



The 49th Annual Scientific Meeting of ISM  
Bar-Ilan University, Ramat Gan

## Conference Schedule – May 18<sup>th</sup>

08:30 - 09:30	Registration
<b>PLENARY SESSION</b>	
<b>Session Chair:</b>	<b>Eyal Shimoni, ISM Chairperson</b>
09:30 - 09:50	Greetings & Presentation of the Lev Margulis & SIG4 Prizes
09:50 - 10:35	Plenary Lecture: <b>Pavel Tomancak</b> , MPI-CBG, Dresden, Germany <i>Guide to Light-Sheet Microscopy for Adventurous Biologists</i>
10:35 - 10:55	<b>Coffee Break</b>
10:55 - 11:40	Plenary Lecture: <b>Ute Kaiser</b> , Ulm University, Germany <i>Strategies of Imaging Low-Dimensional Electron-Beam-Sensitive Objects with Low-Voltage Aberration-Corrected TEM</i>
<b>SOUND BITE SESSION</b>	
<b>Session Chair:</b>	<b>Amit Kohn, Ben-Gurion University, Israel</b>
11:50 - 12:20	Posters Sound Bites
12:20 - 13:15	LIFE SCIENCES POSTERS MATERIALS SCIENCE POSTERS VENDORS EXHIBITION MICROGRAPH COMPETITION
	<b>ISM GENERAL ASSEMBLY</b>
13:15 - 14:15	Lunch
<b>PARALLEL SESSIONS</b>	
14:15 - 16:05	LIFE SCIENCES SESSION MATERIALS SCIENCE SESSION
16:05 - 16:20	<b>Coffee Break</b>
<b>PARALLEL SESSIONS</b>	
16:20 - 17:55	LIFE SCIENCES SESSION MATERIALS SCIENCE SESSION
17:55 - 18:30	<b>Beer &amp; Snacks + Best Posters &amp; Best Micrograph Nominations</b>
18:30	<b>Departure</b>

## Materials Science Session

<b>Session Chair:</b>		<b>Yossi Lereah, Tel-Aviv University, Israel</b>
14:15 - 14:40	Stavros Nicolopoulos - Nanomegas, Belgium <b><i>Precession Electron Diffraction Applications in TEM: from Crystal Structure Determination to Orientation Imaging and Strain Mapping at nm Scale</i></b>	<b>Invited</b>
14:40 - 15:05	Yuval Golan - Ben Gurion University of the Negev, Israel <b><i>Chemical Epitaxy: from Basic Studies to Application</i></b>	<b>Invited</b>
15:05 - 15:25	Haim Weissman - Weizmann Institute of Science, Israel <b><i>Self-Organization of Noncovalent Systems in Aqueous Medium - Updates on Construction and Destruction</i></b>	
15:25 - 15:45	Shmuel Samuha - Ben Gurion University of the Negev, Israel <b><i>Structure Solution of <math>Al_{65}Cu_{25}Re_{10}</math> Phase by 3D Electron Diffraction Tomography</i></b>	<b>SIG 4</b>
15:45 - 16:05	Laurie Palasse - Bruker Nano GmbH, Berlin, Germany <b><i>New Approach to Transmission Kikuchi Diffraction in SEM</i></b>	
16:05 - 16:20	<b>Coffee Break</b>	
<b>Session Chair:</b>		<b>Louisa Meshi, Ben-Gurion University, Israel</b>
16:20 - 16:45	Amit Kohn - Ben Gurion University of the Negev, Israel <b><i>Nanoscale Mapping of Electrostatic and Magnetic Fields by Electron Holography</i></b>	<b>Invited</b>
16:45 - 17:10	Lilac Amirav - Technion, Israel <b><i>Sculpting Photocatalysts on the Nano Scale</i></b>	<b>Invited</b>
17:10 - 17:30	Hadas Sternlicht - Technion, Israel <b><i>Steps and the Mechanism of Grain Boundary Motion in <math>SrTiO_3</math></i></b>	
17:30 - 17:50	Aleksandr Bagmut - National Technical University, Kharkiv, Ukraine <b><i>Crystallization of Films, Deposited with Laser Sputtering</i></b>	
17:55 - 18:30	<b>Beer &amp; Snacks + Best Posters &amp; Best Micrograph Nominations</b>	
18:30	<b>Departure</b>	

## Life Science Session

<b>Session Chair: Edith Suss-Toby, Technion, Israel</b>	
14:15 - 14:40	<p>Daniel Razansky - Technical University of Munich, Germany</p> <p><b><i>Volumetric Multi-Spectral Optoacoustic Tomography – a One-Stop-Shop for High Performance Structural, Functional and Molecular Imaging</i></b></p> <p style="text-align: right;"><b>Invited</b></p>
14:40 – 15:00	<p>Yonatan Sivan - Ben Gurion University of the Negev, Israel</p> <p><b><i>Nanoparticle-Assisted STED, Theory and Experimental Demonstration</i></b></p>
15:00 - 15:20	<p>Yechiel Elkabetz - Tel Aviv University, Israel</p> <p><b><i>Quantitative Live Imaging of Embryonic Stem Cell Derived Neural Rosettes Reveals Cellular Dynamics Coupled to Cortical Development</i></b></p>
15:20 - 15:40	<p>Anat Akiva - Weizmann Institute of Science, Israel</p> <p><b><i>Boning Up on Bone Formation: Tracking the Bone Formation Pathways in the Larval Zebrafish Tail</i></b></p> <p style="text-align: right;"><b>Margulis</b></p>
15:40 - 16:05	<p>Karina Yaniv - Weizmann Institute of Science, Israel</p> <p><b><i>How YouTube the Vertebrate's Body: Insights from Zebrafish</i></b></p> <p style="text-align: right;"><b>Invited</b></p>
16:05 - 16:20	<b>Coffee Break</b>
<b>Session Chair: Dror Fixler, Bar-Ilan University, Israel</b>	
16:20 - 16:45	<p>Michael Elbaum - Weizmann Institute of Science, Israel</p> <p><b><i>Cryo-STEM for Tomography and Beyond</i></b></p> <p style="text-align: right;"><b>Invited</b></p>
16:45 – 17:05	<p>Einat Zelinger - Hebrew University, Israel</p> <p><b><i>High Resolution Correlative X-ray Tomography</i></b></p>
17:05 - 17:30	<p>Natan T. Shaked - Tel-Aviv University, Israel</p> <p><b><i>Novel Approaches for Three-Dimensional Optical Imaging of Live Cells without Using Labeling</i></b></p> <p style="text-align: right;"><b>Invited</b></p>
17:30 - 17:55	<p>Eyal Nir - Ben Gurion University of the Negev, Israel</p> <p><b><i>Computer Controlled DNA-Based Molecular Machines Assisted by Microfluidics and Single-Molecule Fluorescence</i></b></p> <p style="text-align: right;"><b>Invited</b></p>
17:55 - 18:30	<b>Beer &amp; Snacks + Best Posters &amp; Best Micrograph Nominations</b>
18:30	<b>Departure</b>

## Materials Sciences Poster Session

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1. Eran Amsellem and Amit Kohn  
***Double-Barrier Magnetic Tunnel Junctions Based on Epitaxial Growth of Fe and MgO***

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  2. Eran Aronovitch, Philip Kalisman, Shai Mangel, Lothar Houben, Lilac Amirav and Maya Bar-Sadan  
***Designing Efficient Bimetallic Photocatalysts for Hydrogen Production***

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  3. Snejana Bakardjieva, Michaela Maleckova, Jan Subrt, Ivo Jakubec, Lorant Szatmary, Eva Plizingrova, Lars Osterlund and Rosica Petrova  
***Lanthanum Modified Two Dimensional TiO<sub>2</sub> Photocatalyst by Using Controllable Lyophilization Process***

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  4. Rajesh Chalasani, Alex Pekin, Alex Rabkin, Yuval Golan and Amit Kohn  
***Mapping the Electrostatic Potential in Heterojunctions of PbS/CdS Core-Arm Nanostructures by Off-Axis Electron Holography***

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  5. Tzipi Cohen-Hyams, Grisha Spektor, Lior Gal and Meir Orenstein  
***Nanopatterning Plasmonic Structures Using Focused Ion Beam and e-Beam Lithography***

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  6. Keith Dicks, Jenny Goulden, Kim Larsen, Rosie Jones and Scott Sitzman  
***Real-Time Discrimination of Phases with Similar Kikuchi Patterns but Different Chemistries through Simultaneous EBSD and EDS***

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  7. Nimrod Gazit, Gunther Richter and Eugen Rabkin  
***Hollowing Kinetics of Ag-Au Core-Shell Nanoparticles Controlled by Short Circuit Diffusion***

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  8. Gal A. Grinbom, David Duveau, Gregory Gershinsky, Laure Monconduit and David Zitoun  
***Silicon/Hollow  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> Nanoparticles as Efficient Anodes for Li-Ion Batteries***

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  9. Or Haimson, Itzik Ofra, Pavel Fay, Avi Rozenblat Raz and Amir Silber  
***Site-specific Dopant Profiling Applications in the Dual Beam FIB-SEM System***

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  10. Mahdi Halabi, Amit Kohn and Shmuel Hayun  
***Measuring the Space Charge Potential in Granular Magnesium Aluminate Spinel using Off-Axis Electron Holography***

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  11. Ohad Goldbart, Ifat Kaplan-Ashiri, Andrey Enyashin, Sidney R. Cohen, Reshef Tenne, H. Daniel Wagner  
***Liquid Adhesion and Capillary Actions at the Nanoscopic Level: Direct Observations of Exceptional Water-Single WS<sub>2</sub> Nanotube Interactions***

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  12. Olga Kleinerman, Vida Jamali, Lucy Liberman, Matteo Pasquali and Yeshayahu Talmon  
***Nematic Droplets of Carbon Nanotubes in Superacid***
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13. Anna Kosinova, Oleg Kovalenko, Leonid Klinger, Eugen Rabkin, Dong Wang and Peter Schaaf  
***Thermal Coarsening of Porous Gold Nanoparticles***
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14. Daniel Kropman, Valdek Mikli, Viktor Seeman, Toni Laas and Artur Medvids  
***Stress Relaxation Mechanism by Strain in the Si-SiO<sub>2</sub> System and its Modification by Laser Irradiation***
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15. Nina Mirchin, Edward Tannous, Igor Lapsker, Alex Laihtman and Aaron Peled  
***A Discrete Model of the Evanescent Light Emission from Ultra-Thin layers***
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16. Lucy Liberman, Olga Kleinerman and Yeshayahu Talmon  
***Cryogenic Electron Microscopy Study of the Biphasic Region of Super-Acid Solutions of Carbon Nanotubes***
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17. Pradipta Sankar Maiti, Lothar Houben and Maya Bar-Sadan  
***Colloidal Synthesis of Ultrathin CdS<sub>x</sub>Se<sub>1-x</sub> 2D Nanosheets and their Emission Enhancement via Surface Modification***
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18. Oren E. Meiron, Sekhar Reddy Ghanta and Maya Bar-Sadan  
***Layered Materials, an Innovative Direction for Alloying and Exfoliation***
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19. Hadar Nahor and Wayne D. Kaplan  
***Atomistic Structure of the Equilibrated Ni(111)-YSZ(111) Solid-Solid Interface***
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20. Meital Shviro, Shlomi Polani and David Zitoun  
***Hollow Octahedral and Cuboctahedral Nanocrystals by Tip-Enhanced Galvanic Displacement***
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21. Maor Ram-On and Yeshayahu Talmon  
***Effect of pH on Charged Surfactant and Oppositely Charged Polyelectrolyte Complexes***
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22. Priyadarshi Ranjan, Sreejith Shankar Poopanal, Bojana Visic, Ifat Kaplan-Ashiri, Ronit Popovitz-Biro, Sidney Cohen, Iddo Pinkas, Michal Lahav, Reshef Tenne and Milko E. van der Boom  
***Inorganic Nanotubes as Templates for the Selective Formation of Gold Nanostructures***
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23. Adam Weissman, Elad Segal, Hannah Aharon and Adi Salomon  
***Pattern Dependent Energy Modulation in Plasmonic Nano Cavities***
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24. Yael Templeman, Guy Ben Hamu and Louisa Meshi  
***Characterization of Mg-based Friction Stir Welded Alloys***
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25. Lena Yadgarov, Bojana Visic, Rita Rosentsveig and Reshef Tenne  
***Localized Surface Plasmon Resonance in Semiconducting WS<sub>2</sub> Nanotubes and MoS<sub>2</sub> Nanoparticles***
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26. Victor Y. Zenou, Zhan Gao, David Kennouche, Laurence D. Marks and Scott A. Barnett  
***Investigation of Solid Oxide Cells with Zirconia/Ceria Bi-Layer Electrolytes Fabricated Utilizing Reduced-Temperature Firing***
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## **Life Sciences Poster Session**

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27. Koby Baranes, Tony Yamin, Amos Sharoni and Orit Shefi  
***Morphometric Analysis of Neurons Interacting with Topographical Nano-Cues***
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28. Yair Ben-Shaul and Shlomo Trachtenberg  
***Non-Helically Perturbed Polymers: Iterative Real and Reciprocal Space Methods for Reconstruction***
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29. Sharon Cohen, Koby Baranes and Orit Shefi  
***Identified Cultures Using Microinjection for Single Cell Analysis and Manipulation***
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30. Yael Abraham, Sunil Kumar, Yaron Silberberg and Rivka Elbaum  
***Hygroscopically Coiling Cells in a Grass – *Stipa capensis****
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31. Sharon Yunger, Arie Friedrich, Liat Altman, Yuval Garini and Yaron Shav-Tal  
***Following the Modulation of Transcriptional Activity of Single Alleles by Chromatin Modifications During the Cell Cycle in Single Living Cells***
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32. Sutharsan Govindarajan, Nitsan Albocher and Orna Amster-Choder  
***Polar Localization of the PTS System in E. Coli: the Role of Geometric Cues and Novel Pole-Organizing Proteins***
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33. Dvir Gur, Ben Leshem, Maria Pierantoni, Viviana Farstey, Dan Oron, Steve Weiner and Lia Addadi  
***The Structural Basis for the Brilliant Colors of the Sapphirinid Copepods and the Neon Tetra Fish***
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34. Martin Kessel and Alexis Rohou  
***A Genealogy of Three-Dimensional Electron Microscopy***
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35. Naama Koifman, Anat Aharon and Yeshayahu Talmon  
***Cryogenic-SEM Study of Monocytes Undergoing Shedding Upon Stimulation***
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36. Batya Mannasse, Hila Katz, Yaron Milwid, Aliza Amiel and Aryeh Weiss  
***Quantitative Analysis of PNA-Cy3 Labeled Telomeres***
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37. Sonbula Massalha, and Daphne Weihs  
***Adherence Rates, Morphology and Force Depend on Metastatic Potential in Breast Cancer Cells***
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38. Gal Mor Khalifa, Jonathan Erez, Steve Weiner and Lia Addadi  
***Biom mineralization Pathways in Foraminifera: a Cryo Correlative Approach***
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39. Shachar Sherman, David Kirchenbuechler, Michael Elbaum and Natalie Elia  
***Using Soft-X-ray Tomography to Study ESCRT-Mediated Membrane Fission During Mammalian Cell Division***
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40. Amit Shraga, Amir Mor, Rakefet Ben-Yishay, Noga Kozer, Itamar Kanter, Yuval Garini and Yaron Shav-Tal  
***Exploring the Nanometrical Interactions Between NXF1 and Single Nucleoporins Using a FLIM-FRET System.***
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41. Nir A. Turko and Natan T. Shaked  
***Utilizing Gold Nanoparticles in Photothermal Imaging and Ablation of Cell Populations***
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42. Tanya Turovsky, Irina Portnaya, Ellina Kesselman and Dganit Danino  
 ***$\beta$ -Casein Based Nano-Carriers for Oral Delivery of Poorly Water-Soluble Drugs***
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