

Scientific program

Thursday, April 4, 2024

TIME		PAGE
9:30	Registration	
12:30	Opening	
12:35	Christian Güllly: Core facilities @ Med Uni Graz – 20 years of central scientific research support	
12:45	Plenary lecture by Simone Pokrant: Beam sensitive samples in material science and the link to TEM in biological sciences	21
13:15 – 14:05	Johannes Liesche: Plant cell coupling investigated with electron microscopy and mathematical modeling	22
	Daniel Knez: Visualizing cellulose chains with cryo scanning transmission electron microscopy	23
	Scarlett Zeiringer: In vitro differentiation and characterization of monocytes to evaluate the influence of nanocarriers on antigen presenting cells	24
	Sponsor presentation: Daniel Scheinecker (IMS)	25
14:05	Coffee break	
14:30	Fritz Grasenick Award ceremony	
14:38	Grasenick Award lecture by Zhuo Chen: Ceramic deformation through unit cell disturbances	26
14:58	Grasenick Award lecture by Sebastian Antreich: Zygospor development of Spirogyra (Charophyta) investigated by serial block-face scanning electron microscopy and 3D reconstructions	27
15:18	Sponsor presentation: Georg Raggl (JEOL)	28
15:30	Coffee break	
16:00 – 17:00	Andreas Holzinger: 3D reconstruction of zygospores of Zygnema and Spirogyra (green algae) by FIB-SEM or serial block face-SEM	29
	Snježana Radulovic: From a living grasshopper to a reconstructed neural movement detecting network (ATUMTome SEM as a method of choice in connectomics)	30
	Mikhail Koreshkov: 3D characterization of the dispersion of natural nanofillers in polymer matrices for sustainable food packaging	31
	Moritz Theissing: How to properly investigate recrystallization in wrought aluminum alloys	32
	Sponsor presentation: Eric Hummel (Leica), News in sample preparation	
17:00 – 18:00	Poster session 1	53- 73
19:00	Conference dinner	

Friday, April 5, 2024

TIME		PAGE
9:00	BioTechMed plenary lecture by Peter Hinterdorfer: Single molecule and high speed atomic force microscopy in viral research	33
	Wael Joudi: Correlated AFM/STEM study on the mechanical stiffness of defect-engineered graphene	34
9:30 – 10:20	Julius F. Keckes: Enhanced quantification of in-situ micromechanical testing enabled by advanced computer vision techniques	35
	Lukas Seewald: Combined magnetic and conductive AFM probe via FEBID based 3D nanoprinting	36
	Sponsor presentation by Dhirenda Singh (ThermoFisher)	37
10:20	Coffee break	
	Sponsor presentation by Hajo Frerichs (Quantum Design)	38
	Pradeep Bhandari: GABAB receptors induce phasic release from medial habenula terminals through activity-dependent recruitment of release-ready vesicles	39
10:45 – 12:00	Leon Ploszczanski: Heritage en Detail: SEM and LM analysis of cultural heritage artefacts	40
	Yong Huang: Atomic-scale understanding of deformation and strengthening mechanism of TiN/TaN superlattice	41
	Karin Kornmüller: Complementing cryo-EM with simulation studies to address structure and dynamics in low-density lipoprotein	42
	Sponsor presentation by Bernhard Kethler (Videko Hitachi)	43
12:00	Poster session 2 and lunch break	
	Philip Steiner: Thapsigargin induces autophagy in RBL-1 cells: a novel form of non-apoptotic programmed cell death	44
	Tatiana Kormilina: Advances in EELS tomography through automated acquisition and multimodal reconstruction	45
13:00 – 14:00	Barbara Ehall: Automated detection of insulin-, glucagon- and somatostatin granules in electron micrographs using a convolutional neural network	46
	Manuel Längle: Two-dimensional few-atom noble gas clusters in a graphene sandwich	47
	Sponsor presentation by Wolfgang Schwinger (Zeiss)	48
14:00	Coffee break	
14:15	General assembly	
	Isobel C. Bicket: High resolution electron microscopy characterization of $Y(Mn_{1-x}In_x)O_3$ blue chromophores	49
15:20 – 16:00	Lukas Schretter: Mapping nanoscale strain fields in metallic glass composites via 4DSTEM during in-situ deformation	50
	Aleksander Brozyniak: Incorporating birefringence in conventional TEM sample preparation	51
16:00	Closing	
16:30	Lab tour	