

RESUME**CARMEL ROTSCCHILD**

Date and place of birth: 10/06/1971 Tel-Aviv
 Marital status: Married to Sara and father to Yael, Sol, and Yotam
 Web site: <http://excitonics.net.technion.ac.il/>

ACADEMIC DEGREES

2002 -2008 Direct Ph.D., Faculty of Physics, Technion - Israel Institute of Technology, Haifa, Israel
 1996 - 2000 B.Sc., Cum Laude, Mechanical Engineering (Optical engineering), Technion - Israel Institute of Technology.

ACADEMIC APPOINTMENTS

Summer 2012 Visiting scientist, Electrical Engineering Department, MIT,
 2011- to date Assistant Professor, Faculty of Mechanical Engineering, Technion – Israel Institute of Technology, Head of the Laboratory for Excitonics
 2008-2011 Postdoctoral Associate, Electrical Engineering Department, MIT (supervised by Prof. Marc Baldo).

PROFESSIONAL EXPERIENCE

2008-to date *Co-founder, RealView display technology*
<http://www.realviewimaging.com/>
 2000- 2002 *R&D Scientist, Trellis Photonics LTD.*
 Experimental study of electro-holography in nonlinear crystals.
 1990-1994 IDF-Navy

RESEARCH INTERESTS

Nonlinear optics in small molecules; Nano-photonics; Organic-electronics;
 Thermodynamics of light, Engineering of thermal radiation.

Relevant applications:

Optical heat pumps; Solar powered micro-lasers; Nano-scale optical devices; Nonlinear optics in incoherent light for solar applications; Up-conversion of thermal radiation

TEACHING EXPERIENCE

- Experimental techniques-034039: Undergraduate (Renewed and supervising the course)
- Radiation Heat Transfer-038731: The course is designed for the broad mechanical engineering graduate students (Designed and supervising the course).

- Optical systems-035050: The course is designed for the broad mechanical engineering undergraduate students (Designed and supervising the course).
 - Excellence in teaching survey grade- 3.96 for 2016.
- Opto-mechanical Design-035051: The course is designed for the broad mechanical engineering undergraduate students (Designed the course and supervising the adjunct lecturer Dr. Daviv Aziz – Received excellence in teaching survey grade- 4.9 for 2016).
- Transport phenomena at the nano-scale-648013: The course is designed for graduate students at the nano program (Designed and supervising the course).

DEPARTMENTAL ACTIVITIES

2012-to date Head of the Optical Engineering major, Faculty of Mechanical Engineering, Technion-Israel Institute of Technology

As part of this activity:

- Raising, from the industry, \$50,000 for expanding the Advanced Optics Teaching Lab
- Raising awards for six excellent undergraduate students in the amount of a one-year tuition stipend, every year since 2012 (*KLA*)
- Introducing the optical engineering to the industry through student's tours (*KLA*, Elop, Landa Labs) and invited speakers (Rafael, RealView imaging)

PUBLIC PROFESSIONAL ACTIVITIES

Editorial board:

Scientific Reports

Reviewer:

Advanced Materials, Physics Review Letters, ASC-photonics, Advanced Optical Materials, Optics Letters, Optics Express, JOSA B, Applied Optics, US Israel Binational Science Foundation [BSF], German Israeli foundation [GIF], NEVET 2014 Technion grant.

FELLOWSHIPS, AWARDS and HONORS

- 2017 **Krill prize** granted by the Wolf Foundation for Excellence in Scientific Research.
- 2012 **Alon fellowship** granted by the Israeli National academy for Arts and Sciences.
- 2011 Leaders in Science and Technology – **Horev Fellow**.
- 2009 **Bikura** Post Doctorate Fellowship – granted by the Israeli National academy for Arts and Sciences.
- 2009 Outstanding Student Presentation Award at the Frontiers in Optics conference. (One of the three largest international conferences in optics worldwide).

- 2008 **Fulbright** Postdoctoral Fellowship for post doctorate studies.
- 2006 **Adams Fellowship** - the most prestigious fellowship for PhD students in Israel granted by the Israeli National academy for Arts and Sciences.
- 2005 Applied Materials Scholarship.
- 2000 2nd Place Award in the National Contest among all finals student projects in Mechanical Engineering. The project title: "Optical test device for a pilot's vision system".

GRADUATE STUDENTS

Graduated PhD students:

- Sergey Nechayev, started in 2011, "Solar Powered Laser", Graduated 2016. [J23, J28, J32; C18], currently: a post-doctoral fellow, Max Planck Institute for the Science of Light, Erlangen, Germany, at the group of Prof. Peter Banzer.
- Assaf Manor, started in 2011, "Non-linear optics for solar energy conversion: Thermal light management", Graduated 2016. [J20, J21, J24, J27, J30; C17, C19, C20, C22, C24, C27, C28, awarded the **Adams fellowship** for his research in the group], currently: a post-doctoral fellow, at the University of Michigan, Ann Harbor, at the group of Prof. Stephen Forrest

Graduated MSc students:

- Nimrod Kruger, started MSc in 10/2011, "Excitonic fission for Solar conversion", Graduated 2014 [J24; C22]
- Dafna Granot, started in 03/2013, "Entropy driven up-conversion". Graduated **cum laude**, 2016 [J24; C22]

Thesis in progress (Relevant awards, papers and conferences are in parenthesis)

PhD students:

- Karni Wolowolski, started in 01/2014, "Dynamic control over spectral response", expected to graduate in 2017 [J31, J.34, C23, C26, P10, P11]
- Nimrod Kruger, started in 08/2014, "Thermally enhanced photo-luminescence device for solar energy harvesting", expected to graduate in 2018.[J24, J27, J30; C17, C19, C22, C24, C28]
- Shimri Haviv, started in 10/2014, "Fully integrated on-chip high-Q micro-laser". Direct PhD, expected to graduate in 2019 [J29, C25]

MSc students:

- Matej Kurtulik, started in 10/2015, "Thermally enhanced photoluminescence for solar energy", expected to graduate in 10/2017 [J33]
- Natali Revivo, Started in 01/2017, "Fluorescence Intensity Ratio for multi doped emitters", expected to graduate in 03/2019

RESEARCH GRANTS (Carmel is the single PI unless stated otherwise)

- 2011 **Bikura** (ISF), \$24,000, "Bikura post doctorate fellowship"
- 2011 **Alon** (ISF), \$48,000, "Alon fellowship"
- 2012 **Helmsley**, \$300,000 in Four years, Co-PI, Part of Technion-Weizmann joined grant
- 2012 **Marie Curie Career Integration Grants** (FP-7 RIG European Community), €100,000
- 2012 **Focal Technology Area (FTA)**, \$300,000 in Four years, Co-PI, Part of the Center lead by Prof. Meir Orenstein and supported by the Israeli National Nanotechnology Initiative (INNI)
- 2013 **Israeli Strategic Energy Foundation (I-SAEF)**, \$200,000 in three years for "solar powered laser"
- 2013 **Israeli Strategic Energy Foundation (I-SAEF)**, \$100,000 in three years for "lipid rich alga production". As part of a \$200,000. Co-Pi joint grant with Prof. Zvy Dubinsky at Bar Ilan University
- 2014 **Niedersachsen Israeli Research Cooperation**, €56,000 in three years as part of €224,500.00 leading PI
- 2015 **European Research Council ERC starting grant** €1,500,000 for five years "New Thermodynamic ideas for frequency conversion and photovoltaics"
- 2015 **Nofar NIS** 500,000 for one year "Bi spectral dynamic filter based on liquid crystals for sensing and detection", with industrial partner CI-systems.
- 2017 **Meimad NIS** 500,000 for one year "High-frequency dynamic notch-filter at pre-requested spectral band for low cost detection and monitoring ", with industrial partner CI-systems.

PUBLICATIONS, *h-index* 15 with 1328 total citation according to ISI web of knowledge, *h-index* 17 with 1882 total citation according to Google Scholar.

Thesis

Ph.D., Faculty of Physics, Technion - Israel Institute of Technology, under the supervision of Distinguished Professor, Mordechai (Moti) Segev, "Solitons in nonlocal media" (2008).

Published papers at refereed journals, (Impact factor-IF, Ranking in category-R and citation-C according to ISI web of knowledge)

- J1. **C. Rotschild**, S. Zommer, S. Moed, O. Hershcovitz, S. G. Lipson, Adjustable spiral phase plate, *Appl. Opt.* **43**, 2397, (2004).
- J2. **C. Rotschild** , O. Cohen, O. Manela, T. Carmon, and M. Segev, Interactions between spatial screening solitons propagating in opposite directions, *JOSA B*, **21**(7),1354,(2004).

- J3. **C. Rotschild**, T. Carmon, O. Cohen, O. Manela, and M. Segev, Solitons in nonlinear media with an infinite range of nonlocality: first observation of coherent elliptic solitons and of vortex-ring solitons, *Phys. Rev. Lett.* **95**, 213904 (2005).
- J4. **C. Rotschild**, Z. Xu, O. Cohen, Y. aroslav V. Kartashov, L Torner, and M. Segev, Two-dimensional multipole-mode solitons in nonlocal nonlinear media, *Opt. Lett.* **31**, 3312, (2006).
- J5. **C. Rotschild**, B. Alfassi, O. Cohen, and M. Segev, Long-range interactions between optical solitons. *Nature Phys.* **2**, 769, (2006).
- J6. R. El-Ganainy, D. N. Christodoulides, Z. H. Musslimani, **C. Rotschild**, and M. Segev, Optical beam instabilities in nonlinear nanosuspensions, *Opt. Lett.*, **32**, 3185 (2007).
- J7. I. Kaminer, **C. Rotschild**, O. Manela, and M. Segev., Periodic solitons in nonlocal nonlinear media, *Opt. Lett.*, **32**, 3209 (2007)
- J8. B. Alfassi, **C. Rotschild**, O. Cohen, D. N. Christodoulides, and M. Segev, Boundary Force Effects Extracted on Solitons in Nonlinear Media With a Very Large Range of Nonlocality, *Opt. Lett.*, **32**, 154 (2007).
- J9. R. El-Ganainy, **C. Rotschild**, M. Segev, and D. N. Christodoulides, Soliton Dynamics and Self-Induced Transparency in Nonlinear Nanosuspensions, *Optics Express*, **15**, 10207(2007).
- J10. A. Barak, **C. Rotschild**^{1,2}, B. Alfassi, D. N. Christodoulides and M. Segev, Random-Phase Surface-Wave Solitons in Nonlocal Nonlinear Media, *Opt. Lett.*, **32**, 2450 (2007).
- J11. B. Alfassi, **C. Rotschild**, O. Manela, D. N. Christodoulides and M. Segev, Nonlocal Surface-Wave Solitons, *Phys. Rev. Lett.* **98**, 213901 (2007).
- J12. **C. Rotschild**, T. Schwartz, O. Cohen and M. Segev, Incoherent solitons in effectively instantaneous nonlocal nonlinear media, *Nature Photonics*, **2**, 371 (2008).
- J13. B. Alfassi, **C. Rotschild**, and M. Segev, incoherent surface solitons in effectively instantaneous nonlocal nonlinear media, *Phys. Rev. A*, **80**, 041808 (2009).
- J14. Y. Lamhot, A. Barak, **C. Rotschild**, M. Saraf, E. Lifshitz, A. Marmor, R. El-Ganainy, D.N. Christodoulides, and M. Segev, Optical control of thermo-capillary effects in complex nanofluids, *Phys. Rev. Lett.* **103**, 264503 (2009).
- J15. C.L. Mulder, P. D. Reusswig, A. Beyler, H. Kim, **C. Rotschild**, M.A. Baldo, Dyes Aligned in Luminescent Solar Concentrators II. Horizontal Alignment for Energy Harvesting in Linear Polarizers, *Optics Express*, **18**, A91 (2010) [*Energy express*].
- J16. C.L. Mulder, P. D. Reusswig, A. M. Velazquez, H. Kim, **C. Rotschild**, M.A. Baldo, Dyes Aligned in Luminescent Solar Concentrators I. Vertical Alignment for Improved Waveguiding Coupling, *Optics Express*, **18**, A79 (2010) [*Energy express*].

- J17. E. Greenfield, **C. Rotschild**, J Nemirovsky, A Szameit, R El-Ganainy, D. N. Christodoulides, M. Saraf, E. Lifshitz, and M Segev,. Light-induced self-synchronizing flow patterns, *New Journal of Physics*, 13, 052021 (2011).
- J18. **C. Rotschild**, M. Tomes, H. Mendoza, T. L. Andrew, T. M. Swager, T. Carmon, and M.A. Baldo, Cascaded energy transfer for efficient broad-band pumping of high-quality, micro-lasers, *Advanced Materials*, 23: n/a. doi: 10.1002/adma.201100467. (2011).
- J19. A. Menéndez-Velázquez, C. L. Mulder, N. J. Thompson, T. L. Andrew, P. D. Reusswig, **C. Rotschild**, and M. A. Baldo, Light-recycling within electronic displays using deep red and near infrared photoluminescent polarizers, *Energy Environ. Sci.*, 6, 72 (2013), DOI: 10.1039/c2ee23265k.
- J20. A. Manor, L. L. Martin and **C. Rotschild**, Conservation of photon rate in endothermic-photoluminescence and its transition to thermal emission. *OPTICA*, Vol. 2, 6, 585 (2015).
- J21. Svetlana V Boriskina, et al., Roadmap on the Optical Energy Conversion, Ch. 18, A. Manor, and **C. Rotschild**, Endothermic-photoluminescence: Optical heat-pump for next generation PV, *IOP science, journal of optics* (2016) doi:10.1088/2040-8978/18/7/073004.
- J22. R. Bekenstein, R. Schley, M. Mutzafi, A. Ori, **C. Rotschild**, and M. Segev, Experimental Observation of Optical Wavepackets Overcoming Gravitational Phenomena, *Nature Physics* doi:10.1038/nphys3451, (2015).
- J23. P. D. Reusswig, S. Nechayev*, J. M. Scherer, G. W. Hwang, M. G. Bawendi, M. A. Baldo, **C. Rotschild**, Solar Pumped Lasers via Cascade Energy Transfer, *S. Nechayev contribution is equal to first author. *Sci. Rep.* 5, 14758; doi: 10.1038/srep14758 (2015).
- J24. D. Granot, N. Kruger, A. Manor and **C Rotschild**, Efficient tenfold up-conversion through steady-state non-thermal-equilibrium excitation, DOI: 10.1021/ACS photonics.5b00481 (2016).
- J25. E. Bruckheimer, **C. Rotschild**, Holography for imaging in structural heart disease, *EuroIntervention* (2016);12:X0-X0 doi: 10.4244/EIJV12SXA?.
- J26. E. Bruckheimer, **C. Rotschild**, T. Dagan, G. Amir, A. Kaufman, S. Gelman, and E. Birk, Computer-generated real-time digital holography: first time use in clinical medical imaging, *European Heart Journal – Cardiovascular Imaging* (2016) doi:10.1093/ehjci/jew087.
- *See also **Editorial choice** and comments, [Karima Addetia, Roberto M. Lang, The future has arrived. Are we ready?](#), *European Heart Journal – Cardiovascular Imaging* (2016). doi:10.1093/ehjci/jew111
- J27. A. Manor, N. Kruger, T. Sabaphati and **C. Rotschild**, Thermally-Enhanced Photoluminescence for Heat Harvesting in Photovoltaics, *Nat. Commun.* DOI:10.1038/ncomms13167 (2016).

*The Optical Society of America chose this paper as the most important paper in solar energy for the year 2016, [OPTICS & PHOTONICS NEWS December 2016](#) , Efficient Photovoltaics from Photoluminescent Heat Harvesting.

- J28. S. Nechayev, P. D. Reusswig, M. A. Baldo and C. Rotschild, “Designing a Broadband Pump for High-Quality Micro-Lasers via a Modified Net Radiation Method ”, *Sci. Rep.*, 6, 38576 (2016) doi:10.1038/srep38576.

Submitted papers under review (underlined names for Carmel's group students)

- J29. S. Haviv, T. Sabaphati and C. Rotschild, Extreme Up-conversion through Steady State Excitation of 'Hot' Modes”.
- J30. N. Kruger, A. Manor, T. Sabaphati and **C. Rotschild**, “Sensitized Neodymium for thermally enhanced photoluminescence based solar cell”.
- J31. K. Wolowolski, and **C. Rotschild**, ”Bi-spectral imaging for gas detection”.

Papers in preparation

- J32. S. Nechayev, and **C. Rotschild**, ”Thermodynamic limit of solar powered lasers”.
- J33. M. Kurtulik, A. Manor, and **C. Rotschild**, “Generalized photoluminescence-rate far from the radiative limit”.
- J34. K. Wolowelsky, E. Guyes, S. Rubin, M. Suss, M. Bercovici, and **C. Rotschild**, “Color control through FRET efficacy modulation using CDI”.

PATENTS (underlined names for Carmel's group students)

- P1. **C. Rotschild**, ”Method and system for using a cellular phone in water activity” PCT/IL07/00299 03/08/2007., 19611/US/05. (Provisional 2007)
- P2. **C. Rotschild**, Aviad Kaufman., “Broad viewing angle displays and user interfaces”, PCT/IL2009/000686, (Granted in the US, WO 2010004563 A1 and China, CN 102150072 A)
- P3. **C. Rotschild**. Christodoulides, D. N. Segev M., Method and system for manipulating fluid medium, PCT/IL2009/000338 (Provisional 2009)
- P4. C. L. Mulder, M. Baldo, **C. Rotschild**, “Luminescent Solar Concentrators for Energy Harvesting in Displays” US 61/220,145 (Granted in the US, WO 2011005575 A2)

- P5. J. Mapel, M. Baldo, C. L. Mulder, M. Currie, M. Segal, and **C. Rotschild**, “Materials for solar concentrators and devices, methods and systems using them”, US 61/146,550 (Granted in the US WO 2010085561 A3).
- P6. **C. Rotschild**, M. Baldo, T Carmon, “Efficient broad-band pumping of high finesse, high quality-factor lasers”, US 61393966.
- P7. S. Alon-Braitbart, S. A. Gelman, **C. Rotschild**, “Despeckling a computer generated hologram”, US61/678,211 (Provisional 2013)
- P8. S. A. Gelman, S. Alon-Braitbart, Y.Y. Yoreh, **C. Rotschild**, “Increasing an area from which a computer generated hologram may be viewed”, US 61/678,213 (Provisional 2013)
- P9. A. Manor, N. Kruger, **C. Rotschild**, “Energy conversion system”, IL61/677070 (Provisional 2013)
- P10. K. Wolovelsky, M. Bercovici and **C. Rotschild**, IL patent application no. 239998; "Electrically Controllable Variable Color Device" (Provisional 2015)
- P11. K. Wolovelsky, Amir Gil, Dario Habib, and **C. Rotschild**, IL patent application no. 245655; "Infrared detection and imaging device with no moving parts", (Granted 2016, Technion have full ownership)
- P12. S. Rubin, M. Bercovici, and **C. Rotschild**, ‘Dynamic spatial light modulator’, (under preparations)
- P13. **C. Rotschild**, “Non-thermal cathodoluminescence for fuel cells”, (under preparations)

INVITED TALKS at international conference

(Underlined names for Carmel's group students), first author presented the talk,

1. **C. Rotschild**, B. Alfassi, O. Manela, T. Schwartz, A. Barak, M. Segev, O. Cohen, X. Zhiyong, Y. Kartashov, L. Torner, D.N. Christodoulides, **IEEE, LEOS 2007, Lake Buena Vista, Florida, USA**, “Solitons phenomena in highly nonlocal media: From soliton wiring and surface solitons to random-phase solitons and controlling solitons from afar”
2. **C. Rotschild**, Eilat Eilat “The energy initiative at MIT”, **Eilat Israel 2010**
3. **C. Rotschild**, M. Tomes, H. Mendoza, T. Carmon, and M. Baldo **FiO 2010 New York, USA**, “Luminescence Solar Concentrators: from optical heat pump toward solar pumped laser”.
4. **C. Rotschild**, M. Tomes, H. Mendoza, T. Carmon, and M. Baldo, **OASIS 2011, Tel Aviv Israel**, “Non-resonantly pumped High-Q micro-laser For on-chip and solar powered laser applications”
5. **C. Rotschild**, A. Manor, N. Kruger, "Entropy-driven up conversion for sub-bandgap thermal photovoltaics", **OASIS, Tel-Aviv, 2013**
6. **C. Rotschild**, A. Manor, "Optical refrigeration for ultra-efficient photovoltaics" QUANTSOL 2014) March 16-21, 2014, **Rauris, Österreich**.
7. **C. Rotschild**, "Thermally enhanced photoluminescence for efficient photovoltaics" OSA Incubator meeting on the fundamental limits of optical energy conversion, **Washington 2014**
8. **C. Rotschild**, "Thermally enhanced photoluminescence for efficient photovoltaics" QUANTSOL, **Austria, 2015**

9. **C. Rotschild**, "Optical refrigeration for efficient photovoltaics" Photonic west, **San Jose, 2015**
10. **C. Rotschild**, "On the transition from photoluminescence to thermal emission and its implication on solar energy conversion", World science conference Israel (WSCSI), **Jerusalem 2015**
11. **C. Rotschild**, "Live medical holography - a promise finally kept", World science conference Israel (WSCSI), **Jerusalem 2015**
12. **C. Rotschild**, 3% conversion efficiency in Thermally Enhanced Photoluminescence (TEPL) illuminated solely by sub-bandgap photons, QUANTSOL, **Austria, 2016**
13. **C. Rotschild**, Photoluminescence: An optical heat pump for solar energy, Workshop on Thermionic emission, Technion **Israel 2016**
14. **C. Rotschild**, Photoluminescence: An optical heat pump for solar energy, **ISES Israel, 2016**
15. **C. Rotschild**, Photoluminescence: An optical heat pump for solar energy, **NEF, South Korea 2016** (Canceled due to accident)
16. A. Manor, **C. Rotschild**, New concepts in photovoltaics, **FiO, San Jose 2016**
17. **C. Rotschild**, Photoluminescence: An optical heat pump for solar energy, **NEF, Qingdao-China 2016**
18. **C. Rotschild**, Thermally Enhanced Photo-Luminescence: Device, QUANTSOL, **Austria, 2017**

Invited talks at universities and institutes

1. **C. Rotschild**, M. Tomes, H. Mendoza, T. Carmon, and M. Baldo, **ICEL 2010** Michigan, USA, "Non-resonantly Pumped High-quality-factor Lasers "
2. **C. Rotschild**, M. Tomes, H. Mendoza, T. Carmon, and M. Baldo, **OASIS 2011, Tel Aviv Israel**, "Non-resonantly pumped High- Q micro-laser For on-chip and solar powered laser applications"
3. **C. Rotschild**, " Solar Powered Laser: The next generation of Luminescence Solar Concentrators", **Keynote speaker**, European PV Cluster and the Ephocell consortium, 2012, Barcelona, Spain
4. **C. Rotschild** " Entropy driven up-conversion", Technion-Nangune-BNC Symposium, Barcelona 2012
5. **C. Rotschild**, A. Manor, N. Kruger " Entropy driven up-conversion", MIT, Cambridge, 2013
6. A. Manor, N. Kruger, **C. Rotschild**, "Entropy Driven multi-photon Up Conversion", SB Symposium, Israel, 2013
7. **C. Rotschild**, A. Manor, N. Kruger, "Entropy driven up-conversion", Indo-Israel Meeting on Materials for Nanoscience, Biosensors and Energy, Bangalore, 2013
8. **C. Rotschild**, S. Nechayev, Solar Powered Laser, Elop, (2013)
9. **C. Rotschild**, A. Manor, N. Kruger, " Optical refrigeration for ultra-efficient photovoltaics ", NTU-Technion workshop in photonics, Singapore 2014
10. **C. Rotschild**, "Thermally enhanced photoluminescence for efficient photovoltaics" MIT, Cambridge, 2014
11. **C. Rotschild**, "Thermally enhanced photoluminescence for efficient photovoltaics" Columbia University, New-York, 2014
12. **C. Rotschild**, "Thermally enhanced photoluminescence for efficient photovoltaics" Aarhus University, Denmark, 2014
13. **C. Rotschild**, "QD based Solar powered laser" Niedersachsen, Germany, 2015

14. **C. Rotschild**, "Thermally enhanced photoluminescence for efficient photovoltaics" Green Photonics, Berlin, 2015
15. **C. Rotschild**, "Thermally enhanced photoluminescence for efficient photovoltaics" International Iberian Nanotechnology Laboratory Braga, Portugal, 2015
16. **C. Rotschild**, Photoluminescence: An optical heat pump for harvesting thermal losses in PVs, MIT- condensed mater seminar, 2016

ORAL PRESENTATIONS at international conferences:

(Underlined names for Carmel's group students), first author presented the talk

- C1. **C. Rotschild**, O. Cohen, O. Manela, T. Carmon, and M. Segev, "Interactions between spatial screening solitons propagating in opposite directions", *NLGW* 2004, Toronto Canada
- C2. **C. Rotschild**, T. Carmon, O. Cohen, O. Manela, and M. Segev, "Solitons in nonlinear media with infinite range of nonlocality: first observation of coherent elliptic solitons and vortex-ring solitons", *CLEO/QELS* 2005 Baltimore Maryland U.S.A.
- C3. **C. Rotschild**, B. Alfassi, O. Cohen, and M. Segev, "long-rang Interactions between solitons in nonlocal nonlinear media". *NLGW* 2005
- C4. **C. Rotschild**, B. Alfassi, O. Cohen, M. Segev, and D. N. Christodoulides, "Infinite-range interactions between solitons in highly-nonlocal nonlinear media", *CLEO/QELS* 2006, Long-beach California U.S.A
- C5. **C. Rotschild**, Z. Xu, O. Cohen, Y. V. Kartashov, L. Torner, M. Segev, "Two-dimensional multipole-mode solitons in nonlocal nonlinear media", *CLEO/QELS* 2006, California U.S.A
- C6. B. Alfassi, **C. Rotschild**, O. Cohen, M. Segev, and D. N. Christodoulides, "Boundary Force Effects Extracted on Solitons in Nonlinear Media With a Very Large Range of Nonlocality", *CLEO/QELS* 2006, Long-beach California U.S.A.
- C7. R. A. El-Ganainy, **C. Rotschild**, Konstantinos G. Makris, Demetrios N.Christodoulides, and M. Segev, Soliton Dynamics in Exponentially Nonlinear Nanosuspensions, *BGPP/NP* 2007 Quebec City, Canada
- C8. A. Barak, **C. Rotschild**, B. Alfassi, M. Segev, and D.N. Christodoulides, Random-Phase Surface-Wave Solitons in Nonlocal Nonlinear Media, *BGPP/NP* 2007 Quebec City, Canada
- C9. B. Alfassi, **C. Rotschild**, O. Manela, D. N. Christodoulides and M. Segev, "Nonlocal Surface-Wave Solitons", *CLEO/QELS* 2007 Baltimore Maryland U.S.A.
- C10. R. A. El-Ganainy, **C. Rotschild**, Konstantinos Makris, Demetrios Christodoulides, Mordechai Segev, "Cusp Solitons in Exponentially Nonlinear Nanosuspensions", *CLEO/QELS* 2007 Baltimore Maryland U.S.A.
- C11. **C. Rotschild**, T. Schwartz, O. Cohen and M. Segev, "Incoherent solitons in effectively instantaneous nonlocal nonlinear media ", *CLEO/QELS* 2007 Baltimore Maryland U.S.A.
- C12. **C. Rotschild**, T. Schwartz, O. Cohen and M. Segev, "Random-phase spatial solitons in effectively instantaneous nonlocal nonlinear media", *BGPP/NP* 2007 (Quebec City, Canada)
- C13. **C. Rotschild**, et.al., **Post deadline** session, *CLEO/QELS* 2008 San Jose, California, USA, "Complex Nonlinear Opto-Fluidity"
- C14. **C. Rotschild**, et.al., **FiO** 2008 Rochester, New York, USA, "Complex Nonlinear Opto-Fluidity".(winner of the *Outstanding Student Presentation Award*)

- C15. P.D. Reusswig, **C. Rotschild** and M.A. Baldo.” Employment Neodymium for Infrared Luminescent Solar Concentrator”, *OPA/CIPS* 2009, Boston
- C16. C.L. Mulder, H. Kim, P. D. Reusswig, **C. Rotschild**, M.A. Baldo.” Luminescent Solar Concentrators Employing Dyes Aligned by Polymerizable Liquid Crystals”, *OPA/CIPS* 2009, Boston
- C17. A. Manor, N. Kruger, **C. Rotschild**, " Thermal Lasing", FiO 2012 Rochester New York
- C18. P. Reusswig, S. Nechayev, M. Baldo, **C. Rotschild**, “Solar-Powered Laser", FiO 2012 Rochester NY
- C19. A. Manor, N. Kruger, **C. Rotschild**, "Entropy driven multi-photon up-conversion", CLEO, San Jose, USA, 2013
- C20. A. Manor, L., Martin, **C., Rotschild**, "Thermally assist photoluminescence for efficient photovoltaics ", accepted to GORDON REASERCH, Nanostructure Fabrication, University of New England in Biddeford ME, USA 2014
- C21. R. Bekenstein, R. Schley, M. Mutzafi, I. dolev, A. Arie, **C. Rotschild** and M.Segev , Observation of Gravitational effects in nonlocal nonlinearity, CLEO 2014
- C22. D. Granot, N. Kruger, A. Manor, **C. Rotschild**, 10-Fold Entropy Driven Frequency Up-conversion, OASIS, 2015
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