# 26th IVS Annual Conference and Technical Workshop

**Thursday, October 11, 2007**

## Program

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<th>Time</th>
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<tr>
<td>8:10-9:10</td>
<td>Registration</td>
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<td>8:30</td>
<td>Opening of Commercial Exhibition</td>
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<td>9:10-10:30</td>
<td><strong>Plenary Session - Auditorium -1 Floor</strong></td>
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<td>Chairperson: Y. Paz, Technion</td>
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<td>9:10-9:20</td>
<td>Greetings: A. Zaban, IVS President</td>
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<td>9:20-9:40</td>
<td>IVS prize award ceremony:</td>
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<tr>
<td></td>
<td>- The BOC Edwards prize for excellence in scientific research</td>
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<td>- The ODEM Ltd. prize for excellence in technical support</td>
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<td>9:40-10:30</td>
<td>Plenary lecture: Magnetic Resonance at the Nanoscale – The Quest for a Molecular Structure Microscope</td>
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<td>H. J. Mamin, IBM Research Division, Almaden Research Center, San - Jose</td>
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<td>10:30-10:50</td>
<td>Coffee Break</td>
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<td>10:50-12:50</td>
<td><strong>Parallel Sessions - Morning</strong></td>
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### Session ED- Electronic and Optoelectronic Devices, "Tayesset" Hall, -1 floor

Chairperson: S. Yitzchaik, HUJ

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<tr>
<td>10:50-11:20</td>
<td><strong>ED-01</strong> Towards the fusion of nanophotonics and optofluidic</td>
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<td>(Invited) U. Levy, Hebrew University of Jerusalem</td>
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<td>11:20-11:40</td>
<td><strong>ED-02</strong> Manipulation of Electrochemical and Spectroscopic Properties of Dicarbazole-Type Conducting Polymers by Off Backbone Substitution</td>
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<td>Z. Pomerantz, Bar-Ilan University</td>
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<td>11:40-12:00</td>
<td><strong>ED-03</strong> Negative capacitance in organic semiconductor diodes: bipolar injection</td>
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<td>E. Ehrenfreund, Technion</td>
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<td>12:00-12:20</td>
<td><strong>ED-04</strong> Multipeak Negative-Differential-Resistance Molecular Device</td>
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<td>E.D. Mentovich, Tel Aviv University</td>
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<td>12:20-12:50</td>
<td><strong>ED-05</strong> Near Infrared Active Polymer/Nanocrystal Composites</td>
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<td>(Invited) N. Tessler, Technion</td>
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Session CG – Cristal Growth and Physics, "Moreshet" Hall, Entrance floor
Chairperson: Y. Mastai, BIU

10:50-11:20 CG-01 (invited) Chemical bath deposition of ZnO: The role of impurities as nucleation centres
G. Hodes, Weizmann Institute of Science

11:20-11:40 CG-02 Phase-field modeling of steps and step-sources
I.G. Rasin, Technion

11:40-12:00 CG-03 Monitoring of Radiation-Induced Phase Transitions in Polydiacetylene Langmuir Films: an Electron Microscopy and Grazing Incidence Synchrotron X-Ray Diffraction Study
Y. Lifshitz, Ben-Gurion University

12:00-12:20 CG-04 Synthesis of DL-alanine hollow tubes.
D.D. Medina, Bar-Ilan University

12:20-12:50 CG-05 (invited) Atomic Layer Deposition – a Key Technology in the Processing of Nanomaterials for Advanced Applications in Nanotechnology
L. Niinisto, Helsinki University of Technology, Finland

Session VT – Vacuum and Plasma Technology – Hall No. 2, 1st floor
Chairperson: M. Weinstock, INTEL

J. Gordon, Emek Hefer Laboratory

11:20-11:40 VT-02 Performance range and limits of state of the art Turbopumps
W. Bremer, Pfeiffer Vacuum

11:40-12:00 VT-03 Plasma-reduction of metallic ions in solvents
I. Genish, Bar-Ilan University

12:00-12:20 VT-04 Electrostatic Ion Trap: from Mass Spectrometer to XHV Pressure Gauge
M. Rappaport, Weizmann Institute of Science

12:20-12:50 VT-05 (invited) The INNI– Matchmaking Universities and Industry in Nanotechnology
R. Koriat, Israel National Nanotechnology Initiative (INNI)
Session IM-1 – Imaging and Microscopy – Hall No. 1, 1st Floor
Chairperson: S. Cohen, WIS

10:50-11:20 IM1-01 New Horizons in Optical and Chemical Nanocharacterization
A. Lewis, The Hebrew University of Jerusalem

D.H. Dressler, Bar-Ilan University

11:40-12:00 IM1-03 Peptide Nanotube Formation by Chiral Self-Assembly
D. Danino, Technion

12:00-12:20 IM1-04 Nanoscale Strain and Composition Mapping Inside Quantum Dots Using Kelvin Probe force microscopy
S. Shusterman, Tel-Aviv University

12:20-12:50 IM1-05 Molecular Architecture in Intact Eukaryotic Cells Revealed by Cryo-Electron Tomography
O. Medalia, Ben-Gurion University

12:50-15:00 Lunch
Poster Session
Commercial Exhibition

15:00-17:00 Parallel Sessions - Afternoon

Session NM – Nano Materials, "Tayesset" Hall -1 Floor
Chairperson: L. Kronik, WIS

15:00-15:30 NM-01 The structure of Langmuir films on mercury and at buried interfaces
M. Deutsch, Bar-Ilan university

15:30-15:50 NM-02 Nanostructured Metal –Oxide gas sensors
A. Rothschild, Technion

15:50-16:10 NM-03 Nanotube Epitaxy
A. Ismach, Weizmann Institute of Science

16:10-16:30 NM-04 Conjugate between $\gamma$-Fe$_2$O$_3$ nanoparticles and PbSe quantum dots for biological application.
L. Etgar, Technion

16:30-17:00 NM-05 Room Temperature Polariton Lasing From an Individual ZnO Nanowire Cavity
S. Rühle, Utrecht University
Session ES – Energy Storage and Conversion – Hall No. 2, 1st Floor

Chairperson: A. Kribus, TAU

15:00-15:30 ES-01 New materials for energy storage & conversion
(Invited)
D. Aurbach, Bar-Ilan university

15:30-15:50 ES-02 Potential Induced Activity Changes in Nanoporous Electrochemistry Cell Electrolyte
S. Dor, Bar-Ilan University

15:50-16:10 ES-03 Development of an Antireflective Coating for Photovoltaic Module Glass Cover
Y. Eisenberg, Jerusalem College of Technology

16:10-16:30 ES-04 Efficiency Evaluation of Multi-Junction Thin Films Solar Cells
A. Axelevitch, Holon Institute of Technology

16:30-17:00 ES-05 Research & Development of Solel#6 collector
(Invited)
R. Ezer, Solel

Session SS – Surface Science - "Moreshet" Hall, Entrance floor

Chairperson: E. Kolodney, Technion

15:00-15:30 SS-01 Metallic and Oxide Nano-Crystals Growth Assisted by Weakly Bound Buffer Layers
(Invited)
M. Asscher, The Hebrew University of Jerusalem

15:30-15:50 SS-02 IVV Characteristics of Thin Silica and SiON Layers using Chemically Resolved Electrical Measurements (CREM)
H. Cohen, Weizmann Institute of Science

15:50-16:10 SS-03 Large area smooth gold and Surface Force measurements
L. Chai, Weizmann Institute of Science

16:10-16:30 SS-04 Thermal Stability of Pt/Gd2O3 Interfaces for Future Gate Stacks
E. Lipp, Technion

16:30-17:00 SS-05 High Resolution Electron Energy Loss Spectroscopy Studies of Diamond Films Deposited from Isotopic Gas Mixtures
(Invited)
A. Hoffman, Technion
Session IM-2 – Imaging and Microscopy – Hall No. 1, 1st Floor

Chairperson: O. Regev, BGU

15:00-15:30 IM2-01 Genuine Revision in Nanoindentation Technique: Standard Measurements and Curiosities
R. Nowak, Helsinki University of Technology, Finland

15:30-15:50 IM2-02 Polymer micro lenses with Nano Fountain Pen
L.A. Gheber, Ben-Gurion University

15:50-16:10 IM2-03 Study of the superconducting Cs-doped WO\textsubscript{3} crystal surface by electron backscattered diffraction
Z. Barkay, Tel Aviv University

16:10-16:30 IM2-04 Atomic Resolution TEM study and Electron Tomography of MoS\textsubscript{2} fullerenes
M. Bar-Sadan, Weizmann Institute of Science

16:30-17:00 IM2-05 Modern Transmission Electron Microscopy: Not Just Pretty Pictures
W.D. Kaplan, Technion

17:00-17:20 Coffee Break

17:20-18:30 Plenary Session - Auditorium, -1 Floor
Chairperson: Y. Paz, Technion

G.J. Leggett, University of Sheffield, UK

18:10-18:30 Prize award ceremony to winning students' posters. The prizes are sponsored by:
- BOC Edwards
- Israel IEEE-Electron Device Society
- Israel IET
- ISI
- Esterman and Roth Funds
- Israel Association for Crystal Growth

18:30 Cocktail and Departure