

# International Symposium on Atomic Force Microscopy at Solid-Liquid Interfaces

Day 1

Nov. 8 (Wed)

8:30 – 9:10	Registration	
9:10 – 9:20	<b>Takeshi Fukuma</b> Kanazawa University, Japan	Opening remarks
Session 1: High-Resolution & Functional AFM I, Chair: Adam Foster		
9:20 – 10:00	<b>Sergei Kalinin</b> CNMS, USA	Big, deep, and smart data in atomically resolved imaging: a bridge to accelerating materials by design
10:00 – 10:20	<b>Kazuki Miyata</b> Kanazawa University, Japan	High-speed FM-AFM and 3D-SFM imaging of calcite/water interfaces
10:20 – 10:40	<b>Hitoshi Asakawa</b> Kanazawa University, Japan	Macrocyclic host-guest interactions investigated by 3D-SFM in liquid
10:40 – 11:00	Break	
Session 2: Molecular Cell Biology, Chair: Yuri Korchev		
11:00 – 11:40	<b>Andre Hoelz</b> California Institute of Technology, USA	The structure of the nuclear pore complex
11:40 – 12:00	<b>Richard Wong</b> Kanazawa University, Japan	Identifying nanoscopic spider cobweb features of native nuclear pores in cancer cells
12:00 – 12:20	<b>Azuma Taoka</b> Kanazawa University, Japan	Imaging of membrane vesicles for bacterial communication by high speed AFM
12:20 – 14:00	Lunch	
Session 3: Protein Dynamics I, Chair: Andre Hoelz		
14:00 – 14:40	<b>Shuai Zhang</b> Pacific Northwest National Laboratory, USA	Elucidate the dynamic behaviors of protein 2D crystal at solid-liquid interface via atomic force microscopy
14:40 – 15:20	<b>Taro Q. P. Uyeda</b> Waseda University, Japan	Dynamic and Cooperative Polymorphism of Actin Filaments Revealed by HS-AFM
15:20 – 15:40	<b>Hiroki Konno</b> Kanazawa University, Japan	New insight into the functional switching of 2-Cys Peroxiredoxin revealed by high-speed atomic force microscopy Presentation title
15:40 – 16:00	<b>Noriyuki Kodera</b> Kanazawa University, Japan	Structural analysis of intrinsically disordered proteins by high-speed AFM
16:00 – 16:20	Break	
16:20 – 18:00	Poster Session	

Day 2

Nov. 9 (Thu)

8:30 – 9:20	Registration	
Session 4: Scanning Ion Conductance Microscopy, Chair: Michael Higgins		
9:20 – 10:00	<b>Yuri Korchev</b> Imperial College London, UK	Nanopipette biosensors for single-cell analysis, imaging and selective biosensing.
10:00 – 10:20	<b>Yasufumi Takahashi</b> Kanazawa University, Japan	Chemical and topographical imaging using SECM-SICM
10:20 – 10:40	<b>Shinji Watanabe</b> Kanazawa University, Japan	High-speed ion conductance microscopy for visualizing morphological changes in biological samples with nanoscale resolution
10:40 – 11:00	Break	
Session 5: High-Resolution & Functional AFM II, Chair: Sergei Kalinin		
11:00 – 11:40	<b>Kislon Voitchovsky</b> Durham University, UK	Dynamical ionic networks at solid-water interfaces
11:40 – 12:20	<b>Adam Foster</b> Aalto University, Finland	Probing molecular processes at water-insulator interfaces
12:20 – 14:00	Lunch	
Session 6: Protein Dynamics II, Chair: Shuai Zhang		
14:00 – 14:40	<b>Motoyuki Hattori</b> Fudan University, China	Structure and function of MgtE Mg <sup>2+</sup> channels
14:40 – 15:20	<b>Toru Minamino</b> Osaka University, Japan	Real-time imaging of structural dynamics of the Na <sup>+</sup> -type MotPS stator complex of the Bacillus flagellar motor by high-speed atomic force microscopy
15:20 – 15:40	<b>Takahiro Nakayama</b> Kanazawa University, Japan	Video-imaging of Structural Dynamics of Protein Assemblies
15:40 – 16:00	<b>Mikihiro Shibata</b> Kanazawa University, Japan	High-speed atomic force microscopy visualized DNA cleavage reaction of CRISPR-Cas9
16:00 – 16:20	Break	
Session 7: High-Resolution & Functional AFM III, Chair: Kislon Voitchovsky		
16:20 – 17:00	<b>Michael Higgins</b> University of Wollongong, Australia	3D Molecular Hydration Structure of Functionalised Silica Nanoparticles Determines their Biofouling Resistance
17:00 – 17:40	<b>Takeshi Fukuma</b> Kanazawa University, Japan	Nanoscale Measurements of Potential Distributions in Electrolyte by Open-Loop Electric Potential Microscopy
17:40 – 18:00	Break	
18:00 – 20:00	Banquet	

Day 3

Nov. 10 (Fri)

9:00	<b>Bus departure for Kanazawa University (from Kanazawa Tokyu Hotel)</b>
9:30 – 12:00	<b>Lab tours</b>
12:00	<b>Bus departure for Kanazawa Tokyu Hotel &amp; Kanazawa Railway Station</b>