

Biophysical Society 67<sup>th</sup> Annual Meeting  
Nanoscale Approaches to Biology Subgroup Symposium  
Saturday February 18, 2023  
San Diego, California

**Subgroup Chair:** Chan Cao, Ecole Polytechnique Federale de Lausanne, Switzerland

**Symposium Time:** 8:30 AM - 12:30 PM PST

**Symposium Room:** 5AB

**Subgroup Business Meeting:** 12:20 PM

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8:30 AM Opening Remarks

8:35 AM Cynthia Burrows, University of Utah, USA

*Nanopore Sequencing of Nucleic Acids from Cells under Stress*

9:00 AM Reuven Gordon, University of Victoria, Canada

*Rapid Single Protein Analysis by Nanoaperture Optical Tweezers*

9:25 AM Simon Scheuring, Cornell University, USA

*High-Speed Atomic Force Microscopy for Dynamic Single Molecule Structural Biology*

9:50 AM **Student/Postdoc Talk:** Wayne Yang, EPFL, Switzerland

*Defect Engineering of 2D Material for Biosensing applications*

10:05 AM **Student/Postdoc Talk:** Sangwoo Park, Cornell University, USA

*Mucins From a Nanoscale Physical Barrier Against Immune Cell Attack*

10:20 PM Break

10:30 AM Philip Tinnefeld, Ludwig Maximillians University Munich, Germany

*Enhancement Mechanisms for Single-molecule Sensing and Superresolution with DNA Nanotech*

10:55 AM Fang Huang, Purdue University, USA

*Ultra-High Resolution Structural and Molecular Imaging of Whole Cells and Tissues*

11:20 AM Stefan Howorka, University College London, United Kingdom

*Probing and Piercing Lipid Bilayers with DNA Nanostructures*

11:45 AM **Student/Postdoc Talk:** Fatemeh Farhangdoust, Northeastern University, USA

*Towards Direct RNA Sequencing with Electro-optical Waveguides*

12:00 AM **Student/Postdoc Talk:** Misa Yamaji, Tokyo University of Agriculture and Tech, Japan

*Facilitating the Nanopore Detection of Protein Fragment with a Neutral Charge*

3:48 PM Alyssa Miller, University of Cambridge, UK

*Universal Lab-On-A-Chip Microfluidic Spray Deposition for Bulk and Single-Molecule Analytical Methods on Surfaces*

12:15 PM Closing Remarks

12:20 PM Subgroup Business Meeting

The Nanoscale Approaches to Biology Subgroup is grateful for support from the following sponsors:

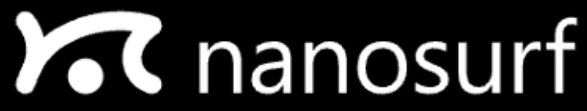
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The logo for nanosurf features a stylized white icon on a black rectangular background. The icon consists of a curved line that forms a shape resembling a lowercase 'n' or a stylized 'r', with a small circle below it.The logo for Oxford Nanopore Technologies. It features a blue circular icon on the left, composed of multiple overlapping curved lines. To the right of the icon, the word "Oxford" is written in a light blue sans-serif font. Below "Oxford", the word "NANOPORE" is written in a large, bold, dark blue sans-serif font. To the right of "NANOPORE", a small "TM" trademark symbol is present. Below "NANOPORE", the word "Technologies" is written in a light blue sans-serif font.The logo for THORLABS. The word "THORLABS" is written in a bold, red, sans-serif font. The letters "LABS" are outlined in red, while "THOR" is solid red.The logo for elements. On the left is a diamond-shaped icon composed of a grid of small squares in various colors (blue, green, yellow, orange, red, purple). To the right of the icon, the word "elements" is written in a bold, black, sans-serif font. Below "elements", the tagline "enabling technologies for Life Science" is written in a smaller, italicized, black sans-serif font.