



24th IVS Annual Conference and Technical Workshop
Thursday, October 27, 2005
Exhibition Halls (*Ganei ha Ta'aruchah*), Bitan 1, Tel Aviv

Program#

- 08:10- 09:10 **Registration**
- 08:30 **Opening of Commercial Exhibition**
- 09:10 - 10:30** **Opening Plenary Session - C6 Hall**
Chairperson - S. Brandon, Technion
- 09:10-09:30 **Greetings:** Y. Rosenwaks, IVS President
Representative of the Ministry of Science & Technology
Y. Golan, Ben Gurion University - *in memory of S. Efrima*
A. Hoffman, Technion - *in memory of M. Folman*
- 09:30-09:40 * **Award of Rafael Scientific Research Excellence Prize to Reshef Tenne,
Weizmann Institute of Science (Sponsored by Rafael)**
- 09:40-09:50 * **Award of ELOP Technician's prize to Y. Harel, ELOP and Y. Shachar,
Weizmann Institute of Science (Sponsored by ELOP)**
- 09:50-10:30 **Plenary Lecture: Tuning the conductance of single walled carbon
nanotubes by ion irradiation in the Anderson localization regime**

Julio Gómez-Herrero, Universidad Autónoma de Madrid
- 10:30-10:50** **Coffee Break**
- 10:50-12:50** **Parallel Morning Sessions**
- Session CG - Crystal Growth – C5 Hall**
Chairperson – D. Gazit, NRC Negev
- 10:50-11:20 **On crystallization mechanisms involved in insulin regulation in mammalian
organisms (invited)**
P.G. Vekilov, University of Houston
- 11:20-11:40 **Calcite microcrystals in the pineal gland of the human brain: Second harmonic
generators and possible piezoelectric transducers**
S.B. Lang, Ben Gurion University
- 11:40-12:00 **Composition-dependent optical properties of KTP-family crystals**
M. Roth, The Hebrew University
- 12:00-12:20 **WC-ZnS-A leading material in the electro-optical industry**
S. Joseph, Rafael
- 12:20-12:50 **High density nanometer-scale InSb dots formation using droplets heteroepitaxial
growth by MOCVD for MWIR detectors (invited)**
Y. Paltiel, Soreq NRC

Session NM-Nanomaterials and Nanomechanics, C6 Hall

Chairperson – A. Zaban, Bar Ilan University

- 10:50-11:20 Mechanics of molecular rods (invited)**
S. Hoz, Bar Ilan University
- 11:20-11:40 Nanobiomechanical Analysis of Stem Cell-Based Tissue Engineered Bone**
G. Pelled, The Hebrew University
- 11:40-12:00 Polycrystalline Macro-Domains formed by Self-Organization of Ferroelectric Grains**
I. Lubomirsky, Weizmann Institute of Science
- 12:00-12:20 Slow Charge Trapping Mechanisms in Thin CdSe Nanoparticle Layers**
H. Cohen, Weizmann Institute of Science
- 12:20-12:50 Nanolubricants for the future (invited)**
J.-M. Martin, University Institute of France

Session VT – Vacuum Technology – C4 Hall

Chairperson – D. Hamawi, NRC Negev (lectures in Hebrew)

10:50-11:20 חידושים בשיטות אפיון תהליכים על פני שטח (הרצאה מוזמנת)

נ. שמיר, קמ"ג נגב

11:20-11:40 הרצאה של י. שחר, מכון ויצמן למדע, על תחום עיסוקו

11:40-12:00 הרצאה של י. הראל, אלאופ, על תחום עיסוקו

12:00-12:30 תופעות הגזה בוואקום של סרט קפטון עם ציפוי דבק אקרילי (הרצאה מוזמנת)

א. לייכטמן, ממ"ג שורק

- 12:50-14:45 * Poster Session**
- * Commercial Exhibition**
- * Sandwich Buffet**
- 14:45-15:00 * Business meeting (C6 Hall)**

15:00-17:00 Parallel Afternoon Sessions

Session ME – Molecular Electronics, C6 Hall

Chairpersons – L. Gheber, Ben Gurion University; D. Porath, The Hebrew University

- 15:00-15:30 Measurement of the conductance of single conjugated molecules (invited)**
A. Yacoby, Weizmann Institute of Science
- 15:30-15:50 Direct electric transport through single DNA molecules**
H. Cohen, The Hebrew University
- 15:50-16:10 How do electronic carriers cross Si-bound alkyl monolayers?**
A. Salomon, Weizmann Institute of Science
- 16:10-16:30 Nanoscale study of charge transport in amorphous molecular thin film transistors**
O. Tal, Tel-Aviv University
- 16:30-17:00 Towards a construction of reliable molecular-based electronic devices (invited)**
S. Richter, Tel-Aviv University

Session SM - Surface Modification – C4 Hall

Chairperson – Y. Paz, Technion

- 15:00-15:30** **Chemistry in self-assembled monolayers: the constraints and consequences of monolayer packing and order (invited)**
C.N. Sukenik, Bar Ilan University
- 15:30-15:50** **Molecular induced field effect in superconducting Nb films**
D. Shvarts, Weizmann Institute of Science
- 15:50-16:10** **Wettability engineering in semiconductor hydroxyapatite activated by surface potential modulation**
D. Aronov, Tel-Aviv University
- 16:10-16:30** **Preparation of Graded Materials by Laterally Controlled Template Electrodeposition**
T. Sehayek, Weizmann Institute of Science
- 16:30-17:00** **Formation of monolayer-based memory elements (invited)**
M.E. van der Boom, Weizmann Institute of Science

Session TF-Thin Films, Electronic & Optoelectronic Devices - C5 Hall

Chairpersons – E. Grünbaum, Tel-Aviv University; S. Cohen, Weizmann Institute of Science

- 15:00-15:30** **Functional hybrid materials based on semiconducting polymers for optoelectronics (invited)**
G.L. Frey, Technion
- 15:30-15:50** **Selected Area Laser Assisted (SALA) crystallization and doping in low-temperature Poly-Si thin-film transistors**
A. Glazer, Orbotech Corporation
- 15:50-16:10** **PECVD grows and characterization of SiOF layers for IMD applications**
A. Cohen, Intel
- 16:10-16:30** **The influence of the nano-crystalline structure on the electrical properties of indium-doped PbTe films**
R. Kreizman, Ben Gurion University
- 16:30-17:00** **Charge transfer dynamics of individual molecules studied with Raman spectroscopy (invited)**
G. Haran, Weizmann Institute of Science

17:00-17:20 **Coffee Break**

17:20-18:00 **Plenary Lecture, C6 Hall**

Chairperson - L. Kronik, Weizmann Institute of Science

Creating nanostructures through self-and directed assembly

Paul S. Weiss, The Pennsylvania State University

18:00 - **Student poster and oral presentation competition prizes, including Esterman and Roth Funds prizes and prizes sponsored by the Israel Association for Crystal Growth and Israel IEEE-Electron Device Society**

Light refreshments



*# Only presenting authors and their affiliation are mentioned in this program.
Please see the abstracts for a full listing of all authors and associated affiliations*