



Wednesday, September 23

Time	Event	Join Session
9:00-12:00	Lecture Session / Resolving Electrochemical Properties on Functional, Sustainable Materials (11.30-12.00) Discussion round / Chatroom	link link
12:00-13:00	Lunch Break	
13:00-15:00	Lectuer Session / 2D materials and nanoelectronics (14.20-14.50) Discussion round / Chatroom	link link
15:00-16:00	Hands-on-Session I / Conductive AFM in high vacuum Training Session I / Practical hands-on: Tricks and tips on AFM	link link
16:30-17:30	E-Poster Session I	link
18:00-19:00	Social Program: Book of Kells "Cyber Tour"	link

Thursday, September 24

Time	Event	Join Session
9:00-11:00	Lecture Session / Polymer- and Biotechnology (10.40-11.00) Discussion round / Chatroom	link link
11:00-12:00	Hands-on-Session II / Scanning Ion Conductance Microscopy SICM for liquid measurements Training Session II / Practical hands-on: Tricks and tips on AFM	link
12:00-13:00	Lunch Break	
13:00-16:00	Lecture Session / Advanced research on ferroelectric materials (15.30-16.00) Discussion round / Chatroom	link link
16:00-17:00	Hands-on-Session III / Advanced PFM Training Session III / Practical hands-on: Tricks and tips on AFM	link link
17:30-18:30	Social Program: Virtual Whiskey Tasting	link

Friday, September 25

Time	Event	Join Session
9:00-11:00	Lecture Session / Correlative microscopy techniques for comprehensive material characterization (10.35-11.00) Discussion round / Chatroom	link link
11:00-12:00	E-Poster Session II	link
13:00-15:00	Lecture Session / Overcoming barriers in AFM (14.30-15.00) Discussion round / Chatroom	link link
15:00-16:00	Hands-on-Session IV / Sideband KPFM Training Session IV / Practical hands-on: Tricks and tips on AFM	link link

Wednesday, September 23

Time	Speaker	Topic	Join Session
9:00-12:00	Lecture Session	Resolving Electrochemical Properties on Functional, Sustainable Materials	
9:00	Welcome to the NSFE 2020	Overview & Practical instructions	
	KEYNOTE TALKS		
9:10	Ass. Prof. Kim McKelvey Trinity College Dublin, Ireland	Electrochemistry on 2D transition metal dichalcogenides	
9:35	Prof. Patrick R. Unwin University of Warwick, United Kingdom	Correlative Electrochemical Multi-Microscopy: Building an Understanding of Electrochemical Interfaces From Local to Global	
10:00	Dr. Reynier I. Revilla Vrije Universiteit Brussel, Belgium	KPFM for electrochemical studies: From corrosion to battery materials	link
	CONTRIBUTED TALKS		
10:25	Dr. Sergey Luchkin Skolkovo Inst. of Science and Technology, Russia	Instrumental aspects of in situ AFM imaging of solid electrolyte interfaces on battery grade powder electrode materials	
10:35	Prof. Gianlorenzo Bussetti Polytechnic University of Milan, Italy	A comprehensive study of electrochemical HOPG intercalation with HClO4 and H2SO4 electrolytes by photoemission spectroscopy and atomic force microscopy	
10:45	Prof. Dr. Florian Hausen RWTH Aachen University, Germany	Revealing local ionic conductivity and chemical distribution in solid state electrolytes by Electrochemical Strain Microscopy	
10:55	Marc Brunet Cabre Trinity College Dublin, Ireland	Using scanning electrochemical cell microscopy (SECCM) architecture for high-temporal resolution stochastic electrochemistry	
	KEYNOTE TALK		
11:05	Prof. Dr. Christine Kranz Ulm University, Germany	Hybrid electrochemical scanning probe microscopy: Physical and electrochemical characterization of interfaces	
		(11.30-12.00) Discussion round / Chatroom	link
12:00-13:00		Lunch Break	
13:00-15:00	Lecture Session	2D materials and nanoelectronics	
	CONTRIBUTED TALKS		
13:00	Ass. Prof. Robert Szoszkiewicz University of Warsaw, Poland	Kinetics of oxidative etching and Mo oxides produced during oxidation of single microscale 2H MoS2 flakes in air and high relative humidity	
13:10	Daniel Steinbach TU Bergakademie Freiberg, Germany	Morphological and electrical characterization of coordination polymers containing rhodium paddle wheels	
13:20	Giorgio Cortelli University of Bologna, Italy	Indentation of metallic thin film on soft substrate: insights for stretchable conductors	
13:30	Prof. Dr. Ana Paula Barboza Federal University of Ouro Preto, Brazil	Compression induced modification of boron nitride layers: a conductive two-dimensional BN compound	
13:40	Dr. Alexander Matkovic University of Leoben, Austria	Kelvin probe force microscopy-based direct measurements of contact resistance in 2D semiconductor thin film transistors	link
13:50	Prof. Mariana Prado Federal University of Ouro Preto, Brazil	Molecular decoration of two-dimensional materials: unveiling crystallographic orientation and grain boundaries	
14:00	Prof. Ive Almeida Federal University of Ouro Preto, Brazil	Wet Graphene Membranes on a Microfluidic Platform	
		(14.20-14.50) Discussion round / Chatroom	link
15:00-16:00	Hands-on-Session I Training Session I	Conductive AFM in high vacuum Practical hands-on: Tricks and tips on AFM (training session)	link link
15:30-17:30		E-Poster Session I	link
18:00-19:00	Social Program	Book of Kells "Cyber Tour" / Live from The Long Room Of The Old Library At Trinity College Dublin	link



Thursday, September 24			
Time		Event	Join Session
9.00-11.00	Lecture Session	Polymer- and Biotechnology	
		KEYNOTE TALKS	
9:00	Prof. Ken Nakajima Tokyo Inst.of Technology, Japan	Nanorheological AFM for Basic Polymer Science	
9:25	Dr. Fatima Linares Ordonez University of Granada, Spain	Characterization of metallo-DNA nanostructures properties with AFM	
		CONTRIBUTED TALKS	
9:50	Dr. Carlos Marcuello University of Zaragoza, Spain	Molecular recognition of protein receptors through quantitative force maps	
10:00	Joanna Zemla Grenoble Alpes University, France	The role of lectins in surface adhesion and virulence of Pseudomonas aeruginosa studied with single molecule force spectroscopy	link
10:10	Dr. Bartłomiej Zapotoczny Polish Academy of Sciences, Poland	Further development of AFM-based imaging techniques for tracking fenestrae in living Liver Sinusoidal Endothelial Cells	
10:20	Dr. Francesco Simone Ruggeri University of Cambridge, United Kingdom	Single Molecule Atomic Force Microscopy to Unravel Protein Misfolding and Aggregation	
10:30	James McCormack University College Dublin	High-Aspect Ratio Polymeric Nanoneedle Arrays	
		(10.40-11.00) Discussion round / Chatroom	link
11.00-12:00	Hands-on-Session II	Scanning Ion Conductance Microscopy SICM for liquid measurements	link
	Training Session II	Practical hands-on: Tricks and tips on AFM (training session)	link
12.00-13.00		Lunch Break	
13.00-16.00	Lecture Session	Advanced research on ferroelectric materials	
		KEYNOTE TALKS	
13:00	Prof. Brian Rodriguez University College Dublin, Ireland	AFM tip-induced strain effects in BiFeO3 films: from structural phase changes to polarization switching and nanofabrication-activated phenomena	
13:25	Dr. Neus Domingo Catalan Inst. of Nanoscience and Nanotechnology, Spain	Quantification of nanoscale electromechanical responses	
13:50	Prof. Dr. Lukas Eng Technical University Dresden, Germany	Reconfigurable 2D Electron Gases in Ferroelectric Domain Walls	
14:15	Prof. Dennis Meier Norwegian University of Science and Technology, Norway	Advanced functionality in ferroelectric oxides - creating building blocks for nanoscale circuitry	
		CONTRIBUTED TALKS	
14:40	Ass. Prof. Tobias Cramer University of Bologna, Italy	Piezoelectric and electrostatic properties of electrospun PVDF-TrFE nanofibers and their role in electromechanical transduction in nano-generators and strain sensors	
14:50	Dr. Lukas Kuerten ETH Zurich, Switzerland	Giant electron and hole conduction coexisting in non-oxide ferroelectric domain walls	
15:00	Loïc Musy University of Geneva, Switzerland	Probing the behaviour of surface water and ferroelectric PbTiO3 thin films as a function of relative humidity and temperature	
15:10	Ralph Bulanadi University of Geneva, Switzerland	Quantifying the Impact of Varying Defect Landscapes on Domain Wall Motion	
15:20	Dr. Markus Kratzer University of Leoben, Austria	Piezoresponse force microscopy on ZnO platelets, thin films, and sintered material	
		(15.30-16.00) Discussion round / Chatroom	link
16.00-17:00	Hands-on-Session III	Advanced PFM	link
	Training Session III	Practical hands-on: Tricks and tips on AFM (training session)	link
17:30-18:30	Social Program	Virtual Whiskey Tasting / Live from Dubliner Whiskey Museum	link



Friday, September 25			
Time		Event	Join Session
9.00-11.00	Lecture Session	Correlative microscopy techniques for comprehensive material characterization	
		KEYNOTE TALKS	
9:00	Prof. Thorsten Hugel University of Freiburg, Germany	Nanoscale characterization across several length scales by AFM and fluorescence microscopy	
9:25	Prof. Silke Christiansen Innovation-Institute for Technology and Correlative Microscopy, Forchheim, Germany	Three-dimensional nano-architectures in energy, bio-medical, electronic and sensing applications – optimization based on correlative microscopy and spectroscopy and machine learning	
9:50	Dr. Sang-Joon Cho Park Systems Corp., South Korea	Introduction of recent SPM hybrid technology development	link
		CONTRIBUTED TALKS	
10:15	Ass. Prof. Xiaoji Xu Lehigh University, USA	Integrated Simultaneous Chemical, Surface Potential, Mechanical, and Topographic Imaging at < 10 nm Spatial Resolution	
10:25	Pranoti Kshirsagar Database Group, Nanoscience & Technology, Springer Nature, Germany	Accelerating Your Research Using Nature Research Group's AI Powered Nanotechnology Platform	
		(10.35-11.00) Discussion round / Chatroom	link
11:00-12:00	E-Poster Session II		link
12.00-13.00		Lunch Break	
13.00-15.00	Lecture Session	Overcoming barriers in AFM	
		KEYNOTE TALKS	
13:00	Prof. Dr. Franz J. Giessibl University of Regensburg, Germany	Mysteries of the chemical bond revealed by atomic force microscopy	
13:25	Dr. Sibylle Sievers PTB - The National Metrology Institute of Germany	Traceably quantitative magnetic field measurements with magnetic force microscopy	
		CONTRIBUTED TALKS	
13:50	Dr. Vincenzo Cotroneo The National Institute for Astrophysics, Italy	pySurf - a Python library for analysis of surface data	link
14:00	Fangzhou Xia Massachusetts Institute of Technology, USA	Instrument Development for New AFM Capabilities	
14:10	Prof. Babak Eslami Widener University, USA	Improving image contrast and estimating material properties by Biharmonic AFM	
14:20	Devon Jakob Lehigh University, USA	Pulsed Force Kelvin Probe Force Microscopy for < 10 nm Contact Potential Mapping in Ambient Conditions	
		(14.30-15.00) Discussion round / Chatroom	link
15.00-16:00	Hands-on-Session IV	Sideband KPFM	link
	Training Session IV	Practical hands-on: Tricks and tips on AFM (training session)	link
16:00	Poster Awards / Closing remarks		link