

Date: Sunday, 27 July 2014

RESUME**NIR TESSLER****Personal Data:**

Identification number: 057668923

Date and place of birth: Israel, June 1, 1962

Family status: Married + three children

Academic Degrees:

1989	B.Sc. Summa Cum Laude	Department of Electrical Engineering, Technion, Haifa, Israel
1992	M.Sc.	Department of Electrical Engineering, Technion, Haifa, Israel
1995	D.Sc.	Department of Electrical Engineering, Technion, Haifa, Israel

Academic Appointments

2008	Professor	Department of Electrical Engineering, Technion, Haifa, Israel
2003	Associate Professor	Department of Electrical Engineering, Technion, Haifa, Israel
October 1999	Senior Lecturer	Department of Electrical Engineering, Technion, Haifa, Israel
1999	EPSRC advanced fellow	Cambridge University, Cavendish Laboratory, UK.
1997-1999	Senior Research Associate	Cambridge University, Cavendish Laboratory, UK.
1997	Academic Guest	Department de Physique, Institute de Micro-et Optoelectronique, Ecole Polytechnique Federal de Lausanne (EPFL).
1995-1997	Research Associate	Cambridge University, Cavendish Laboratory, UK.

Departmental Roles

2002-2003	manager of the nano-electronic forum (laying the foundation for the nano-electronic center)
2003-2005	Member of the committee for student submission

2004-2005 Head of the committee for student admission
 2006-2007 Vice dean for undergraduate students affairs
 2010- Head of Nanoelectronics center and Microelectronics center

Professional Experience:

1988-1999 Student member of The Technical Staff, Electronics Department, RAFAEL Acko, Israel
 1987-1989 Computer Operator, Computer Department, Tambur Acko, Israel
 1982-1985 Training and Exercise Co-ordinator Officer, Israel Air Force

Research Interests:

Device physics and device structural designs. This includes photo-physical processes (including laser action and micro-cavities), transport of charges and of electron-hole pairs (excitations), processing of devices and circuits (diodes, transistors, detectors, sensors).

Teaching Experience:

1982--1983 Teaching Supervisor, Israel Air Force School.
 1990--1995 Teaching Assistant, Electrical Engineering, Technion - Israel Institute of Technology, Haifa, Israel.
 1999-- Organic Materials and Devices, Graduate
 Introduction to electrical engineering, undergraduate
 Electrical engineering 1 , Undergraduate.

Public Professional Activities

2000 Guest Editor, IEE proceedings optoelectronics

Membership in Professional Societies

IEEE
 Materials Research Society
 Israeli Chemical Society

Honors

The President of the Technion, Excellence Award 1986,1987,1988
 The Gutvirt Fellowship, Special Excellence Scholarship 1991
 The Minister of Communication, Excellence Scholarship 1993

The Charles Clore Foundation, Excellence Scholarship 1994

The Rothschild Post Doctoral Fellowship 1996

AVI Fellowships, Post Doctoral Fellowship 1997

Engineering and Physical Sciences Research Council, UK, Advanced Fellowship
1999

Alon Fellowship 1999

Andre and Bella Meyer academic lectureship - France 2000-2001.

Friedenberg special research award 2000

Gutvirt price for active research (Henry Gutvirt Fund for the promotion of research)

David Ben Aharon prize (2004)

Henry Taube prize for academic excellence (2010)

Hershel and Hilda Rich Technion Innovation award (2011)

IBM Faculty Award (2013)

GRADUATE STUDENTS

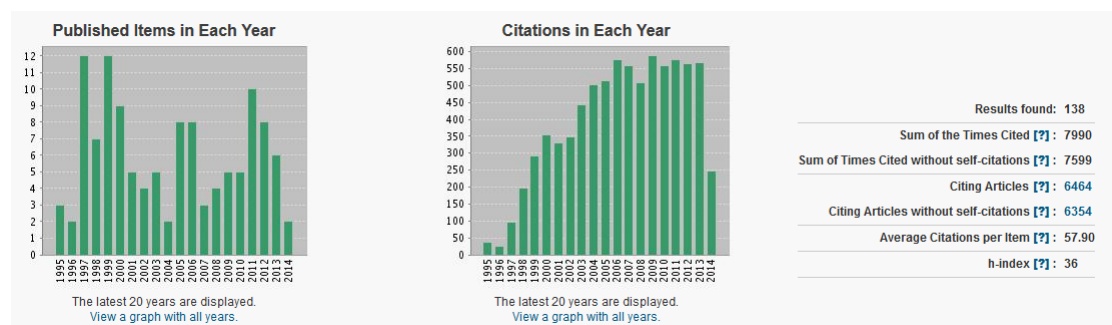
Completed Theses

Year	Student	Degree	Supervisor	Title
2004	Yohai Roichman	Ph.D.	Nir Tessler	Charge transport in conjugated polymers
2004	Evgeni Preezant	M.Sc.	Nir Tessler	Electrical properties of the contact region in polymer semiconductor devices
2005	Yhoram Bar	M.Sc.	Nir Tessler	Monte-Carlo simulation of transport in polymers
2006	Oded Globerman	M.Sc.	Nir Tessler	Organic Field Effect Transistors
2006	Noam Rappaport	Ph.D.	Nir Tessler	Transport phenomena & organic solar cells
2008	Nir Yaacobi	M.Sc.	Nir Tessler	Transferred to direct track
2008	Eran Avnon	M.Sc.	Nir Tessler & Yaron Paz	Transferred to direct track
2010	Michal	Ph.D.	Nir Tessler	

	Soreni			
2009	Ariel Ben-Sasoon	M.Sc.	Nir Tessler & Gitti Frey	Transferred to direct track
2010	Ariel Epstein	M.Sc.	Nir Tessler & Pinchas Einziger	Transferred to direct track
2011	Eran Avnon	Ph.D.	Nir Tessler	
2011	Lior Levy	M.Sc.	Nir Tessler	Transferred to direct track
2011	Israel Ravia	M.Sc.	Nir Tessler	
2012	Nir Yaacobi	Ph.D.	Nir Tessler	
2013	Ariel Epstein	Ph.D.	Nir Tessler & Pinchas Einziger	
2013	Ariel Ben-Sasoon	Ph.D.	Nir Tessler & Gitti Frey	
2013	Netta David	M.Sc	Nir Tessler & Yoav Eichen	
2013	Michael Greenman	M.Sc.	Nir Tessler	

Theses in Progress

Year Due	Student	Degree	Supervisor
2015	Lior Levy	Ph.D.	Nir Tessler
2014	Dahvyd Wing	M.Sc	Nir Tessler & Avner Rothchild
2014	Dan Mendels	Ph.D.	Nir Tessler
2016	Michael Greenman	Ph.D.	Nir Tessler
2015	Osnat Magen	Ph.D,	Nir Tessler
2014	Talia Avrahamov	M.Sc.	Nir Tessler
2018	Himanshu Shekhar	Ph.D.	Nir Tessler



LIST OF PUBLICATIONS

Theses

M.Sc. Thesis: Spectral and Dynamic Response of Active Optical Filters

D.Sc. Thesis: Dynamic Properties of Inverted QW Laser Structure

Refereed Journal Papers

1. G. Eisenstein, N. Tessler, U. Koren, J.M. Wiesenfeld, G. Raybon, and C.A. Burrus, Length Dependence of the Saturation Characteristics in 1.5 μ m Multiple Quantum Well Optical Amplifiers, *IEEE Photonic Technol. Lett.*, 2, 11, (1990), p. 790-791
2. N. Tessler, R. Nagar, G. Eisenstein J. Salzman, U. Koren, G. Raybon and C.A. Burrus, Distributed Bragg Reflector Active Optical Filters, *IEEE J. Quantum Electron.*, 27, 8, (1991), p. 2016 - 2024
3. N. Tessler, R. Nagar and G. Eisenstein, U. Koren and G. Raybon, Characteristics Of Distributed Bragg Reflector Active Optical Filters, *IEEE Photonic Technol. Lett.*, 3, 4, (1991), p. 336 - 338
4. R. Nagar, D. Abraham, N. Tessler, A. Fraenkel G. Eisenstein, E.P. Ippen, U. Koren, and G. Raybon, Frequency Modulation Mode-Locking in a Semiconductor Laser, *Optics Letters*, 16, 22, (1991), p. 1750 - 1752
5. N. Tessler, R. Nagar, D. Abraham, G. Eisenstein, U. Koren, and G. Raybon, Coupling Between Barrier And Quantum Well Energy States In a Multiple Quantum Well Optical Amplifier, *Appl. Phys. Lett.*, 60, 6, (1992), p. 665 - 667
6. R. Nagar, N. Tessler, D. Abraham, G. Eisenstein U. Koren, G. Raybon, Measurements Of The Barrier - Well Injection Bottleneck In A Multiple Quantum Well Optical Amplifier, *Appl. Phys. Lett.*, 60, 15, (1992), p. 1788 - 1790
7. N. Tessler, R. Nagar, G. Eisenstein, Structure Dependent Modulation Response In Quantum Well Lasers, *IEEE J. Quantum Electron.*, 28, 10, (1992), p. 2242 - 2250

8. N. Tessler, R. Nagar, G. Eisenstein, S. Chandrasekher, C.H. Joyner, A.G. Dentai, U. Koren, G. Raybon, Non Equilibrium Effects in Quantum Well Lasers, *Appl. Phys. Lett.*, 61, 20, (1992), p. 2383 - 2385
9. N. Tessler, G. Eisenstein, Distributed Nature of Quantum Well Lasers, *Appl. Phys. Lett.*, 62, 1, (1993) p. 10 - 12
10. N. Tessler, G. Eisenstein, Transient Carrier Dynamics and Photon Assisted Transport in Multiple Quantum Well Lasers, *IEEE Photonic Technol. Lett.*, 5, 3, (1993) p. 291- 293
11. M. Margalit, R. Nagar, N. Tessler, G. Eisenstein, M. Orenstein, Bistability and Optical Control of a Distributed Bragg Reflector Laser, *Optics Lett.*, 18, 6, (1993) p. 610 - 612
12. N. Tessler, G. Eisenstein, On Carrier Injection And Gain Dynamics in Quantum Well Lasers, *IEEE J. Quantum Electron.*, 29, 6, (1993) p. 1586 - 1595
13. S. Mark, N. Tessler, G. Eisenstein, J. Mork, Broad Band Femtosecond Pump-Probe Set-Up Operating at 1300 and 1550 nm *Appl. Phys. Lett.*, 64, 15, (1994), p. 1899 -1901
14. N. Tessler, J. Mark, G. Eisenstein, J. Mork, U. Koren, C. A. Burrus, Gain Dynamics in Quantum Well Lasers and Optical Amplifiers - An Experimental Comparison. *Appl. Phys. Lett.*, 64, 16, (1994), p. 2050 - 2052
15. N. Tessler, G. Eisenstein, Modeling Carrier Dynamics And Small Signal Response in Quantum Well Lasers, *Quantum and Optical Electronics*, 26, (1994) pp. S767 - S787 (**Invited paper**)
16. V. Mikhaelashvili, N. Tessler, R. Nagar, G. Eisenstein, A. G. Dentai, S. Shandrasekhar, C. H. Joyner, Temperature Dependent Loss and Carrier Overflow Effects in Quantum Well Lasers, *IEEE Photonic Technol. Lett.*, 6, 11, (1994) pp. 1293 - 1296
17. N. Tessler, M. Margalit, G. Eisenstein, U. Koren, C. A. Burrus, Short Cavity Distributed Bragg reflection Lasers With a Narrow Band Bragg Mirror: Dynamic Characteristics, *Appl. Phys. Lett.*, 65, 24, (1994) pp. 3048 - 3050
18. N. Tessler, M. Margalit, R. Ben-Michael, M. Orenstein, G. Eisenstein, Modulation of Quantum Well Lasers by Short Optical Excitation: Energy and Spatial Dependent Effects, *IEEE Photonic Technol. Lett.*, 7, 1 (1995) pp. 23 - 25
19. N. Tessler, A. Berenzon, G. Eisenstein, Analysis of Pump Probe Measurements and Carrier Overflow Effects in Multiple Quantum Well Optical Amplifiers, *IEEE J. Quantum Electron.*, 30, 12,(1995), pp. 2767 - 2770
20. N. Tessler, M. Margalit, G. Eisenstein, U. Koren Wide Band Amplitude Modulation by Electro Optic Tuning of the Center Wavelength in Short Cavity

- Distributed Bragg Reflector Lasers, *IEEE J. of Selected Topics in Quantum Electron.*, 1, 2 (1995)
21. N.Tessler, V. Mikhaelashvili, R. Nagar, G. Eisenstein, A.G. Dentai, S. Chandrasekhar, C.H. Joyner, Lasing Transitions Between Self Localized Barrier State Electrons and Confined State Heavy Holes in InGaAs/InGaAsP/InP Multiple Quantum Well Lasers, *IEEE J. Quantum Electron.*, 31, 11 (1995), pp. 1935-1940.
 22. D. Finzi, N.Tessler, V. Mikhaelashvili, G. Eisenstein, A.G. Dentai, S. Chandrasekhar, C.H. Joyner, Dynamics of barrier State Self localization in InGaAs/InGaAsP Multiple Quantum Well Lasers, *Appl. Phys. Lett.*, 68, (1996) pp. 2486 - 2488
 23. U. Ben-Ami, N. Tessler, N. Ben-Ami, R. Nagar, G. Fish, K. Lieberman, G. Eisenstein, A. Lewis, J.M. Nielsen, A. Moller-Larson, Near-Infrared Contact Mode Collection Near-Field Optical and Normal Force Microscopy of Modulated Multiple Quantum Well Lasers, *Appl. Phys. Lett.*, 68, (1996), pp. 2337 - 2339.
 24. N. Tessler, G.J. Denton, and R.H. Friend, Lasing from Conjugated-Polymer Microcavities, *Nature*, 382, (1996), pp. 695-697.
 25. G.J. Denton, N. Tessler, N.T. Harrison and, R.H. Friend, Factors influencing Stimulated Emission from Poly(p-phenylenevinylene), *Phys. Rev. Lett.*, 78, (1997), pp. 733-736.
 26. N. Tessler, S. Burns, H. Becker, R.H. Friend, Suppressed Angular Color Dispersion in Planar Microcavities, *Appl. Phys. Lett.*, 70, (1997), pp. 556-558.
 27. R.H. Friend, G.J. Denton, J.J.M. Halls, N.T. Harrison, A.B. Holmes, A. Kohler, A. Lux, S.C. Moratti, K. Pichler, N. Tessler and K. Towns, Electronic excitations in luminescent conjugated polymers, *Solid State Comm.*, 102, (1997) pp. 249-258
 28. H. Becker, S.E. Burns, N. Tessler, R.H. Friend, Role of optical properties of metallic mirrors in microcavity structures, *J. Appl. Phys.*, 81, (1997) pp. 2825-2829.
 29. N. Tessler, G.J. Denton, and R.H. Friend, Lasing characteristics of PPV microcavities, *Synth. Met.*, 84, (1997), pp. 475-476.
 30. R.H. Friend, G.J. Denton, J.J.M. Halls, N.T. Harrison, A.B. Holmes, A. Kohler, A. Lux, S.C. Moratti, K. Pichler, N. Tessler, K. Towns, Electronic processes of conjugated polymers in semiconductor device structures, *Synth. Met.*, 84, (1997), pp. 463-470.
 31. J. C. de Mello, N. Tessler, S. C. Graham, X. Li, A. B. Holmes, R.H. Friend, Ionic Space-Charge Assisted Current Injection in Organic Light Emitting Diodes, *Synth. Met.*, 85, (1997), pp. 1277-1278.

32. G.J. Denton, N. Tessler, M.A. Stevens, R.H. Friend, Spectral narrowing in optically-pumped Poly(p-phenylenevinylene) films, *Adv. Mat.*, 9, (1997), pp. 547-550.
33. D. Finzi, V. Mikhaelashvili, N. Tessler, G. Eisenstein, Modification of modal gain in InGaAs-GaAs quantum-well lasers due to barrier-state carriers, *IEEE J. Select. Topics in Quant. Elect.*, 3, (1997), pp. 142-147.
34. N. Tessler, S. Marcinkevicius, U. Olin, C. K. V. Silfvenius, B. F. Stalnacke, and G. Landgren, "Vertical carrier transport in InGaAsP multiple-quantum-well laser structures: effect of p-doping," *IEEE J. Selected Topics In Quantum Electronics*, 3, (1997), pp. 315-319.
35. N. Tessler, N. T. Harrison, and R. H. Friend, "High peak brightness polymer light-emitting diodes," *Adv. Mat.*, 10, (1998) pp. 64-68.
36. N. Tessler, G.J. Denton, N.T. Harrison, M.A. Stevens, S.E. Burns, and R.H. Friend, High Excitation Density in Light Emitting Polymers, *Synth. Met.*, 91, (1997), pp. 61-64.
37. J. C. deMello, N. Tessler, S. C. Graham, and R. H. Friend, "Ionic space-charge effects in polymer light-emitting diodes," *Phys. Rev. B*, 57, (1998), pp. 12951-12963.
38. N.T. Harrison, N. Tessler, C.J. Moss, K. Pichler, R.H. Friend, "Peak current density and brightness from poly(p-phenylenevinylene) based light-emitting diodes", *Optic. Mater.*, 9, (1998), 178-182.
39. H. Sirringhaus, N. Tessler, R.H. Friend, "Integrated Optoelectronic Devices based on Conjugated Polymers", *Science*, 280, (1998), pp. 1741-1743.
40. N. Tessler, N. T. Harrison, and R. H. Friend, "Current Heating in Polymer Light Emitting Diodes," *Appl. Phys. Lett.*, 73, (1998), pp. 732-734.
41. V. Cleave, G. Yahioglu, P. Le Barny, R.H. Friend, and N. Tessler, "Harvesting of singlet and triplet energy in polymer LEDs", *Adv. Mat.*, 11, (1999), pp. 285-288.
42. N. Tessler, "Lasers based on semiconducting organic materials", *Adv. Mat.*, 11, (1999), pp. 363-370, **Review paper**.
43. G.J. Denton, N. Tessler, M.A. Stevens and, R.H. Friend, " Optical response of conjugated polymers excited at high intensity", *Synth. Met.*, 102, (1999), 1008-1009.
44. H. Sirringhaus, N. Tessler, R.H. Friend, " Integrated, high-mobility polymer field-effect transistors driving polymer light-emitting diodes", *Synth. Met.*, 102 (1999), pp. 857-860.
45. D.J. Pinner, N. Tessler and R.H. Friend, " Moving the recombination zone in two layer polymer LEDs using high voltage pulses", *Synth. Met.*, 102 (1999), pp. 1108-1109.

46. N. Tessler, D.J. Pinner, V. Cleave, D.S. Thomas, G. Yahiolglu, P. Le Barny and R.H. Friend, "Pulsed Excitation of Low Mobility Light Emitting Diodes – Implication for Organic Lasers", *APL*, 74, (1999), 2764-2766.
47. P.K.H. Ho, N. Tessler and R.H. Friend, " Towards solution-processible semiconducting polymer-based photonic devices", *Synth. Met.*, 102, (1999), pp. 1020-1021.
48. N. Tessler, X.C. Li, R.H. Friend, S.C. Morrati, A.B. Holmes, " New method for colour patterning", *Synth. Met.*, 102, (1999), pp. 1124-1125.
49. P.K.H. Ho, R.H. Friend and N. Tessler, "All Polymer Photonic structures", *Science*, 285, (1999), 233-236.
50. D.J. Pinner, R.H. Friend and N. Tessler, " Transient Electroluminescence of Polymer light emitting diodes using Electrical Pulses", *J. Appl. Phys.*, 86, (1999), 5116-5130.
51. D.J. Pinner, R.H. Friend and N. Tessler, "Analysis of the turn-off dynamics in polymer light-emitting diodes", *Appl. Phys. Lett.*, 76, (2000), 1137-1139.
52. N. Tessler, P.K.H. Ho, V. Cleave, D.J. Pinner, R.H. Friend, G. Yahiolglu, P. Le Barny, J. Gray, M. de Souza, G. Rumbles, " Material and Device Related Properties in the Context of the Possible Making of Electrically Pumped Polymer Laser", *Thin Solid Films*, 363, (2000), 64-67 (**Invited paper**).
53. D.J. Pinner, R.H. Friend and N. Tessler, " Time-resolved transport in conjugated polymers", *Synth. Met.*, 111, (2000), 257-261.
54. D.J. Pinner, R.H. Friend and N. Tessler, "The Use of Multiple Electrical Pulses to Study Charge Transport in Polymer Light-Emitting Diodes", *Appl. Phys. Lett.*, *Appl. Phys. Lett.*, 77 (2000), 1493-1495.
55. J.C. deMello, J.J.M. Halls, S.C. Graham, N. Tessler, R.H. Friend, "Electric field distribution in polymer light-emitting electrochemical cells", *Phys. Rev. Lett.*, 85 (2000), 421-424.
56. N. Tessler, D.J. Pinner, R.H. Friend, Semiconductor device model applied to electrically pulsed polymer LEDs, *Synth. Met.*, 111, (2000), 269-272.
57. N. Tessler, "Transport and Optical Modeling of Organic Light Emitting Diodes", *Appl. Phys. Lett.*, 77 (2000), 1897-1899 .
58. N. Tessler, D.J. Pinner, V. Cleave, P.K.H. Ho, R.H. Friend, G. Yahiolglu, P. Le Barny, J. Gray, M. de Souza, G. Rumbles, "Properties of light emitting organic materials within the context of future electrically pumped lasers", *Synth. Met.* 115 (2000), 57-62 (**Invited paper**).
59. V. Cleave, G. Yahiolglu, P. Le Barny, Do-Hoon Hwang, Andrew B. Holmes, R.H. Friend, N. Tessler, "Transfer processes in semiconducting polymer-porphyrin blends", *Adv. Mat.*, 13 (2001), 44-47.
60. N. Tessler, "Polymer LEDs as a physics tool", *Israel Journal of Chemistry* , 40 (2000), 147-152 (**Invited paper**).
61. P.K.H. Ho, Ji-Seon Kim, N. Tessler, R.H. Friend, "Photoluminescence of poly(p-phenylenevinylene)-silica nanocomposites: Evidence for emission

- from two electronic states by Franck-Condon analysis", *J. Chem. Phys.*, 115 (2001), 2709-2720.
62. N. Tessler and Y. Roichman, "Two Dimensional Simulation of Polymer Field Effect Transistor", *Appl. Phys. Lett.*, 79 (2001), 2987-2989.
 63. N. Tessler, D.J. Pinner, P.K. Ho, "Optoelectronic devices based on hybrid organic-inorganic structures", *Opt. Mat.*, 17 (2001), 155-160. (**Invited paper**)
 64. Y. Roichman and N. Tessler, " Structures of Polymer Field Effect Transistor - experimental and numerical analysis", *Appl. Phys. Lett.*, 80 (2002), 151-153.
 65. N. Tessler, V. Medvedev, M. Kazes, S. Kan, U. Banin, "Efficient Near Infrared Polymer-Nanocrystal Light Emitting Diodes", *Science*, 295 (2002), 1506-1508.
 66. Y. Roichman and N. Tessler, " Generalized Einstein-relation for disordered semiconductors", *Appl. Phys.Lett.*, 80 (2002), 1948-1950.
 67. Y. Preezant, Y. Roichman, N. Tessler, "Amorphous Organic Devices – Degenerate semiconductors", *J. Phys. Cond. Matt.* 14 (2002) 9913–9924 (**Invited paper**)
 68. Y. Roichman and N. Tessler, "Charge transport in conjugated polymers - the influence of charge concentration," *Synthetic Metals*, vol. 135-136, pp. 443-444, (2003).
 69. Y. Preezant, N. Tessler, "Self-consistent analysis of the contact phenomena in low-mobility semiconductors". *J. Appl. Phys.* 93 (2003) 2059-2064.
 70. V. Medvedev, M. Kazes, S. Kan, U. Banin, Y. Talmon, and N. Tessler, "Near infrared polymer nanocrystal LEDs," *Synthetic Metals*, vol. 137, pp. 1047-1048, (2003).
 71. Sagi Shaked, Shay Tal, Yohai Roichman, Alexey Razin, Steven Xiao, Yoav Eichen, Nir Tessler, "Charge Density and Film Morphology dependence of Charge Mobility in Polymer Field Effect Transistors", *Adv. Mat.*, 15 (2003) 913-916.
 72. Y. Preeznat and N. Tessler, "Self consistent treatment of contact region in organic semiconductors devices," *Synthetic Metals*, vol. 137, pp. 1061-1062, (2003).
 73. N. Tessler and N. Rappaport, "Excitation density dependence of photocurrent efficiency in low mobility semiconductors," *Journal of Applied Physics*, vol. 96, pp. 1083-1087, (2004).
 74. Y. Roichman, Y. Preezant, and N. Tessler, "Analysis and modeling of organic devices," *Physica Status Solidi a-Applied Research*, vol. 201, pp. 1246-1262, (2004).
 75. O. Katz, Y. Roichman, G. Bahir, N. Tessler, and J. Salzman, "Charge carrier mobility in field effect transistors: analysis of capacitance–conductance measurements," *Semicond. Sci. Technol.*, vol. 20, pp. 90-94, (2005)
 76. D.J. Pinner, R.H. Friend and N. Tessler, " The use of electrical pulses to study the physics of bilayer organic light-emitting diodes", *J. Appl. Phys.*, **97**, 014504-1 -014504-6 (2005).
 77. M. Brumer, A. Kigel, L. Amirav, A. Sashchiuk, O. Solomesch, N. Tessler, and E. Lifshitz, "PbSe/PbS and PbSe/PbSe_xS_{1-x} Core/Shell Nanocrystals," *Adv. Funct. Mater.*, vol. 15, 2005.
 78. H. Salman, Y. Abraham, S. Tal, S. Meltzman, M. Kapon, N. Tessler, S. Speiser, and Y. Eichen, "1,3-Di(2-pyrrolyl)azulene: An efficient luminescent

- probe for fluoride," *European Journal of Organic Chemistry*, pp. 2207-2212, 2005.
79. N. Rappaport, O. Solomesch, and N. Tessler, "The interplay between space charge and recombination in conjugated polymer/molecule photocells," *Journal of Applied Physics*, vol. 98, pp. 033714, 2005.
 80. O. Solomeshch, A. Kigel, A. Saschiuk, V. Medvedev, A. Aharoni, A. Razin, Y. Eichen, U. Banin, E. Lifshitz, N. Tessler, "Optoelectronic properties of polymer-nanocrystal composites active at Near-IR wavelengths", *J. Appl. Phys.*, 98, pp. 074310, 2005.
 81. N. Tessler and Y. Roichman, "Amorphous Organic Molecule/Polymer Diodes and Transistors – Comparison between Predictions based on Gaussian or Exponential Density of States", *Organic Electronics*, 6, pp. 200-210, 2005.
 82. Feng Li, O. Solomesch, Philip R. Mackie, D. Cupertino, Nir Tessler, "Low gain-threshold of the cavity mode close to the cut-off wavelength in a three-slab asymmetric conjugated polymer based waveguide structure", *J. Appl. Phys.*, 2005.
 83. O. Tal, Y. Rosenwaks, Y. Preezant, N. Tessler, C. K. Chan, and A. Kahn, "Direct determination of the hole density of states in undoped and doped amorphous organic films with high lateral resolution," *Physical Review Letters*, vol. 95, pp. 256405, 2005.
 84. O. Tal, Y. Rosenwaks, Y. Roichman, Y. Preezant, N. Tessler, C. K. Chan, and A. Kahn, "Threshold voltage as a measure of molecular level shift in organic thin-film transistors," *Appl. Phys. Lett.*, vol. 88, pp. 043509, 2006.
 85. N. Rappaport, O. Solomesch, and N. Tessler, "The mobility spatial distribution function: Turn-on dynamics of polymer photocells", *J. Appl. Phys.*, Vol. 99, 6, pp. 064507, 2006.
 86. O. Solomesch, V. Medvedev, Philip R. Mackie, D. Cupertino, A. Razin, N. Tessler, "Electronic Formulations – Photo patterning of luminescent polymers", *Advanced functional materials*, Vol. 16, 16, pp. 2095-2102, 2006.
 87. N. Tessler and N. Rappaport, "The Loss of Photocurrent Efficiency in Low Mobility Semiconductors – analytic approach to space charge effects", Vol. 89, 1, pp. 013504, 2006..
 88. Y. Preezant and N. Tessler, "carrier heating in disordered organic semiconductors", *Phys. Rev. B.*, Vol. 74, 23, p. 235202, 2006.
 89. N. Rapaport, Y. Bar, O. Solomesch, and N. Tessler, "Mobility spatial distribution function: Comparative method for conjugated polymers/molecules," *Appl. Phys. Lett*, vol. 89, pp. 252117, 2006.
 90. Y.J. Yu, S.H. Lee, D.H. Choi, J.I. Jin, N. Tessler, "Photopatternability of Poly(vinylcarbazole) Bearing Cinnamate Pendants and Its Blends with a Soluble Poly(p-phenylene vinylene) Derivative", *Macromolecular Research*, Vol.15, No.2, 142-146, 2007.
 91. Olga Solomeshch, Young-Jun Yu, Vladislav Medvedev, Alexey Razin, Batya Blumer-Ganon, Yoav Eichen, Jung-Il Jin and Nir Tessler, *Synthetic Metals*, 157, 21, 841-845, 2007.
 92. N. Rappaport, Y. Preezant, and N. Tessler, "Spatially dispersive transport- a mesoscopic phenomenon in disordered semiconductors", *Phys. Rev. B.*, **76**, 235323 (2007)
 93. Elisabeth Holder, Nir Tessler and Andrey L. Rogach, "Hybrid nanocomposite materials with organic and inorganic components for opto-electronic devices" *J. Mater. Chem.*, 18, 1064-1078, (2008)

94. M. Soreni-Harari, N. Yaacobi, D. Steiner, A. Aharoni, U. Banin, O. Millo, N. Tessler, "Tuning energetic levels in nanocrystal quantum dots through surface manipulations", *Nano Lett*, 8 , 678-684 (2008)
95. O. Tal, I. Epstein, O. Baboor, Y. Roichman, Y. Ganot, N. Tessler, C.K. Chan, A.Kahn, and Y. Rosenwaks, "Measurements of the Einstein Relation in Doped and Undoped Molecular Thin Films", *Phys. Rev. B.*, Vol 77, 201201, (2008).
96. Y. Young-Jun, S. Olga, C. Helena, A. A. Goryunkov, R. F. Tuktarov, C. Dong Hoon, J. Jung-II, E. Yoav, and T. Nir, "p-type doping in organic light emitting diodes based on fluorinated C60," *Journal of Applied Physics*, vol. 104, p. 124505, (2008).
97. A. Eran, P. Yaron, and T. Nir, "Photopatternable self-assembled monolayers as micron scale templates for polymer based field effect transistors," *Applied Physics Letters*, vol. 94, p. 013502, (2009).
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Submitted

Review Papers

1. N. Tessler, "Lasers based on semiconducting organic materials", *Adv. Mat.*, 11, (1999), pp. 363-370.
2. N. Tessler, "Device physics of light emitting polymers – LEDs and lasers", in "Recent research developments in physics", *Research Signpost, Trivandrum*.
3. N. Tessler, "Organic Materials Based Lasers", *Elsevier Encyclopedia of Materials: Science and Technology*

4. N. Tessler, "Organic Light Emitting Diodes", Elsevier Encyclopedia of Materials: Science and Technology
5. N. Tessler, Y. Preezant, N. Rappaport, and Y. Roichman, "Charge Transport in Disordered Organic Materials and its Relevance to Thin Film Devices – a Tutorial Review", *Advanced Materials*, vol. 21, pp. 2741-2761, 2009.
6. N. Tessler, "Experimental techniques and the underlying device physics," *Journal of Polymer Science Part B: Polymer Physics*, vol. 52, pp. 1119-1152, 2014.
7. A. J. Ben-Sasson, M. Greenman, Y. Roichman, and N. Tessler, "The Mechanism of Operation of Lateral and Vertical Organic Field Effect Transistors," *Israel Journal of Chemistry*, vol. 54, pp. 568-585, 2014.

Book Chapters

1. N. Tessler, "Device physics of light emitting polymers – LEDs and lasers", in "Recent research developments in physics", Research Signpost, Trivandrum.
2. N. Tessler, " Laser Devices from Molecular and Polymer Semiconductors ", Elsevier Encyclopedia of Materials: Science and Technology
3. N. Tessler, " Light Emitting Diodes from Molecular and Polymer Semiconductors ", Elsevier Encyclopedia of Materials: Science and Technology
4. N. Tessler & Y. Roichman, "Organic Field Effect Transistors", to be published in undergraduate text book edited by J.C. DeMello & J.J. Halls, Elsevier.
5. Y. Roichman, Y. Preezant, N. Rapaport, and N. Tessler, "Analysis and Modeling of Organic Devices", in *Physics of Organic Semiconductors*, edited by W. Brueeting, , ISBN 3-527-40550-X, Wiley-VCH (2005)
6. N. Tessler, O. Globerman, N. Rappaport, Y. Preezant, Y. Roichman, O. Solomesch, J. Veres, S. Tal, E. Gershman, M. Adler, V. Zolotarev, V. Gorelik, Y. Eichen, "Conjugated Polymer Electronics – Engineering Materials and Devices", in *Handbook of Conducting Polymers*, Ed. T.A. Skotheim and J.R. Reynolds, CRC (2006)

Patents

Year	Short Title	Inventors	Publication ref.	Owned by or licensed to
1996	Organic EL	Nick Harrison, Nir Tessler, Paul May	US6002206	Cambridge Display Technology
1998	Polymer Devices	Nir Tessler, Henning Sirringhaus, Richard Friend	EP1074048A1	Plastic Logic
1999	Optical Devices (A)	Nir Tessler, Peter Ho, Richard Friend	WO0004593A1	Cambridge Display Technology
1999	Optical Devices (B)	Peter Ho, Nir Tessler, Richard Friend	WO0003950A1	Cambridge Display Technology
2001	Near Infra-Red Composite Polymer-nanocrystal materials and electro-optical devices produced there from	Uri Banin, Nir Tessler	WO03038914A3	The Hebrew University & The Technion Institute of Technology
2003	π -conjugated molecules	Yoav Eichen, Nir Tessler, Gadi Schuster, Shay Tal, Vlad Medvedev	WO2004039862	Peptronics
2005	Printable Materials	Yoav Eichen, Nir Tessler, Batya Blumer, Olga Solomeshch	WO/2007/020636A1	Peptronics
2005	Transistor Structures	Tessler Nir, Shenhar Roy, Globerman Oded	WO/2007/080576A1	Carbon Valley Technologies
2007	Transistor Structures And Methods Of Fabrication	Nir Tessler and Moti Margalit	USA 60/969,867	Carbon Valley Technologies
2010	Derivatized Fullerene-based dopants	Olga Solomeshch and Nir Tessler	WO2010029542A1	Technion
2010	Vertical Organic Field Effect Transistor and ..	Ariel Ben Sasoon and Nir Tessler	USA Patent Applicat. 13/259,397	Technion

Plenary or Invited Talks

1. International Semiconductor Device Research Symposium, U.S.A., 1995.
2. International Conference on Electroluminescence of Molecular Materials and Related Phenomena, Japan, 1997
3. Lasers and Electro Optics Society Leos-98, San-Francisco, 1997
4. Materials Research Society (MRS), San-Francisco, 1998
5. European Quantum Electronics Conference EQEC'98, Glasgo, 1998
6. European Materials Conference (E-MRS), Strasbourg, June 1999
7. Asia-Pacific Symposium on Organic Electroluminescent Materials & Devices, Hong Kong, June 1999
8. The Rank Prize meeting, Grasmere, October 1999
9. European Materials Research Society (EMRS-2000), Strasbourg, France, 2000.
10. Materials Research Society (MRS), San-Francisco, 2001
11. Optical Probes, Venice, 2003.
12. International conference on composites/nano engineering (ICCE10), New Orleans, 2003
13. European Conference on Organic Electronics and Related Phenomena, Wye, Kent, UK, 2003
14. Photonics Europe, The international society for optical engineering, Strasbourg, France, 2004
15. Gordon Conference on Electronic Processes In Organic Materials, Mount Holyoke College, MA, USA 2004
16. European Conference on Organic Electronics and Related Phenomena, Zurich, Switzerland, 2005 (Plenary talk).
17. Organic Semiconductor Conference (OSC-05), Queens College, Cambridge, UK, 2005.
18. American Vacuum Society (AVS), Boston, USA, 2005.
19. International workshop of organic electronics, Hsinchu, Taiwan, 2006
20. Cleo Europe, Munich, Germany, 2007.
21. MRS, Singapore, 2009
22. ECS meeting, Vienna, Austria, 2009
23. MRS, SF, USA 2010
24. Stopped Logging Conferences (Sorry)

Contributed talks:

1. IEEE The 17th Convention of Electrical & Electronics Engineers in Israel, 1991, Tel-Aviv Israel (N. Tessler).
2. Topical Meeting on Optical Amplifiers and Their Applications, 1991, Snowmass Colorado (N. Tessler).
3. IEEE International Semiconductor Laser Conference, 1992, Takamatsu Kagawa Japan (N. Tessler).
4. IEEE International Semiconductor Laser Conference, 1992, Takamatsu Kagawa Japan (N. Tessler).

5. International Quantum Electronics Conference, 1994, Anaheim California (N. Tessler).
6. Conference on lasers and Electrooptics, 1994, Anaheim California (N. Tessler).
7. Conference on lasers and Electrooptics, 1994, Anaheim California (N. Tessler).
8. IEEE International Semiconductor Laser Conference, Hawaii, 1994 (N. Tessler).
9. IEEE International Semiconductor Laser Conference, Hawaii, 1994 (N. Tessler).
10. International Semiconductor Device Research Symposium, 1995 (N. Tessler).
11. European Conference on Molecular Electronics (ECME 96), 1996, Belgium (N. Tessler).
12. International Conference on Electroluminescence of Molecular Materials and Related Phenomena, Japan, 1997 (N. Tessler).
13. Lasers and Electro Optics Society Leos-98, San-Francisco, 1997 (N. Tessler).
14. Materials Research Society (MRS), San-Francisco, 1998 (N. Tessler)
15. European Quantum Electronics Conference EQEC'98, Glasgo, 1998 (N. Tessler)
16. European Materials Conference (E-MRS), Strasbourg, June 1999 (N. Tessler)
17. Asia-Pacific Symposium on Organic Electroluminescent Materials & Devices, Hong Kong, June 1999 (N. Tessler)
18. The Rank Prize meeting, Grasmere, October 1999 (N. Tessler)
19. European Materials Research Society (EMRS-2000), Strasbourg, France, 2000 (N. Tessler).
20. European Materials Conference (E-MRS), Strasbourg, France, 2000 (N. Tessler).
21. Materials Research Society (MRS), San-Francisco, 2001 (N. Tessler)
22. Materials Research Society (MRS), San-Francisco, 2001 (N. Tessler)
23. European Conference on Molecular Electronics (ECME 2001), Holland, 2001. (Y. Roichman)
24. International Conference on Electroluminescence of Molecular Materials and Related Phenomena, Los-Angeles, 2001 (N. Tessler)
25. International Conference on Synthetic Metals (ICSM2002), Shanghai, 2002.
26. Optical Probes, Venice, 2003.

27. International conference on composites/nano engineering (ICCE10), New Orleans, 2003
28. European Conference on Organic Electronics and Related Phenomena, Wye, Kent, UK, 2003
29. Photonics Europe, The international society for optical engineering, Strasbourg, France, 2004
30. Gordon Conference on Electronic Processes In Organic Materials, Mount Holyoke College, MA, USA 2004
31. Materials Research Society (MRS), San-Francisco, 2005 (Y. Roichman)
32. Materials Research Society (MRS), San-Francisco, 2005 (N. Rapaport)
33. Oren Tal, Yossi Rosenwaks, Yohai Roichman, Nir Tessler, Calvin K. Chan and Antoine Kahn, "Nanoscale Measurements of Electronic Properties in Organic Thin Film Transistors", in *Organic Thin-Film Electronics*, edited by A.C. Arias, N. Tessler, L. Burgi, and J.A. Emerson (Mater. Res. Soc. Symp. Proc. **871E**, Warrendale, PA, 2005), I4.5.
34. ICSM, Dublin, Ireland, 2006. (N. Rappaport)
35. ICSM, Dublin, Ireland, 2006. (N. Tessler)
36. ICSM, Dublin, Ireland, 2006. (Y. Bar)
37. Materials Research Society (MRS), San-Francisco, 2007
38. Stopped Logging Conferences (Sorry)

Participation in organizing conferences

Conference title	location	date	organizational function
Photonics Europe, The international society for optical engineering (SPIE)	Strasbourg, France	2004	Scientific committee
Materials Research Society (MRS)	San-Francisco	2005	Organizing committee
Photonics Europe, The international society for optical engineering (SPIE)	Strasbourg, France	2005	Scientific committee
Materials Research Society (MRS)	San-Francisco	2007	Organizing committee