**Assaf Manor: Curriculum Vitae**

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**Education:**

**2011-Present:**  Ph.D., The Russel Berrie Nanotechnology Institute (RBNI) , Technion – Israel

Institute of Technology, Haifa, Israel. Under the supervision of Dr. Carmel

Rotschild.

**2009-2011:** M. Sc., Cum Laude, Physics and Solar Energy Department, The Jacob Blaustein

Institutes for Desert Research, Sde-Boker, Israel. Under the supervision of

Professor Eugene Katz.

**2005-2008:** B. Sc. In Electrical Engineering, Cum Laude, Technion – Israel Institute of

Technology, Haifa, Israel.

B. Sc. In Physics, Cum Laude, Technion – Israel Institute of Technology, Haifa,

Israel.

**Mandatory Military Service**:

**1998-2001:** Paratrooper, Israel Defense Force, Sargent.

**Research interests:**

Solar energy physics, the thermodynamics of radiation and its energy conversion. Light management for PV enhancement: engineering of thermal radiation and solar driven lasing. The interaction of light and matter in the micro and nano-scale.

*Relevant applications:*

Optical Heat pumps, Solar powered micro-Lasers, Up-conversion of thermal radiation for PV efficiency enhancement.

**Professional experience:**

**2006-2008: R&D Engineer at "EchoSense" - a Biomedical start-up company, Haifa, Israel.**

*Ultra-sound signal processing & algorithm development.*

**2005-2006: Student position, “Mellanox Technologies”, Yokneam, Israel.**

*Analog circuit design.*

**Teaching Experience:**

**2012:** Teaching Assistant: Electrical Motoring (034034), Technion - ITT.

**2011:** Physics teacher, Yeruham Talmudic High School, Yeruham, Israel.

**2011:** Math teaching assistant, Yeruham High school, Yeruham, Israel.

**Honors and Fellowships:**

**2013:** “Adams Fellowship” for outstanding doctoral students.

**2012**: “Fein scholarship” for beginning Ph. D students.

**2011:** “The Director's Award for Outstanding Achievement", given by the The Jacob Blaustein   
 Institutes director to one student per year.

**Professional Membership:**

* Reviewer for the “solar energy materials and solar cells” journal.

**Patent ending:**

* A. Manor, N. Kruger, C. Rotschild, "Energy conversion system", IL61/677070.

**Publications:**

**Published articles in peer-reviewed journals:**

* R.R Sondergaard et al. The use of polyurethane as encapsulating method for polymer solar cells – An inter laboratory study on outdoor stability in 8 countries, *Sol. Energy Mater. And sol Cells* 99, 292 (2012).
* **A. Manor**, E. A. Katz, T. Tromholt, B. Hirsch, F. C. Krebs, Origin of size effect on efficiency of organic photovoltaics, *J. App. Phys.* 109, 074580 (2011).
* **A. Manor**, E. A. Katz, T. Tromholt and F. C. Krebs, Electrical and photo-induced degradation of ZnO layers in organic photovoltaics, *Adv. Energy Mater.* 1, 836 (2011).
* **A. Manor** and E. A. Katz, Open-circuit voltage of organic photovoltaics: implications of the generalized Einstein relation for disordered semiconductors*, Sol. Energy Mater. And sol. Cells* 97, 132 (2011).
* **A. Manor**, E. A. Katz, R. Andriessen, Y. Galagan, Study of organic photovoltaics by localized concentrated sunlight: Towards optimization of charge collection in large-area solar cells, *App. Phys. lett*. 99, 173305 (2011).
* **A. Manor**, E. A. Katz, T. Tromholt, F. C. Krebs, Enhancing functionality of ZnO hole blocking layer in organic photovoltaics, *Sol. Energy Mater. And sol. Cells* 98,491 (2011).
* T. Tromholt, **A. Manor**, E. A. Katz and F. C. Krebs. Reversible degradation of inverted organic solar cells by concentrated sunlight. *Nanotechnology* 22, 225401 (2011).
* S. A. Gevorgyan et al. An inter-laboratory stability study of roll-to-roll coated flexible polymer solar modules, *Sol. Energy Mater. And sol. Cells* 95, 1398 (2011).

**Invited talks:**

* C. Rotschild, **A. Manor**, N. Kruger," Entropy driven up-conversion", Technion-Nangune-BNC Symposium, Barcelona 2012.

**Conference presentations:**

* **A. Manor**, N. Kruger, C. Rotschild, “Entropy Driven multi-photon Up Conversion”, CLEO 2013, San-Jose CA.
* **A. Manor**, N. Kruger, C. Rotschild, " Thermal Lasing", FiO 2012 Rochester New York.
* **A. Manor**, E. A. Katz, T. Tromholt and F. C. Krebs, Electrical and photo-induced degradation of ZnO layers in organic photovoltaics, The 13th Meeting on Optical Engineering and Science in Israel (3rd OASIS), Tel-Aviv, Israel, 2011.
* **A. Manor**, E. A. Katz, T. Tromholt and F. C. Krebs, Electrical and photo-induced degradation of ZnO layers in organic photovoltaics, 16th Sede Boqer Symposium for Solar Electricity production, Sede Boqer, Israel 2011.

**Conference posters:**

* **A. Manor**, E. A. Katz, T. Tromholt, Baruch Hirsch and F. C. Krebs, Origin of size effect on efficiency of organic photovoltaics, The 2nd International Nanotechnology Conference and Exhibition (NanoIsrael), Tel-Aviv, Israel.