biostructures

» [Mr. Patryk Obstarczyk](#), Mr. Paweł Cwynar, Dr. Joanna Olesiak-Bańska

2:30pm

Nanopores II
Auditorium



Continued from Friday, 3 April

- 2:30pm **Ultra-sensitive mRNA and protein biomarkers quantification using solid-state nanopores**
» [Prof. Amit Meller](#)
- 3:04pm **Design and Modeling of a Nanopore Transistor**
» [Dr. Dino Ruic](#), Mr. Kherim Willems, Mr. Ashesh Ray Chaudhuri, Dr. Chia Ling Chan, Dr. Simone Severi, Mr. Mihir Gupta, Dr. Willem Van Roy, Dr. Chang Chen, Dr. Pol Van Dorpe
- 3:21pm **Engineered aerolysin nanopores for improved molecular sensing**
» [Prof. Matteo Dal Peraro](#)
- 3:38pm **Single Gold Nano Particle Detection using Nanopore-Integrated Microwave Sensor**
» Mr. Arda Secme, Mrs. H. Dilara Uslu, Mr. Berk Kucukoglu, [Dr. Hadi Sedaghat Pisheh](#), Dr. Mehmet Selim Hanay
- 3:55pm **Controllable Subnanometer Channel MscS for Simultaneous Discrimination of dNTP Barcode Probes**
» [Prof. Jia Geng](#), Mr. Changjian Zhao
- 2:30pm **Single-molecule Fluorescence - FRET**
Room 201
- 2:30pm **Single-Molecule FRET for Protein Fingerprinting**
» [Mr. Mike Filius](#), Dr. Sung Hyun Kim, Dr. Chirlmin Joo
- 2:47pm **Integrated label-free and fluorescence photonic crystal biochips for early cancer biomarker detection**
» [Ms. Elisabetta Sepe](#), Dr. Alberto Sinibaldi, Dr. Norbert Danz, Dr. Agostino Occhicone, Dr. Matteo Allegretti, Dr. Peter Munzert, [Mr. Tommaso Pileri](#), Dr. Patrizio Giacomini, Prof. Francesco Michelotti
- 3:04pm **Improving single molecule FRET using zero-mode waveguide nanoapertures**
» [Mr. Mikhail Baibakov](#), Dr. Jérôme Wenger, Dr. Satyajit Patra, Dr. Jean Benoît Claude

- 3:21pm **Optical mapping of single DNA molecules in real time**
» Mrs. Franziska Esmek, Dr. Manja Czech-Sioli, Dr. Thomas Guenther, Prof. Adam Grundhoff, Prof. Nicole Fischer, [Dr. Irene Fernandez-Cuesta](#)
- 3:38pm **Single molecule probing of interplay between Energy Transfer and Metal-Enhanced Fluorescence**
» [Mr. Kamil Wiwatowski](#), Ms. Karolina Sulowska, Prof. Sebastian Maćkowski
- 3:55pm **Substrate processing by the 26S proteasome visualized by smFRET**
» [Dr. Erik Jonsson](#), Dr. Zaw Htet, Dr. Jared Bard, Dr. Ken Dong, Dr. Andreas Martin
- 2:30pm **DNA Nanotechnology, Molecular machines and Self-assembly II**
Room 207
- 2:30pm **Single-molecule biosensing enhanced by DNA nanotech**
» [Prof. Philip Tinnefeld](#)
- 2:47pm **DNA Origami Nanoantennas for Fluorescence based Biosensing**
» [Dr. Florian Selbach](#), Dr. Viktorija Glembockyte, Dr. Kateryna Trofymchuk, Ms. Cindy Close, Ms. Martina Pfeiffer, Mr. Lennart Grabenhorst, Dr. Florian Steiner, Prof. Philip Tinnefeld
- 3:04pm **G-quadruplex-assisted Hybridization Chain Reaction**
» [Dr. Osman Doluca](#)
- 3:21pm **DNA nunchucks: nano-instrumentation for single-molecule measurement of stiffness and bending**
» Ms. Xinyue Cai, [Prof. Deborah Fygenson](#)
- 3:38pm **Red light and pH-controlled DNA origami nanodevices**
» [Mrs. Heini Ijäs](#), Ms. Iida Kettunen, Dr. Boxuan Shen, Dr. Veikko Linko, Prof. Janne Ihalainen



Continued from Friday, 3 April

3:55pm **Stable silver nanospheres and nanorods for DNA origami-based plasmonics**
 » Mrs. Linh Nguyen, Mrs. Martina Ober, Mr. Mihir Dass, Dr. Bert Nickel, [Prof. Tim Liedl](#), Dr. Amelie Heuer-Jungemann

4:10pm **Coffee Break**
Gallery

4:40pm **Fluorescence and Absorption Spectroscopy for Sensing**
Auditorium

4:40pm **Optical monitoring of catalytic reactions confined in microdroplets**
 » [Ms. Veronica Kraseckj](#), Mr. Andrew Cavell, Prof. Randall Goldsmith

4:57pm **Analysis of exosome drug-loading yields by means of fluorescence cross-correlation spectroscopy**
 » [Dr. Maryam Sanaee](#), Ms. Elin Sandberg, Dr. Göran Ronquist, Prof. Jane M. Morrell, Prof. Jerker Widengren, Prof. Katia Gallo

5:14pm **Optical properties of graphene quantum dots**
 » Mr. Thomas Liu, Dr. Shen Zhao, Dr. Loïc Rondin, Dr. Stéphane Campidelli, [Prof. Jean-Sébastien Lauret](#)

5:31pm **SPP propagation in a silver nanowire waveguide for biosensing**
 » Dr. Dorota Byczyńska, Mr. Michał Ćwik, Dr. Ewa Roźniecka, Ms. Karolina Sulowska, Prof. Sebastian Maćkowski, [Dr. Joanna Niedziolka-Jonsson](#)

4:40pm **Nanofluidics, Physical and Chemical Control at the Nanoscale**
Room 201

4:40pm **Thermophoretic Trap for Single Amyloid Fibril and Protein Aggregation Studies**
 » Mr. Martin Fränzl, Mr. Tobias Thalheim, Prof. Daniel Huster, Prof. Michael Mertig, [Prof. Frank Cichos](#)

4:57pm **Precise placement of nano-objects utilizing geometry induced trapping in a tunable nanofluidic confinement**
 » Dr. Stefan Fringes, Dr. Christian Schwemmer, Dr. Colin D. Rawlings, Dr. Francesca Ruggeri, Dr. Heiko Wolf, [Dr. Armin Knoll](#)

5:14pm **Electrokinetic trapping of non-fluorescent nanoparticles in water**
 » [Mr. Yera Ussembayev](#), Mr. Vincent De Clercq, Prof. Kristiaan Neyts, Prof. Filip Strubbe

4:40pm **Molecular Electronics II**
Room 207

4:40pm **Mechanoresistive molecular junctions: contacts, coordination and through-space interactions**
 » [Dr. Andrea Vezzoli](#), Ms. Chuanli Wu, Mr. Demetris Bates, Dr. Nicolo' Ferri, Dr. Kun Wang, Dr. Sara Sangtarash, Dr. Ali K. Ismael, Prof. Bingqian Xu, Dr. Hatef Sadeghi, Dr. Craig Robertson, Prof. Colin Lambert, Prof. Simon Higgins, Prof. Richard Nichols

4:57pm **Spin driven enhancement of single molecule thermoelectric efficiency**
 » [Dr. Sara Sangtarash](#), [Dr. Hatef Sadeghi](#)

5:14pm **Pi-Radical Kondo-like State Exhibits Nodal Structure**
 » [Mr. Radovan Vraník](#), Dr. Vitalii Stetsovych, Prof. Stefan Müllegger

5:50pm **Closing Speech**
Auditorium