

Monday, June 18, 2018

09:00 – 9:30 | Registration and coffee

Plenary session

<u>Session chair:</u>	Zahava Barkay	
9:30-10:00	Welcome and opening remarks	
10:00-10:40	Introduction to crystallography	Semen Gorfman (TAU)
10:40-11:20	Electron channeling contrast imaging (Electron microscopy of thick crystals)	Angus J Wilkinson (Oxford)
11:20-11:40	Coffee break	
11:40-12:20	Introduction to electron backscattered diffraction	Ben Britton (Imperial)
12:20-13:00	Probing local crystal structure in liquids and gases	Sarah Haigh (Manchester)
13:00-14:00	Lunch break and poster mounting	

Parallel sessions

14:00-15:40	Life sciences session	Materials Science session
15:40-16:00	Coffee break	

Companies parallel sessions

16:00 – 17:00	Life techno-bite session	Materials techno-bite session
---------------	--------------------------	-------------------------------

Tuesday, June 19, 2018

09:00 – 9:30 | Registration and coffee

Parallel sessions

9:30-10:50	Life sciences session	Materials Science session
10:50-11:10	Coffee break	
11:10-12:50	Life sciences session	Materials Science session
12:50-13:50	Lunch break	
13:50-14:30	Poster presentations	

Plenary session

<u>Session chair:</u>	Assaf Gal	
14:30-15:10	Organic nano-crystals in organisms: biogenic scatterers, mirrors, multilayer reflectors and photonic crystals	Lia Addadi (WIS)
15:10-15:30	Closing remarks and poster prize winner	
15:30-16:00	Coffee break and good bye	
16:00-17:00	Break after workshop – optional close collaboration forms	
17:00	Visit at the Diaspora museum	

Materials Science Track

Monday, June 18, 2018

	Tutorial on TEM diffraction	
Session Chair:	Amit Kohn	
14:00-14:20	Electron diffraction in the TEM and related imaging modes - a brief introduction and overview	Yaron Kauffmann (Technion)
14:20-15:00	Electron crystallography as a tool for structure solution of nanosized materials	Louisa Meshi (BGU)
15:00-15:40	Crystallography in the TEM - Precession electron diffraction	Alexander Eggeman (Manchester)
15:40-16:00	Coffee break	
	Company session on advances in TEM and SEM diffraction	
Session Chair	Louisa Meshi	
16:00-16:15	Precession electron diffraction and orientation imaging /phase mapping at nm scale in TEM material science applications	Stavros Nicolopoulos (NanoMegas)
16:15-16:30	Kikuchi pattern simulations for EBSD data analysis	Aimo Winkelmann (Bruker)
16:30-16:45	Introduction of CMOS technology in EBSD – Super speed and sensitivity in a single EBSD detector	Keith Dicks (Oxford)
16:45-17:00	Innovative and non-conventional STEM diffractive imaging using patented integrated Differential Phase Contrast (iDPC) and new generation of hybrid pixelated detectors	Dominique Delille (FEI)

Tuesday, June 19, 2018

	SEM diffraction and related methods	
Session Chair:	Inna Popov	
9:30-9:50	High angular resolution EBSD	Ben Britton (Imperial)
9:50-10:10	Multivariate statistical analysis of EBSD data	Angus J Wilkinson (Oxford)
10:10-10:30	Transmission Kikuchi Diffraction (TKD)	Zahava Barkay (TAU)
10:30-10:50	Tracking deformation in small volumes by in situ microbeam Laue diffraction	Finn Giuliani (Imperial)
10:50-11:10	Coffee break	
	TEM diffraction and related methods	
Session Chair:	Yaron Kauffmann	
11:10-11:30	Nano-scale characterization of short-range-order in amorphous materials by electron scattering	Amit Kohn (TAU)
11:30-11:50	Strain and deformation in 2D materials	Sarah Haigh (Manchester)
11:50-12:10	2D diffraction by low and high energy electrons for studying surface crystallography and defects	Ilan Goldfarb (TAU)
12:10-12:30	Application of diffraction to measurement of crystal size in nano-materials	Inna Popov (HUJI)
12:30-12:50	Exploring the underlying structure in TEM diffraction data	Alexander Eggeman (Manchester)

Life Sciences Track

Monday, June 18, 2018

	Structure determination with TEM	
Session Chair:	Emil Zolotoyabko	
14:00-14:40	Structural studies by cryo-electron microscopy: Achievements, prospects, and challenges	Elena Orlova (BBK)
14:40-15:10	The single particle cryo-EM workflow for structural studies of biological macromolecules	Nadav Elad (WIS)
15:10-15:40	Cryo-STEM analysis of protein-bound metals	Michael Elbaum (WIS)
15:40-16:00	Coffee break	
	Company session on advances in TEM and SEM diffraction	
Session Chair:	Nadav Elad	
16:00-16:15	EBSD analysis of beam sensitive bio materials; calcite and aragonite in mollusc shell	Keith Dicks (Oxford)
16:15-16:30	Micro-electron diffraction (MED) – A complementary structural biology technique	Bart Buijsse (FEI)
16:30-16:45	3D precession diffraction tomography at nm scale in TEM: Solving structures of pharmaceutical compounds with new generation direct detection pixelated detectors	Stavros Nicolopoulos (NanoMegas)
16:45-17:00	Analysis of crystalline biological materials using EBSD in the SEM	Aimo Winkelmann (Bruker)

Tuesday, June 19, 2018

	X-ray scattering in biophysical studies	
Session Chair:	Raz Zarivach	
9:30-10:00	Dynamic self-assembly of biomolecules	Uri Raviv (HUJI)
10:00-10:25	X-ray Scattering – resolving order and disorder in nano-scale biological complexes	Roy Beck (TAU)
10:25-10:50	Small Angle X-ray diffraction revealing structural adaptations for seed crawling	Rivka Elbaum (HUJI)
10:50-11:10	Coffee break	
	X-ray crystallography	
Session Chair:	Roy Beck	
11:10-11:35	X-ray crystallography, 100 years old, and still a “bright” future	Haim Rozenberg (WIS)
11:35-12:00	Structural studies of magnetosome-associated proteins	Raz Zarivach (BGU)

UK - Israel Workshop on Nano - Scale Crystallography for Bio and Materials Research
June 18 - 19, 2018 | Tel-Aviv University

12:00-12:25	Ferritin-peptide chimera scaffolds for x-ray structural elucidation of biominerals interacting proteins.	Amir Berman (BGU)
12:25-12:50	Nano-structure of natural biominerals visualized by advanced X-ray diffraction, X-ray tomography, and electron microscopy techniques	Emil Zolotoyabko (Technion)