

# 10<sup>th</sup> Nanomanipulation Workshop

## DAY 1

Monday, June 1<sup>st</sup>, 2026

18:00	WELCOME SESSION BY THE ORGANIZERS
19:30-22:00	<b>SOCIAL</b> Dinner

<https://nanomanipulationworkshop2026.physik.unibas.ch/en/>

# 10<sup>th</sup> Nanomanipulation Workshop

## DAY 2

Tuesday, June 2<sup>nd</sup>, 2026

07:30 – 09:00	Morning Coffee & Breakfast
09:00 – 10:30	<b>MORNING SESSION 1 (CHAIRMAN: FRANCESCA MORESCO)</b> <b>Invited: Towards an universal framework to describe and control atomic-scale friction</b> <i>Antonio Cammarata, Czech Technical University in Prague</i> <b>Contributed: Effect of interlayer Bonding on Superlubric Sliding in Layered Material Contacts</b> <i>Michael Urbakh, Tel Aviv University</i> <b>Contributed: Microscopic Contributions to The Deviation From Amontons Friction Law</b> <i>Suresh Ravisankar, Czech Technical University in Prague</i>
10:30 – 11:00	Coffee Break
10:30 – 12:00	<b>MORNING SESSION 2 (CHAIRMAN: ANTONIO CAMMARATA)</b> <b>Invited: Extending AFM Manipulation Models: From Single-Particle Control to Collective Nanostructuring</b> <i>Enrico Gnecco, Jagiellonian University</i> <b>Contributed: Bridging Phonon Dynamics and Nanotribology in TMD Heterostructures via Machine Learning Force Fields</b> <i>Ravikant Kumar, Czech Technical University in Prague</i> <b>Contributed: Superlubric to pinned/locked transition at quasi-crystal interfaces</b> <i>Dong Han, SISSA &amp; Southeast University</i>
12:30 – 14:00	Lunch
14:00 – 15:30	<b>AFTERNOON SESSION 2 (CHAIRMAN: SHIGEKI KAWAI)</b> <b>Invited: Vertical molecule-rotors based on subphthalocyanine platforms</b> <i>Francesca Moresco, TU Dresden</i> <b>Invited: Atomically precise fabrication by mechanosynthesis</b> <i>Megan Cowie, CBN Nano Technologies Inc.</i> <b>Contributed: Mechanosynthetic donation of C2H to Si(100):H Using Inverted-Mode STM</b> <i>Reid Wotton, CBN Nano Technologies Inc.</i>
15:30 – 16:00	Coffee Break & Poster Session
16:00 – 17:30	<b>AFTERNOON SESSION 2 (CHAIRMAN: MEGAN COWIE)</b> <b>Invited: Single-Molecule Manipulation for Synthesis of Radicals on Surface</b> <i>Shigeki Kawai, National Institute for Materials Science</i> <b>Invited: Synthesis and Characterization of Long Acenes and Azaacenes by Single-Molecule Manipulation</b> <i>Zilin Ruan, Marburg University</i>
19:30-22:00	<b>SOCIAL</b> Dinner

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## DAY 3

Wednesday, June 3<sup>rd</sup>, 2026

07:30 – 09:00	Morning Coffee & Breakfast
09:00 – 10:30	<b>MORNING SESSION 1 (CHAIRMAN: ENRICO GNECCO)</b> <b>Invited: Modular and Scalable Modeling of Interfacial Properties in van der Waals Heterostructures</b> <i>Wengen Ouyang, Wuhan University</i> <b>Contributed: Unveiling Surface and Subsurface Vacancies in MoS2 with LFM</b> <i>Aitor Zambudio, Universidad Autónoma de Madrid - Universidad de Murcia</i> <b>Invited: Frictional Energy Dissipation of Polycrystalline van der Waals Material</b> <i>Yiming Song, University of Basel</i>
10:30 – 11:00	Coffee Break
10:30 – 12:00	<b>MORNING SESSION 2 (CHAIRMAN: WENGEN OUYANG)</b> <b>Invited: Structural superlubricity and curved surfaces</b> <i>Astrid de Wijn, Norwegian University of Science and Technology</i> <b>Invited: How collective and internal mechanics modulate nanomanipulation</b> <i>Guilherme Vilhena, Spanish National Research Council, Materials Science Institute of Madrid</i> <b>Contributed: Unraveling the Interfacial Properties of Twisted Single-Crystal Au(111)/MoS2 Heterostructures: A Pathway to Robust Superlubricity</b> <i>Yuanpeng Yao, Wuhan University</i> <b>Contributed: Tuning magnitude and direction of lattice thermal conductivity in transition metal dichalcogenide heterobilayers</b> <i>Elliot Perviz, Czech Technical University in Prague</i>
12:30 – 14:00	Lunch
14:00 – 15:30	<b>AFTERNOON SESSION 2 (CHAIRMAN: ZILIN RUAN)</b> <b>Invited: Grid-projected force fields for efficient modelling of molecular assembly, manipulation, and friction</b> <i>Prokop Hapala, FZU - Institute of Physics of the Czech Academy of Sciences</i> <b>Invited: Autonomous tip-induced chemical reactions in scanning probe microscopy</b> <i>Nian Wu, Aalto University</i> <b>Contributed: Unveiling the Precise Configuration of a Molecular Junction</b> <i>Christian Wagner, Forschungszentrum Jülich</i>
15:30 – 16:00	Coffee Break
16:00 – 17:30	<b>AFTERNOON SESSION 2 (CHAIRMAN: ASTRID DE WIJN)</b> <b>Invited: Engineering Protein Mechanics : from Single-molecule to High-throughput Studies</b> <i>Michael Nash, University of Basel/ETH Zurich</i> <b>Invited: Sequence, Length and Loading Geometry as Determinants of Coiled Coil Mechanical Stability</b> <i>Russell Wilson, Johannes Kepler University</i> <b>Contributed: RHK PanScan Freedom II: Cryogen-free LT SPM Systems</b> <i>Denis Radosavkic, Schaefer Tec GmbH</i>
19:30-22:00	<b>SOCIAL</b> <b>Gala Dinner</b>

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## DAY 4

Thursday, June 4<sup>th</sup>, 2026

07:30 – 09:00	Morning Coffee & Breakfast
09:00 – 10:30	<b>MORNING SESSION 1 (CHAIRMAN: MICHAEL NASH)</b>  <b>Invited: Tips functionalised by large molecules: An extended toolbox of scanning probe microscopy</b> <i>Ruslan Temirov, Forschungszentrum Jülich</i> <b>Invited: Engineering Optical Properties in Graphene Nanoribbons with Atomic Precision</b> <i>Song Jiang, Institut de physique et chimie des Matériaux de Strasbourg</i> <b>Contributed: Quantized Dissipation in Single-Polymer Nanomanipulation</b> <i>Alessandro Peruzzo, Madrid Institute of Materials Sciences</i>
10:30 – 11:00	Coffee Break
10:30 – 12:00	<b>MORNING SESSION 2 (CHAIRMAN: RUSSELL WILSON)</b>  <b>Invited: Nanomechanical dissipation spectroscopy and manipulation of charge dynamics in two dimensional electron gas on reduced SrTiO<sub>3</sub>(001) surface</b> <i>Marcin Kisiel, University of Basel</i> <b>Invited: Lateral Force Microscopy: Probing atomic scale energy dissipation</b> <i>Sophia Schweiss, University of Regensburg</i> <b>Invited: In-operando Atomic Force Microscopy on Functional Layers in Energy Materials</b> <i>Florian Hausen, Forschungszentrum Jülich</i>
12:30 – 14:00	Lunch
14:00 – 15:30	<b>EXCURSION</b> <b>Hiking in «Parc National de la Vanoise»</b> <b>Guided tour of the village (Fort Esseillon)</b>
19:30 – 22:00	<b>SOCIAL</b> <b>Dinner</b>

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## DAY 5

Friday June 5<sup>th</sup>, 2026

07:30 – 09:00	Morning Coffee & Breakfast
09:30 – 10:30	<b>MORNING SESSION 1 (CHAIRMAN: RUSLAN TEMIROV)</b> <b>Contributed: Comparative Study of Thermal, Current-Induced, and Laser-Induced Melting of Ag and Au Nanoplates</b> <i>Sven Oras, University of Tartu</i> <b>Contributed: Manipulation of the charge state of molecules on superconducting Pb(111)</b> <i>Rémy Pawlak, University of Basel</i>
10:30 – 11:00	Coffee Break
10:30 – 12:00	<b>MORNING SESSION 2</b> <b>Farewell, Poster Prizes, Announcements for the 11th Nanomanipulation Workshop</b>
12:30 – 14:00	Lunch
13:00	<b>DEPARTURE WITH BUS TO MODANE STATION</b>

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