

26th IVS Annual Conference and Technical Workshop
Thursday, October 11, 2007

Program

- 8:10-9:10** **Registration**
- 8:30** **Opening of Commercial Exhibition**
- 9:10-10:30** **Plenary Session - Auditorium -1 Floor**
Chairperson: Y. Paz, Technion
- 9:10-9:20** **Greetings:** A. Zaban, IVS President
- 9:20-9:40** **IVS prize award ceremony:**
- The BOC Edwards prize for excellence in scientific research
- The ODEM Ltd. prize for excellence in technical support
- 9:40-10:30** **Plenary lecture: Magnetic Resonance at the Nanoscale – The Quest
for a Molecular Structure Microscope**
H. J. Mamin, IBM Research Division, Almaden Research Center, San - Jose
- 10:30-10:50** **Coffee Break**
- 10:50-12:50** **Parallel Sessions - Morning**
- Session ED- Electronic and Optoelectronic Devices, "Tayesset" Hall, -1 floor**
Chairperson: S. Yitzchaik, HUJ
- 10:50-11:20** **ED-01** **Towards the fusion of nanophotonics and optofluidic**
(Invited) U. Levy, Hebrew University of Jerusalem
- 11:20-11:40** **ED-02** **Manipulation of Electrochemical and Spectroscopic Properties of
Dicarbazole-Type Conducting Polymers by Off Backbone
Substitution**
Z. Pomerantz, Bar-Ilan University
- 11:40-12:00** **ED-03** **Negative capacitance in organic semiconductor diodes: bipolar
injection**
E. Ehrenfreund, Technion
- 12:00-12:20** **ED-04** **Multipeak Negative-Differential-Resistance Molecular Device**
E.D. Mentovich, Tel Aviv University
- 12:20-12:50** **ED-05** **Near Infrared Active Polymer/Nanocrystal Composites**
(Invited) N. Tessler, Technion

Session CG – Cristal Growth and Physics, "Moreshet" Hall, Entrance floor

Chairperson: Y. Mastai, BIU

- 10:50-11:20** CG-01 **Chemical bath deposition of ZnO: The role of impurities as nucleation centres**
(invited)
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 **Atomic Layer Deposition – a Key Technology in the Processing of Nanomaterials for Advanced Applications in Nanotechnology**
(invited)
L. Niinisto, Helsinki University of Technology, Finland

Session VT – Vacuum and Plasma Technology – Hall No. 2, 1st floor

Chairperson: M. Weinstock, INTEL

- 10:50-11:20** VT-01 **New LEEM/PEEM instruments for multi-technique characterization of surfaces.**
(invited)
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 **The INNI– Matchmaking Universities and Industry in Nanotechnology**
(invited)
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**
(invited) A. Lewis, The Hebrew University of Jerusalem
- 11:20-11:40** IM1-02 **Polarized Near field Scanning Optical Microscopy-A Novel Method for Optical Rotation Measurements of Crystals Surfaces.**
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**
(invited) 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, "Tavesset" Hall -1 Floor

Chairperson: L. Kronik, WIS

- 15:00-15:30** NM-01 **The structure of Langmuir films on mercury and at buried interfaces**
(invited) 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 γ -Fe₂O₃ 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**
(invited) 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

(invited)

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 WO₃ 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 MoS₂ fullerenes

M. Bar-Sadan, Weizmann Institute of Science

16:30-17:00 IM2-05 Modern Transmission Electron Microscopy: Not Just Pretty Pictures

(invited)

W.D. Kaplan, Technion

17:00-17:20 Coffee Break

17:20-18:30 Plenary Session - Auditorium, -1 Floor

Chairperson: Y. Paz, Technion

17:20-18:10 Plenary lecture: Towards New Tools for Zeptomolar Analysis: Bionanofabrication by Near-field Optical Methods

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