CURRICULUM VITAE

Yael Hanein

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1 Personal Details

Residence address: 58 Livneh st. Caesarea, Israel.

Date and place of birth: March 18, 1970, Kfar-Saba, Israel.

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2 Education

- Ph.D. - Physics, The Weizmann Institute of Science, Rehovot, Israel (1996-1999). Thesis: The metal-insulator transition in two-dimensional gallium-arsenide based systems. Thesis advisor: Prof. Dan Shahar.
- M.Sc. - Physics, The Weizmann Institute of Science, Rehovot, Israel (1993-1995). Thesis: A novel fabrication and characterization of quantum wires grown by molecular beam epitaxy on non-planar substrates. Thesis advisor: Prof. Mordehai Heiblum.
- B.Sc. - Physics, Tel-Aviv University, Tel-Aviv, Israel (1990-1993).

3 Post-Graduate and Additional Academic Experience

- Postdoctoral research associate, Department of Physics, University of Washington, Seattle, WA (9/2002 - 9/2003). Research interests: Carbon nanotube electronic devices.
- Postdoctoral research associate, Department of Electrical Engineering, University of Washington, Seattle, WA (1/2000 - 2/2003) with Profs. Denice Denton and Karl Bohringer. Research interests: Silicon based electrodes for intracellular neuronal recording, micro-machined protein resistant coatings, and micro self-assembly for MEMS applications.
- Visiting student, Prof. Dan Tsui's lab, Department of Electrical Engineering, Princeton University, Princeton, NJ (1997-1999). Research interests: Metal-insulator transitions in two-dimensional systems.

4 Academic and Professional Experience

- Associate Professor, Iby and Aladar Fleischman Faculty of Engineering, School of Electrical Engineering; Department of Physical Electronics, Tel-Aviv University, Tel-Aviv (3/2009 - present).
- VP, Nano Retina, Israel (2009 - present).
- Senior Lecturer (with tenure), Iby and Aladar Fleischman Faculty of Engineering, School of Electrical Engineering; Department of Physical Electronics, Tel-Aviv University, Tel-Aviv (11/2006 - 2/2009).
- Lecturer, Iby and Aladar Fleischman Faculty of Engineering, School of Electrical Engineering; Department of Physical Electronics, Tel-Aviv University, Tel-Aviv (10/2003 - 11/2006)

5 Academic and Professional Awards

5.1 Awards and distinctions

- Young mentor, IAP's third conference for young scientists, World economic forum "summer Davos" (2010).
- Outstanding young scientist, IAP's second conference for young scientists, World economic forum "summer Davos"(2009).
- David Kulitz fellow, Tel-Aviv University (2004-2006).
- NSF CISE postdoctoral associateship (2000 - 2003).
- Levi Eshkol Scholarship, The Israeli Ministry of Science (1997-1999).
- Israeli Society of Crystal Growth student prize (1996).

5.2 Membership in Professional Societies

- American Physical Society (APS). Member since 1997.
- Institute of Electrical and Electronics Engineers (IEEE). Member since 2000. Senior member since 2008.

6 Professional Duties and Committees

- Co-director, Tel-Aviv University micro & nano central characterization & fabrication facility (2007-present).
- Tel-Aviv University center for nano-science and nano-engineering, Managing committee member (2006 - present).
- Executive committee member, Global Young Academy, 2010-2011.
- Tel-Aviv University, Faculty of engineering research committee (2007-2010).
- Tel-Aviv University, committee for research service improvement (2007-2010).
- Scientific Programme Committee, 7th International Meeting on Substrate-Integrated Microelectrode Arrays, June 29 to July 2, 2010, Reutlingen, Germany
- Technical program committee, MEMS 2010, Hong-Kong, China.
- Co-organizer, a symposium on "Graphitic Materials" at the ACS National Meeting, 2009, Washington DC.
- Technical program committee, Transducers 2009, Denver, CO, USA.
- Technical program committee, Transducers 2007, Lyon, France.
- Technical program committee, Transducers 2005, Seoul, Korea.
- Technical program committee, Euro-sensors 2009, Lausanne, Switzerland.
- Technical program committee, Euro-sensors 2008, Dresden, Germany.
- Organizing committee, Annual meeting of the Israeli Society for Medical and Biological Engineering, 2006.
- Organizing committee; Israel vacuum society 25th annual meeting, 2006, Tel-Aviv.

7 Publications

7.1 Book Chapters

- Carbon Nanotubes: Methods and Protocols, edited by Marko Burghard and Kannan Balasubramanian, Carbon nanotube based neuro-chips, Moshe David-Pur, Mark Shein and Yael Hanein, Humana Press, USA 2010.

7.2 Journal Papers

1. Y. Hanein, H. Shtrikman and U. Meirav, Very low density two-dimensional hole gas in an inverted GaAs/AlAs interface, Applied Physics Letters, Vol. 70, pp. 1426-1428, 1997.

2. D. Scheiner, Y. Hanein and M. Heiblum, Fabrication of quantum wires in thermally etched V-grooves by Molecular Beam Epitaxy, Semiconductors Science and Technology, Vol. 12, pp. 1046-1051, 1997.

3. Y.Hanein, U. Meirav, D. Shahar, C. C. Li, D. C. Tsui and H. Shtrikman, The metallic-like conductivity of a two-dimensional hole system, Physical Review Letters, Vol. 80, pp. 1288-1291, 1998.

4. Y. Hanein, H. Shtrikman and U. Meirav, Transport properties of a two-dimensional hole gas with density varied over a very wide range, Physica E, Vol. 2, pp. 498-501, 1998.

5. Y. Hanein, D. Shahar, J. Yoon, C. C. Li, D.C. Tsui and H. Shtrikman, Properties of the apparent metal-insulator transition in two-dimensional systems, Physical Review B, Vol. 58, pp. 7520-R7523, 1998.

6. Y. Hanein, D. Shahar, J. Yoon, C. C. Li, D. C. Tsui and H. Shtrikman, Observation of the metal-insulator transition in two-dimensional n-type GaAs, Physical Review B, Vol. 58, pp. R13338-R13340, 1998.

7. H. Shtrikman, Y. Hanein, A. Soibel and U. Meirav, Superior molecular beam epitaxy (MBE) growth on (N11)A GaAs, Journal of Crystal Growth, Vol. 201/202, pp. 221-225, 1999.

8. H. Shtrikman, Y. Hanein, A. Soibel and U. Meirav, (N11)A GaAs: A preferable platform for high quality GaAs/AlGaAs structures, Microelectronics Journal, Vol. 30, pp. 323-328, 1999.

9. Y. Hanein, N. Nenadovic, D. Shahar, Hadas Shtrikman, J. Yoon, C.C. Li and D.C. Tsui, Linking insulator-to-metal transitions at zero and finite magnetic fields, Nature, Vol. 400, pp. 735-737, 1999.

10. Y. Hanein, Y. V. Pan, B. D. Ratner, D. D. Denton, K. F. Bohringer, Micromachined non-fouling coatings for bio-MEMS applications, Sensors and Actuators: B. Chemical, Vol. 81, pp. 49-54, 2001.

11. Y. Hanein, K. F. Bohringer, R. Wyeth, and A. O. D. Willows, Towards MEMS Probes for Intracellular recording, Sensors Update, Vol. 10, pp. 47-74, 2002.

12. X. Xiong, Y. Hanein, J. Fang, Y. Wang, W. Wang, D. T. Schwartz, K. F. Bohringer, Controlled Multi-Batch Self-Assembly of Micro Devices, ASME/IEEE Journal of Microelectromechanical Systems, Vol. 12, pp.117-127, 2003.

13. Y. Hanein, C. G. J. Schabmueller, G. Holman, P. Lucke, D. D. Denton, K. F. Bohringer, High-aspect ratio submicrometer needles for intracellular applications, IOP Journal of Micromechanics and Microengineering (JMM), Vol. 13, pp. S91, 2003.

14. J. Lienemann, A. Greiner, J. G. Korvink, X. Xiong, Y. Hanein, and K. F. Bohringer, Modeling, Simulation,and Experimentation of a Promising New Packaging Technology: Parallel Fluidic Self-Assembly of Microdevices, Sensors Update, Vol. 13, pp. 47-75, 2003.

15. J. Clemmens, H. Hess, R. Lipscomb, Y. Hanein, Karl F. Bohringer, Carolyn M. Matzke, George D. Bachand, Bruce C. Bunker, Viola Vogel, Mechanisms of microtubule guiding on microfabricated kinesin coated surfaces: Chemical and topographic surface patterns, Langmuir, Vol. 19, pp. 10967-10974, 2004.

16. I. Radu, Y. Hanein and D. H. Cobden, Oriented growth of single-wall carbon nanotubes using alumina patterns, Nanotechnology, Vol. 15, pp. 473-476, 2004.

17. Xuanhong Cheng, Yanbing Wang, Yael Hanein, Karl F. Bohringer and Buddy D. Ratner, Novel cell patterning using microheater controlled thermoresponsive plasma films, Journal of Biomedical Materials Research, Vol. 70A, pp. 159-168, 2004.

18. Tamir Gabay, Eyal Jakobs, Eshel Ben-Jacob, and Yael Hanein, Engineered self-organization of neural networks using CNT clusters, Physica A, Vol. 350, pp. 611-621, 2005.

19. R. Sorkin, T. Gabay, P. Blinder, D. Baranes, E. Ben-Jacob and Y.Hanein, Compact self-wiring in cultured neural networks, Journal of Neural Engineering, Vol. 3, pp. 95-101, 2006.

20. Eyal Jakobs and Yael Hanein, Micrometer scale gel patterns, Colloids and Surfaces A: Physico-chemical and Engineering Aspects, Vol. 290, pp. 33-40, 2006.

21. Z. R. Abrams and Y. Hanein, Tube-tube and tube-surface interactions in straight suspended carbon nanotube structures, Journal of Physical Chemistry B, Vol. 110(43), pp. 21419-21423, 2006.

22. Z. R. Abrams, Y. Lereah and Y. Hanein, Transmission electron microscope imaging of single-walled carbon nanotube interactions and mechanics on nitride grids, Nanotechnology, Vol. 17, pp. 47064712, 2006.

23. Z. R. Abrams and Y. Hanein, Radial deformation measurements of isolated pairs of single-walled carbon nanotubes, Carbon, Vol. 45, pp. 738-743, 2007.

24. Tamir Gabay, Moti Ben-David, Itshak Kalifa, Raya Sorkin, Ze'ev R. Abrams, Eshel Ben-Jacob and Yael Hanein, Electro-chemical and biological properties of carbon nanotube based multi-electrode arrays, Nanotechnology, Vol. 18, pp. 035201-035206, 2007.

25. Ze'ev R. Abrams, Zvi Ioffe, Alexander Tsukernik, Ori Cheshnovsky, and Yael Hanein, A Complete Scheme for Creating Large Scale Networks of Carbon Nanotubes, Nano Letters, Vol. 7, pp. 2666-2671, 2007.

26. N B Sopher, Z R Abrams, M Reches, E Gazit and Y Hanein, Integrating peptide nanotubes in micro-fabrication processes, J. Micromech. Microeng. Vol. 17, pp. 2360-2365, 2007.

27. Z R Abrams, D Szwarcman, Y Lereah, G Markovich, Y Hanein, Iron assisted growth of copper tipped multi-walled carbon nanotubes, Nanotechnology, Vol. 18, pp. 495602, 2007.

28. Orly Levy, David Kauzlarić, Zeév R. Abrams, Yael Hanein, Andreas Greiner and Jan G. Korvink, Dissipative particle dynamics model of carbon nanotubes, Molecular Simulation, Vol. 34, pp. 737-748, 2008.

29. E. Ben-Jacob and Y. Hanein, Carbon nanotube micro-electrodes for neuronal interfacing, Journal of Materials Chemistry, Vol. 18, pp. 51815186, 2008.

30. Mark Shein, Vladislav Volman, Nadav Raichman, Yael Hanein and Eshel Ben-Jacob, Management of synchronized network activity by highly active neurons, Physical Biology, Vol. 5, pp. 036008, 2008.

31. Orly Liba, David Kauzlaric, Yael Hanein, Andreas Greiner and Jan G. Korvink, Investigation of the mechanical properties of bridged nanotube resonators by dissipative particle dynamics simulation, International Journal for Multiscale Computational Engineering, Vol. 6, pp. 1543-1649, 2008.

32. Sarit Anava, Alon Greenbaum, Eshel Ben Jacob, Yael Hanein and Amir Ayali, The regulative role of neurite mechanical tension in network development, Biophysical Journal, Vol.96, pp. 16611670, 2009.

33. Raya Sorkin, Alon Greenbaum, Moshe David-Pur, Sarit Anava, Amir Ayali, Eshel Ben-Jacob, and Yael Hanein, Process entanglement as a neuronal adhesion mechanism, Nanotechnology, Vol. 20, pp. 015101, 2009.

34. Mark Shein, Alon Greenbaum, Tamir Gabay, Raya Sorkin, Moshe David-Pur, Eshel Ben-Jacob and Yael Hanein, Engineered neuronal circuits shaped and interfaced with carbon nanotube microelectrode arrays, Vol. 11, pp. 495501, 2009.

35. Asaf Shoval, Christopher Adams, Moshe David-Pur, Mark Shein, Yael Hanein and Evelyne Sernagor, Carbon nanotube electrodes for effective interfacing with retinal tissue, Frontiers in Neuroengineering, Vol 2, pp. 4, 2009.

36. Gabriel A. Karp, Assaf Yaakobovitz, Moshe David-Pur, Zvi Ioffe, Ori Cheshnovsky, Slava Krylov, and Yael Hanein, Integration of Suspended Carbon Nanotubes into Micro-Fabricated Devices, J. Micromech. Microeng. Vol. 19, pp. 085021, 2009.

37. Alon Greenbaum, Sarit Anava, Amir Ayali, Mark Shein, Moshe David-Pur, Eshel Ben-Jacob and Yael Hanein, One to one neuron-electrode interfacing, Journal of Neuroscience Methods, Vol. 182, pp. 219224, 2009.

38. Assaf Ya'akobovitz, Slava Krylov and Yael Hanein, Digital image correlation algorithm for nanoscale displacement measurements by means of optical microscopy of electrostatically actuated devices, Physical, Sensors and Actuators A: Physical Vol. 162, pp. 1-7, 2010.

39. Yael Hanein, Carbon nanotube integration into MEMS devices, Phys. Status Solidi B, pp. 16, 2010.

40. Mark Shein Idelson, Eshel Ben-Jacob, Yael Hanein, Innate synchronous oscillations in freely-organized small neuronal circuits, PLoS One, 5(12): e14443, 2010.

41. Yael Hanein, Oren Tadmor, Sarit Anava and Amir Ayali, Neuronal migration and network topology - under tension, Neuroscience Vol. 172, pp. 572579, 2011.

42. Assaf Ya'akobovitz, Gabriel A. Karp, Yael Hanein and Slava Krylov, A nanomanipulator with integrated Mechanical De-amplifier for Testing Nanostructures Under Tension, journal of Microsystem Technologies, In press 2011.

43. Moran Horesh, Nina Lidich, Shlomo Yitzchaik,Yael Hanein A Temperature-Differential Affinity Biosensor: Model and D-optimal Performance Limits, IEEE Sensors, In press 2011.

44. Assaf Yaakobovitz, Slava Krylov, Yael Hanein, Large Deflections Mechanical Analysis of a Suspended Single Wall Carbon Nanotube Under Thermo-Electrical Loading, Journal of Nanomaterials, In press 2011.

45. Inbal Friedler, Yuval Yifat, Zeev Iluz, Michal Eitan, Yael Hanein, Amir Boag, and Jacob Scheuer, Coherent directional emission of IR radiation from metallic nano-antenna arrays, Submitted 2011.

46. Nitzan Herzog, Mark Shein, Yael Hanein, Optical validation of in-vitro extra-cellular neuronal recordings, Submitted 2011.

7.3 Extended Papers in Conference Proceedings

1. Y. Hanein, U. Meirav, D. Shahar, C. C. Li, D. C. Tsui and H. Shtrikman, The metallic-like conductivity of a two-dimensional hole system, Proceedings of the 24th International conference on the physics of semiconductors, (CD-ROM), 1998.

2. Y. V. Pan, Y. Hanein, D. Leach-Scampavia K.F. Bohringer, B. D. Ratner, D. D. Denton. A precision technology for controlling protein adsorption and cell Adhesion in bioMEMS, Proceedings of the IEEE Workshop on Micro Electro Mechanical Systems (MEMS), pp. 435-438, 2001.

3. Xiaorong Xiong, Y. Hanein, Weihua Wang, Daniel T. Schwartz and Karl F. Bohringer, Controlled part-to-substrate micro-assembly via electrochemical modulation of surface energy, Proceedings of the International Conference on solid-state Sensors and Actuators, Transducers, pp. 1040-1043, 2001.

4. Y. Hanein, U. Lang, J. Theobald, R. Wyeth, K. F. Bohringer, T. Daniel, D.D. Denton and A. O. D. Willows, Intracellular recording with high aspect ratio MEMS neuronal probes, Proceedings of the International Conference on solid-state Sensors and Actuators, Transducers, pp. 386-389, 2001.

5. Karl F. Bohringer, Yael Hanein, Daniel Schwartz, Weihua Wang, Xiaorong Xiong, Multi-batch micro-selfassembly via controlled capillary forces, Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems, Vol. 3, pp. 1335-1342, 2001.

6. Andreas Greiner, Jan Lienemann, Jan G. Korvink, Xiaorong Xiong, Yael Hanein, and Karl F. Bohringer, Capillary forces in micro-fluidic self-assembly, Proceedings of the 5th International Conference on Modeling and Simulation of Microsystems, pp. 198 - 201, 2002.

7. G. Holman, Y. Hanein, R.C. Wyeth, A.O.D. Willows, D. D. Denton, and K.F. Bohringer, Silicon micro-needles with flexible interconnections, Proceedings of the Second Annual International IEEE-EMBS Special Topic Conference on Microtechnologies in Medicine and Biology, pp. 255-260, 2002.

8. R. C. Lipscomb, J. Clemmens, Y. Hanein, M. R. Holl, V. Vogel, B. D. Ratner, D. D. Denton and K. F. Bohringer, Controlled microtubules transport on patterned non-fouling surfaces, Proceedings of the Second Annual International IEEE-EMBS Special Topic Conference on Microtechnologies in Medicine and Biology, pp. 21-26, 2002.

9. Y. Wang, X. Cheng, Y. Hanein, A. Shastry, D. D. Denton, B. D. Ratner, and K. F. Bohringer, Protein patterning with programmable surface chemistry chips, Proceedings of the Sixth International Symposium on Micro Total Analysis System (uTAS), pp. 482-484, 2002.

10. Xiaorong Xiong, Yael Hanein, Jiandong Fang, Daniel T. Schwartz and Karl F. Bohringer, Multi-batch self-assembly for microsystem integration, Proceeding of the International Workshop on Microfactories pp. 25-28, 2002 .

11. C. G. J. Schabmueller, Y. Hanein, G. Holman, and K. F. Bohringer, High-aspect ratio sub-micrometer needles for intracellular applications, Proceedings of Micromechanics Europe, pp. 35-38, 2002.

12. Y. Wang, X. Cheng, Y. Hanein, A. Shastry, D. D. Denton, B. D. Ratner, K. F. Bohringer, Cell and Protein Patterning on Programmable Chemistry Surface, the International Conference on solid-state Sensors and Actuators, Transducers, 2003.

13. Buddy D. Ratner, Xuanhong Cheng, Yanbing Wang, Yael Hanein, and Karl F. Bohringer, Temperature-Responsive Polymeric Surface Modifications by Plasma Polymerization: Cell and Protein Interactions, the annual meeting of the ACS, 2003.

14. T. Gabay, E. Jakobs, E. Ben-Jacob, Y. Hanein, Engineering neural networks using carbon nanotube templates, eleventh international conference on composites/nano engineering (ICCE - 11), 2004.

15. Itshak Kalifa, Meital Reches, Lihi Abramovich, Nir Sopher, Ehud Gazit, and Yael Hanein, Towards micro-machined peptide nanotube based devices, Proceeding of the the 13th International Conference on Solid-State Sensors and Actuators (Transducers'05), Seoul, Korea, pp. 1509-1512, 2005.

16. Eyal Jakobs, and Y. Hanein, Micrometer scale gel patterns, Proceeding of the 13th International Conference on Solid-State Sensors and Actuators (Transducers'05), Seoul, Korea, pp. 1412-1415, 2005.

17. Tamir Gabay, Eyal Jakobs, Eshel Ben-Jacob, and Yael Hanein, Carbon nanotube electrodes for neuronal patterning and recording, Proceeding of the 13th International Conference on Solid-State Sensors and Actuators (Transducers'05), Seoul, Korea, pp. 1226-1229, 2005.

18. N. B. Sopher, M. Reches, M. D. Kiessling, E. Gazit and Y. Hanein, Nanotube based nano-fluidic channels, Eurosensors 2006, September 17-20, 2006 Goteborg, Sweden

19. Z.R. Abrams, Y. Hanein, Imprinting straight, long, carbon nanotube networks, Eurosensors 2006, September 17-20, 2006 Goteborg, Sweden

20. R. Sorkin, T. Gabay, E. Ben-Jacob and Y. Hanein, Novel micro-fabricated engineered neural networks for bio-sensing applications, Eurosensors 2006, September 17-20, 2006 Goteborg, Sweden

21. T. Gabay, M. Ben-David, I. Kalifa, Z. R. Abrams, R. Sorkin, E. Ben-Jacob and Y. Hanein, Carbon nanotube microelectrode array, Proceeding of the the 14th International Conference on Solid-State Sensors and Actuators (Transducers'07), Lyon, France.

22. Jan Gerrit Korvink, Orly Levy, Yael Hanein, David Kauzlaric, and Andreas Greiner, Reduced molecular model for the mechanics of carbon nanotubes, Proceedings of the Third Asian-Pacific Congress on Computational Mechanics (APCOM'07) and the Eleventh International Conference on the Enhancement and Promotion of Computational Methods in Engineering and Science (EPMESC XI), Kyoto, Japan, December 3-6, 2007.

23. M. David-Pur M, C. Adams C, E. Sernagor, R. Sorkin, A. Greenbaum, M. Shein, E. Ben-Jacob E, and Y. Hanein, Carbon Nanotube Based MEA for Retinal Interfacing Applications, MEA-Meeting 2008, July 8-11, Reutlingen, Germany.

24. A. Greenbaum, M. Shein, M. David-Pur, S. Anava, Eshel B. Jacob, A. Ayali, and Y. Hanein, Electrical interfacing with engineered neuronal circuits, Eurosensors XXII, Dresden, Germany 7-10 September 2008.

25. G. A. Karp, A. Yaakobovitz, S. Krylov, Y. Hanein, CNT integration procedure into MEMS devices, Eurosensors XXII, Dresden, Germany, 7-10 September 2008.

26. Y. Hanein, M. David-Pur, S. Ben-Valid, S. Yitzchaik, Very low impedance mico/nano electrodes, Eurosensors XXII, Dresden, Germany, 7-10 September 2008.

27. Assaf Ya'akobovitz, Gabriel Karp, Moshe David-Pur, Yael Hanein, Slava Krylov Carbon nanotube self-assembled high frequency resonator, MEMS 2010, Hong-Kong, China, 24-28 January 2010.

28. Nitzan Herzog, Mark Shein, Yael Hanein, Accurate validation of extra-cellular neuronal recordings in culture, MEA 2010, June 29 - July 2, 2010, Reutlingen, Germany

29. Mark Shein Idelson, Eshel Ben-Jacob and Yael Hanein, Collective Activation in Clustered Neuronal Assemblies of Variable Size and Topology,MEA 2010, June 29 - July 2, 2010, Reutlingen, Germany

8 Invited Conference Talks, Keynote Presentations and Colloquia

1. From the magnetic-field-driven transitions to the zero-field transition in two-dimensions, XVIIIth Moriond Workshop, January 1999, Les Arcs, France.

2. The metal, the insulator and the transitions in 2D hole systems in GaAs, 11th Trieste Mini-workshop on Strong Correlations, July 1999, ICTP, Trieste, Italy .

3. Electrochemical surface modulation for micro self-assembly applications, Gordon Research Conference on Electrodeposition, August 2002, Colby-Sawyer College, New London, NH, USA.

4. Engineering neural networks using carbon nanotube templates, 11th International Conference on Composites/nano Engineering (ICCE - 11), August 2004, Hilton Head, SC, USA.

5. Carbon nanotube electrodes for engineering and recording of cultured neural networks, Biomaterials and Medical Devices 2005: Science, Technology and Business, November 17, 2005, Tel-Aviv, Israel.

6. Carbon nanotube based neuro-chips for engineering and recording of cultured neural networks, Bio Interfaces Engineering Workshop, 29-30 November 2005, Ispra, Italy.

7. Engineering neural networks with carbon nanotube templates, Israel Chemical Society Annual Meeting, February 27-28, 2006, Tel Aviv, Israel.

8. Compact self-wired cultured neural networks, From Solid State to BioPhysics III, June 24 to July 1, 2006, Dubrovnik, Croatia.

9. The Bio-Nano Interface, The Minerva Research Center for Microscale and Nanoscale Particles and Films as Tailored Biomaterial Interfaces, February 8, 2007, Bar-Ilan University, Israel.

10. Carbon nanotube based electrodes for neuronal patterning and recording, International Conference on Emerging Mechanical Technology - Macro to Nano (EMTM2N-2007), February 16-19, 2007 BITS, Pilani, India.

11. Carbon nanotube based neurochip, Tel Aviv Symposium in Chemical Physics on Chemistry and Physics of Bio-Nano Systems, June 7, 2007, Tel-Aviv.

12. Interfacing with cultured neural networks using carbon nanotubes, Franco-Israeli Trends in soft matter, biophysics and microfluidics, October 7-10, 2007 Domaine de Francon, Biarritz, France.

13. Engineering neural networks, From Principles to Applications, Complex Networks in Biology and Engineering, Tel Aviv University, October 24-25, 2007.

14. Self-assembly and self-wiring of engineered biological and electrical networks, Monthly Seminar Series of the Russell Berrie Nanotechnology Institute (RBNI), The Technion, Israel Institute of Technology, December 19, 2007.

15. Neurons, carbon nanotubes and everything in between, Physics colloquium, Technion, March 27, 2008.

16. Carbon Nanotube Micro-electrodes for Neuronal Interfacing, US AFRL-Israeli Bio/Nanotechnology for Materials Workshop, March 24-25, 2008, San Francisco, CA.

17. Nanotechnology and nano-circuits, Keynote, Motorola Israel, Technology Day Symposium, June 4, 2008 (Keynote).

18. Carbon nanotubes based neurochips, Binational Korean-Israeli "Cells on chips" workshop, September 22-24, 2008, Seoul, Korea.

19. Carbon nanotubes based neurochip, Chinese Israeli nano workshop, October 28-29, 2008, Beijing, China.

20. Nanotubes, neurons and everything inbetween, nano Israel 2009, March 30-31, 2009, Jerusalem, Israel.

21. Carbon nanotubes as a mechanical and electrical neuronal interface, International school on neural electronics hybrids, March 15-20, 2009, Jerusalem, Israel.

22. Carbon nanotube based multi electrode arrays for neuronal interfacing, 1st International Conference on Neuroprosthetic Devices, March 19th and 20th, 2009, National Chiao Tung University, Hsinchu, Taiwan.

23. "Gentlemen, we can rebuild him": Towards neuro-prosthetic nano devices, The HUJI nanocenter annual workshop, June 29-30, 2009 (Keynote).

24. Nanotechnology for retinal implant applications, The annual meeting of the Israel ophthalmological society, July 1, 2009, Tel-Aviv.

25. Carbon nanotube as an interface material for neuronal recording and stimulation applications, Symposium on "Graphitic Materials", the Fall ACS National Meeting, 16-20 August 2009,Washington DC.

26. Carbon nanotube based neuro-sensors, Israel vacuum society meeting, October 15 2009, Herzelia, Israel.

27. Brain chips with self-organized neurons, 2nd Korea-Israel Workshop on "Cells and Molecules, Chips and sensors: innovative platforms for interfacing biology", October 26, 2009, Jerusalem, Israel.

28. Carbon nanotube integration into micro-fabricated devices, nanoRF Workshop, November 27 2009, EPFL, Lausanne.

29. Carbon nanotubes as a biomaterial, 14th Israel Materials Engineering Conference (IMEC-14), Tel-Aviv University, December 13-14, 2009, Tel-Aviv, Israel.

30. Self-assembled Carbon nanotube Structures and Devices, International Winter school on Electronic Properties of Novel Materials: Molecular Nanostructures, March 6-13, 2010, Kirchberg/Tirol, Austria.

31. The Regulative Role of Neurite Mechanical Tension in Developing Neural Networks, From Solid State to BioPhysics V: From Physics to Life Sciences, June 12 - 19, 2010, Dubrovnik, Croatia.

32. Carbon nanotube self-assembly and Devices, the International Workshop LASERION 2010 on Microfabrication, nanostructured materials and biotechnology, July 7-10, 2010, Schloss Ringberg, Germany.

33. What can 20 neurons do? Science Foo Camp, July 30-August 1, Googleplex, Mountain View, CA.

34. Innate oscillations and signal propagation in engineered neuronal circuits, Frontiers in Neuroengineering, September 5-9, 2010, Monte Verita, Ascona, Switzerland.

35. Breaking the Wall of Blindness; How Neuro Engineering can Relink Brain and Body, Falling Walls Conference, November 7-8, 2010, Berlin.

36. TBD, INSERM Workshop; "Cell Biochips : from fundamental studies towards tissue engineering", June 2011, Saint-Raphael, France.

9 Invited Seminars

1. The apparent metal-insulator transition in two-dimensional systems, Condensed matter physics seminar, Hebrew University, Jerusalem, Israel (1997).
2. The apparent metal-insulator transition in two-dimensional systems, Condensed matter physics seminar, Weizmann Institute, Rehovot, Israel (1997).
3. The apparent metal-insulator transition in two-dimensional systems, Condensed matter physics seminar, Technion, Haifa, Israel (June, 1998).
4. The apparent metal-insulator transition in two-dimensional systems, Condensed matter seminar, City College of New-York, New-York, New-York, USA (November, 1998).
5. The metal, the insulator and the transitions in 2D hole systems in GaAs, CAM Seminar, University of Washington, Seattle, WA, USA (March 1999).
6. Micromachined Neural Implants, Sensors and Sensor Systems Seminar, Department of Electrical Engineering, University of Washington, (October 3, 2000).
7. Towards Micro-Machined Intracellular Neural Implants, Hebrew University, Jerusalem, Israel, (January 30, 2001).
8. Micro-Machined Intracellular Neural Implants (Condensed Matter Physics Seminar), Weizmann Institute, Rehovot, Israel, (January 31, 2001).
9. Towards Micro-Machined Intracellular Neural Implants, Tel-Aviv University, Tel-Aviv, Israel, (February 1, 2001).
10. Surface Chemistry Based MEMS, Friday Harbor Laboratories, Friday Harbor, WA, USA (May 14, 2001).
11. Surface modification techniques for MEMS applications, Physics department, Stanford University, Palo-Alto, CA, USA (November 2001).
12. Surface modification techniques for MEMS applications, Tel-Aviv University, Department of electrical engineering, Tel-Aviv, Israel (February, 2002).
13. MEMS Modules for MLSC Applications, MLSC CEGS Seminar, University of Washington, Seattle, WA, USA (April 3, 2002).
14. Surface modification and self-assembly in MEMS and EMS applications, Hebrew University (November 16, 2003).
15. Surface modification and self-assembly in MEMS and NEMS applications, Material science seminar, Tel-Aviv University (January 11, 2004).
16. Engineered self-organization of neural networks, Institute for Microsystem Technology, University of Freiburg (July 2004).
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10 Patent Applications

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- Rectifying antenna device, Yael Hanein, Amir Boag, Koby Scheuer, U.S. Provisional Patent Application
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