UCLouvain

RBSM

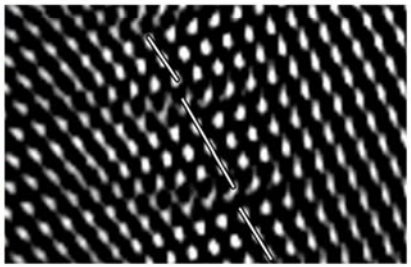
Royal Belgian Society for Microscopy vzw

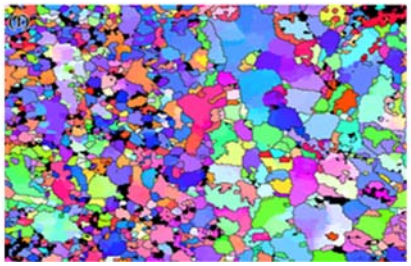
RBSM Meeting 2019

Louvain-la-Neuve, September 9, 2019

fnrs LA LIBERTÉ DE CHERCHER

fwo





fnrs LA LIBERTÉ DE CHERCHER

ZEISS

Protochips

NanoMEGAS *Advanced Tools for electron diffraction*

VIB

Nikon

fwo HAMAMATSU PHOTON IS OUR BUSINESS

SYNERGIE4 BRUKER

ThermoFisher SCIENTIFIC The world leader in serving science

TESCAN PERFORMANCE IN NANOSPACE

JEOL Solutions for Innovation

8:00-9:00	**Opening and coffee**	
9:00-9:30	**Welcome and Introduction (Auditorium A.02)**	
9:30-10:30	**Plenary lecture (Auditorium A.02): Novel in-situ Electron Microscopy Solutions: Capabilities and Applications** **By Madeline Dukes (Protochips, USA)**	
	Materials science session (Auditorium A.03)	**Life science session (Auditorium A.02)**
10:30-11:10	**Invited talk: Highly efficient phase contrast imaging in STEM with electron ptychography** By ***Tim Pennycook*** *(University of Antwerp)*	**Invited talk: Super-resolution microscopy by dSTORM: From concepts to biomedical applications** By ***Markus Sauer*** *(University of Würzburg)*
11:10-11:40	**Coffee break**	
11:40-12:00	**Investigation of the nanoscale plasticity mechanisms in nanostructured thin metallic glass films using advanced in-situ TEM nanomechanical testing** By ***Andrey Orekhov*** *(UCLouvain/University of Antwerp)*	**Automatic cell tracking in Ca2+ imaging recordings of the enteric nervous system using B-Spline Explicit Active contours** By ***Youcef Kazwiny*** *(KULeuven)*
12:00-12:20	**Quantitative HAADF-STEM tomography for in situ analysis of elemental redistribution in 3D** By ***Alexander Skorikov*** *(University of Antwerp)*	**Morphofunctional profiling exposes a pharmacological window for modifiers of neuronal network connectivity** By ***Peter Verstraelen*** *(University of Antwerp)*
12:20-14:00	**Lunch, coffee and poster session**	
14:00-15:00	**Keynote for all (Auditorium A.02): Content-Aware Image Restoration for Light and Electron Microscopy Facilitates Quantitative Data Analysis** **By Florian Jug (MPI-CBG, Germany)**	
	Materials science session (Auditorium A.03)	**Life science session (Auditorium A.02)**
15:00-15:40	**Invited talk: On the local estimation of strain based on SEM high-resolution electron back-scattered diffraction** By ***Pascal Jacques*** *(UCLouvain)*	**Invited talk: Deep learning for imaging en masse & deep learning for the masses** By ***Christophe Zimmer*** *(Institut Pasteur)*
15:40-16:00	**Is it possible to study gas adsorption/desorption processes, surface reactions, coupling, dynamics of catalytic reactions, spillover effects and the behaviors at defects from 10^{-4} to 10 Pa by in situ environmental scanning electron microscopy?** By ***Cédric Barroo*** *(Unviersité Libre de Bruxelles)*	**CELLMIA, CellMissy and MIACME: tools for quantitative analysis and standardized reporting of cell migration** By ***Marleen Van Troys*** *(UGhent)*
16:00-16:20	**Preparation of high crystalline quality, large area MoTe2 films by MBE** By ***Trung Phamthanh*** *(University of Namur)*	**Structural Study of Centimeter-long Electron Conducting Cable Bacteria** By ***Raghavendran Thiruvallur Eachambadi*** *(Hasselt University)*
16:20-17:00	**Coffee break and poster session**	
17:00-17:10	**Best oral and poster presentation award in the two sessions (Auditorium A.02)**	
17:10-17:50	**RBSM2019 PhD Awards (Auditorium A.02)**	
17:50-18:00	**Closing words (Auditorium A.02)**	

POSTERS

N°	Materials science session	N°	Life science session
P1	**interface controlled super tough crystal/amorphous hybrid nanolaminate coatings** By *Hui Wang (UCLOUVAIN IMMC)*	P13	**Microscopy based profiling of proteomics derived CRC metastasis markers** By *Guillermo Solís Fernández (Chemistry/KU Leuven)*
P2	**Strain measurement on Semiconductor FinFET devices using Moiré and a novel quadrature demodulation technique** By *Viveksharma Prabhakara (University of Antwerp and IMEC)*	P14	**The impact of culture conditions on the phenotype of human fetal astrocytes** By *Hugo Steenberghen (Lab of Cell Biology and Histology, Dept. Veterinary Sciences, University of Antwerp, Antwerpen, Belgium)*
P3	**The nucleation and growth mechanisms of deformation twins in equiatomic CrCoNi medium-entropy alloy** By *Lipeng Ding (Université catholique de Louvain)*	P15	**MYCN activation in hTERT immortalized RPE cells as model for oncogene induced senescence** By *Sofia Zanotti (Lab. Cell Biology and Histology, Dept. Veterinary Sciences, University of Antwerp)*
P4	**Graphene effect on mechanical response of metal substrate** By *Farzaneh Bahrami (Université Catholique de Louvain)*	P16	**Correlative in toto imaging in a seeded Tau.P301L mouse brain** By *Jan Detrez (Antwerp University)*
P5	**In-situ TEM observation of healing process in Al 6xxx based alloy** By *Mariia Arseenko (UClouvain)*	P17	**Mapping nutrient-sensing neuronal pathways in the intact intestinal wall using calcium imaging** By *Candice Fung (KU Leuven)*
P6	**Fundamental processes on Au-Ag model catalysts studied by electron microscopies** By *Luc Jacobs (Chimie Physique des Matériaux et Catalyse)*	P18	**Nuclear lamins influence infection kinetics of Human Papilloma Virus** By *Freya Molenberghs (University of Antwerp)*
P7	**Atom detection from electron microscopy images** By *Jarmo Fatermans (University of Antwerp)*	P19	**Using molecular proximity to refine synapse quantification in neuronal cultures** By *Gerardo Garcia-Diaz Barriga (University of Antwerp)*
P8	**3-D characterization of nanomaterials from a single 2-D STEM image** By *Ece Arslan Irmak (EMAT, University of Antwerp, Groenenborgerlaan 171, 2020 Antwerp, Belgium)*	P20	**Ground truth estimation for image segmentation tasks by contour averaging** By *Michaël Barbier (Department of Veterinary Sciences, University of Antwerp, Antwerp, Belgium)*
P9	**Studying structural heterogeneities and dynamics of novel biomimetic polymer gels using fluorescence microscopy.** By *Johannes Vandaele (KU Leuven)*	P21	**Expansion Microscopy (ExM) as a tool to unravel retroviral related questions at the nanoscale** By *Aline Acke (KULeuven)*
P10	**Temporal re-distribution of dose to reduce beam damage in (S)TEM** By *Abner Velazco Torrejón (Antwerp University)*	P22	**New FRET biosensors using SNAP, HALO tags and organic dyes** By *Marco Dalla Vecchia (Lab for Nanobiology, Department of Chemistry, KU Leuven, Belgium & VIB-UGent Center for Inflammation Research)*
P11	**Optimization of graphene support enabled the direct visualization of surface ligands** By *Adrian Pedrazo (University of Antwerp)*	P23	**A-type lamin status determines susceptibility to and recovery after compression-induced nuclear envelope rupture** By *Ana Leal (University of Antwerp)*
P12	**On the fracture mechanism of TRIP-TWIP Ti-12wt.% Mo: From microscopic to nanoscopic scale** By *Laurine Choisez (UCLouvain)*	P24	**The regulation of mitochondrial transport by conformational changes in the microtubule lattice** By *Valérie Van Steenbergen (Laboratory of Enteric NeuroScience, KU Leuven, Belgium)*
		P25	**Differential gene expression changes in the neuroepithelial body microenvironment, following induced acute lung inflammation** By *Line Verckist (University of Antwerp)*
		P26	**Optimization of a primary myenteric culture to study the interaction between amyloids and enteric neurons.** By *Nouchin De Loose (Laboratory of Cell Biology & Histology, Department of Veterinary Sciences, University of Antwerp, Universiteitsplein 1, 2020 Antwerp, Belgium)*

		P27	**Optimization of two ex vivo systems for studying amyloid uptake and distribution in the gut** By *Rosanne Verboven (Laboratory of Cell Biology & Histology, University of Antwerp, Department of Veterinary sciences, Antwerp, Belgium)*
		P28	**Plasma membrane curvature sensing by BAR domain proteins** By *Benjamin Ledoux (LIBST - UCLouvain)*
		P29	**Endophilin-A3 controls a clathrin-independent endocytic route distinct from Endophilin-A2** By *François Tyckaert (UCL)*