

# Oksana G. Ostroverkhova

## Curriculum Vita

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### A. Education and Employment Information

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#### Education

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- Ph.D.** in **Physics**, *Case Western Reserve University*  
(Cleveland, OH, USA) 2001 (GPA: 4.0/4)  
Thesis: "Nonlinear optical probes and processes in  
polymers and liquid crystals", **Advisor: K. D. Singer**
- Diploma** in **Physics** and **Optical Engineering**,  
*National Taras Shevchenko University* (Kiev, Ukraine) 1996 (GPA: 5.0/5, with highest honors)  
Thesis: "Fast CO<sub>2</sub> analyzer for medical applications" **Advisor: A. S. Skirda**

#### Professional Appointments

- 2010-present Associate Professor, *Physics Department, Oregon State University*, Corvallis, OR, USA  
2011 Consultant, Nitto-Denko, San Diego, CA, USA  
2005-2010 Assistant Professor, *Physics Department, Oregon State University*, Corvallis, OR, USA  
2003-2005 Killam Memorial Postdoctoral Fellow, *Physics Department, University of Alberta*, Edmonton, AB, Canada  
**(Postdoctoral advisor: F. A. Hegmann)**
- 2001-2003 Postdoctoral Scholar, *Chemistry Department, Stanford University*, Stanford, CA, USA  
**(Postdoctoral advisor: W. E. Moerner)**
- 1997-2001 Research Assistant, *Physics Department, Case Western Reserve University*, Cleveland, OH, USA  
1996-1997 Teaching Assistant, *Physics Department, Case Western Reserve University*, Cleveland, OH, USA

#### Honors and Awards

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- APS Woman Scientist of the Month (May 2017)  
OSU Milton Harris Award in Basic Research (2016)  
OSU Loyd Carter Award for "outstanding and inspirational teaching" (graduate level) (2016)  
OSU College of Science Scholar (2012-2013)  
NSF CAREER Award (2008)  
OSU Loyd Carter Award finalist (1 out of 4) for "outstanding and inspirational teaching" (2007, 2013)  
ACS PRF Award (2006)  
Izaak Walton Killam Memorial Postdoctoral Fellowship, University of Alberta, Canada (2002-2004)  
Cited in the 59<sup>th</sup> and 64<sup>th</sup> Editions of Marquis Who's Who in America (2004 and 2009)  
University Excellence Scholarship, National Taras Shevchenko University, Ukraine (1991-1996)  
International Soros Science Education Program (ISSEP) student excellence grant (1995)

## B. Teaching, advising, and other assignments

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### Instructional summary

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#### Credit Courses

Course	Term	Yr
PH 652 Quantum Mechanics II	Winter	2005
PH 653 Quantum Mechanics III	Spring	2005
PH 651 Quantum Mechanics I	Fall	2005
PH 652 Quantum Mechanics II	Winter	2006
PH 651 Quantum Mechanics I	Fall	2006
PH 652 Quantum Mechanics II	Winter	2007
PH 653 Quantum Mechanics III	Spring	2007
PH 651 Quantum Mechanics I	Fall	2007
PH 652 Quantum Mechanics II	Winter	2008
PH 653 Quantum Mechanics III	Spring	2008
PH 481/581 Optics	Winter	2009
PH 481/581 Optics	Winter	2010
PH 481/581 Optics	Winter	2011
PH 481/581 Optics	Winter	2012
PH 585 Atomic, Molecular, and Optical Physics	Spring	2009
PH 585 Atomic, Molecular, and Optical Physics	Spring	2010
PH 585 Atomic, Molecular, and Optical Physics	Spring	2011
PH461/561/505 Mathematical Methods	Fall	2009
PH 673 Nanoscience and Nanotechnology	Fall	2010
PH 673 Nanoscience and Nanotechnology	Fall	2012
PH 681 Modern Optics	Fall	2011
PH 682 Semiconductor Optics	Fall	2013
PH 424 Waves	Winter	2014
PH 426 Central Forces	Spring	2014
PH 673 Nanoscience and Nanotechnology	Fall	2014
PH 424 Waves	Winter	2015
PH 426 Central Forces	Spring	2015
PH 424 Waves	Winter	2016
PH 426 Central Forces	Spring	2016
PH 651 Quantum Mechanics I	Fall	2016
PH 652 Quantum Mechanics II	Winter	2017
PH 653 Quantum Mechanics III	Spring	2017

#### Graduate and Undergraduate Students and Postdoctoral Trainees

##### Postdoctoral Trainees

1. Dr. Keshab Paudel 10/ 2012-08/2015
2. Dr. Rajesh K. R. 12/2013-12/2014

##### Major Professor

3. Jonathan Van Schenck Ph. D. student current student (2<sup>nd</sup> year)
4. Greg Giesbers Ph. D. student current student (2<sup>nd</sup> year)
5. Novela Auparay Ph. D. student current student (3<sup>rd</sup> year)
6. Robert Harrison Ph. D. student current student (3<sup>rd</sup> year)
7. Nicole Quist Ph. D. student M. S. (2016), current student
8. Rebecca Grollman Ph. D. 2017

9.	Brian Johnson	Ph. D.	2015
10.	Kati Bilty	M.S.	2013
11.	Whitney Shepherd	Ph.D.	2012
12.	Mark Kendrick	Ph.D.	2012
13.	Andrew Platt	Ph. D. student	2005-2010
14.	Jonathan Day	Ph.D.	2008

### Co-advisor

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1.	Siddartha Bhowmik (co-advised with Prof. S. Atre)	Ph.D. (Mech.Eng.)	2009
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### Senior Project Mentor

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1.	Ryan Tollefsen	B.S. (Physics) student	expected 2020
2.	Mark Li	B.S. (Chem E) student	expected 2018
3.	Richard Wallace	B.S. (Physics)	2017
4.	Alexander Quinn	B.S. (Physics) student	expected 2018
5.	Graham Founds	B.S. (Physics)	2017
6.	Jeremy Rath	B.S. (Physics)	2016
7.	Jacob Busche	B.S. (Physics, Honors)	2015
8.	Alex Robertson	B. S. (Nucl. Eng.)	2015
9.	Mattson Thieme	B.S. (Physics)	2014
10.	Kyle Peters	B. S. (Physics)	2013
11.	Afina Neunzert	B. S. (Physics, Honors)	2013
12.	Keith Schaefer	B. S. (Physics)	2012
13.	Kyle Williams	B.S. (Physics)	2012
14.	Thomas Hathaway	B. S. (Physics)	2011
15.	Jessica Gifford	B. S. (Physics, Honors)	2011
16.	Garrett Banton	B. S. (Nucl. Eng.)	2011
17.	Mark Mazurier	B.S (Physics)	2007
18.	Joseph Peterson	B.S. (Physics)	2006
19.	Zach Peterson	B.S. (Physics)	2006

### Summer/Internship Project Mentor

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1.	Thomas Gilray	B.S. (Comp. Sc.)	2010
2.	David Hofer	post-bacc (Physics)	2010
3.	Guy Cutting	B.S (Comp. Phys.) student	2008
4.	Dustin Quandt	B.S. (Env. Sc.)	2010
5.	Samuel Peterson	B. S. (Physics)	2008

### Graduate Committee Member

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1.	Daniel McCulley	Ph. D.	current student
2.	Amani Alobaidi	Ph. D.	current student
3.	Ali Mousavian	Ph. D.	current student
4.	Jihan Kim	Ph. D.	current student
5.	Kyle Vogt	Ph. D.	current student
6.	Andrew Stickel	Ph. D.	current student
7.	Lee Aspitarte	Ph. D.	current student
8.	Matt Cibula	Ph. D.	2015
9.	Michael Paul	Ph. D.	2014
10.	Peter Wojcik	M. S.	2012
11.	Louis Maizy	M.S.	2012
12.	Chris Reidy	Ph. D.	current student
13.	Tal Sharf	Ph. D.	2014
14.	Tristan DeBorde	Ph. D.	2014
15.	Jason Francis	Ph. D.	2013
16.	Zach Thomson	Ph. D.	2015

17.	Ali Almaqwashi	M. S.	2012
18.	Sukosin Thongrattanasiri	Ph.D.	2010
19.	Andriy Zakutayev	Ph. D.	2010
20.	Nicholas Kuhta	Ph. D.	2012
21.	Seongweon Park	Ph.D.	2012
22.	Matt Leyden	Ph. D.	2011
23.	Joseph Tomaino	Ph.D.	2011
24.	Andy Jameson	Ph.D.	2012
25.	Landon Prisbrey	Ph.D.	2011
26.	Denny Jackson	Ph. D.	2011
27.	Vincent Rossi	Ph. D.	2015
28.	Robynne Kirkpatrick	Ph.D.	2008
29.	Zachary Wiren	Ph.D.	2008
30.	Jon Shanks	M. S.	2007
31.	Matt Neel	M. S.	2007
32.	Joel Wetzel	M.S.	2006

### Team or Collaborative Efforts

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NSF MIP, MRSEC, PIRE, MRI proposals

Active participation in Paradigms 2.0 activities

Experimental demonstrations in lasers and nonlinear optics for ECE482 and 483 courses (taught by Prof. T. Plant)

Upgrade of optics instructional labs (with Profs. D. McIntyre, W. Hetherington, T. Plant); restructuring undergraduate electronics sequence (with Profs. D. McIntyre and W. Qiu)

## B. Scholarship and Creative Activity

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**Google Scholar profile:** <https://scholar.google.com/citations?user=HEnlUfEAAAJ&hl=en>

## Full Publication List

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### Books and Invited book chapters

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1. "Handbook of Organic Materials for Electronic and Photonic Devices", edited by **O. Ostroverkhova**, 2<sup>nd</sup> Edition, Elsevier, to appear in 2018.
2. **O. Ostroverkhova**, "Organic and polymeric photorefractive materials and devices", in "Introduction to organic electronic and optoelectronic materials and devices", edited by S. Sun and L. Dalton, CRC Taylor & Francis, 2<sup>nd</sup> Edition, 2016.
3. "Handbook of Organic Optical and Optoelectronic Materials and Devices", edited by **O. Ostroverkhova**, Woodhead publishing, Cambridge, UK, 2013.
4. **O. Ostroverkhova**, "Photophysical and photoconductive properties of novel organic semiconductors and their composites", in "New trends in organic electronics", edited by C. Santato and F. Cicoira, Wiley VCH Verlag GmbH, 2013.
5. **O. Ostroverkhova**, "Optical and electronic properties of organic semiconductors", in "Encyclopedia of Nanoscience and Nanotechnology" edited by H.S. Nalwa, American Scientific Publishers, 2011.
6. **O. Ostroverkhova**, A. D. Platt, W. E. B. Shepherd, "Optical, photoluminescent, and photoconductive properties of novel high-performance organic semiconductors", in "Advances in Lasers and Electro-Optics", edited by V. Kordic, In-Tech Publishing, 2010.
7. A. D. Platt, J. Day, W. E. B. Shepherd, and **O. Ostroverkhova**, "Photophysical and photoconductive properties of novel organic semiconductors", in "Organic Thin Films for Photonic Applications", American Chemical Society Publishing, edited by W. Herman and S. Foulger, 2010.

8. **O. Ostroverkhova**, "Organic and polymeric photorefractive materials and devices", in "Introduction to organic electronic and optoelectronic materials and devices", edited by S. Sun and L. Dalton, CRC Taylor & Francis, pp.607-636, 2008.
9. F. A. Hegmann, **O. Ostroverkhova**, and D. G. Cooke, "Probing organic semiconductors with terahertz pulses", in "Photophysics of Molecular Materials", edited by G. Lanzani, Wiley-VCH, Weinheim, Germany, pp.367-428, 2006.

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## Refereed journal articles

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1. R. Grollman, N. Quist, A. Robertson, J. Rath, B. Purushothaman, M. M. Haley, J. E. Anthony, and O. Ostroverkhova, "Single-molecule insight into nanoscale environment-dependent photophysics in blends", *Journal of Physical Chemistry C* **121**, 12483-12494, 2017 (DOI: 10.1021/acs.jpcc.7b03729).
2. O. Ostroverkhova, "Organic Optoelectronic Materials: Mechanisms and Applications" *Chemical Reviews* **116**, 13279-13412, 2016 (<http://pubs.acs.org/doi/abs/10.1021/acs.chemrev.6b00127>).
3. W. E. B. Shepherd, R. Grollman, A. Robertson, K. Paudel, R. Hallani, M. Loth, J. Anthony, and **O. Ostroverkhova**, "Single-molecule imaging of organic semiconductors: Toward nanoscale insights into photophysics and molecular packing", *Chemical Physics Letters* **629**, 29-35, 2015.
4. S. Rao and **O. Ostroverkhova**, "Visual outdoor response of multiple wild bee species: highly selective stimulation of a single photoreceptor type by sunlight-induced fluorescence" *Journal of Comparative Physiology A* **201**, 705-716, 2015.
5. K. R. Rajesh, K. Paudel, B. Johnson, R. Hallani, J. E. Anthony, and **O. Ostroverkhova**, "Design of organic ternary blends and small-molecule bulk heterojunctions: photophysical considerations" *Journal of Photonics for Energy* **5**, 057208, 2015.
6. K. Paudel, B. Johnson, M. Thieme, M. Haley, M. M. Payne, J. E. Anthony, **O. Ostroverkhova**, "Enhanced charge photogeneration promoted by crystallinity in small-molecule donor-acceptor bulk heterojunctions", *Applied Physics Letters* **105**, 043301, 2014.
7. K. Paudel, B. Johnson, A. Neunzert, M. Thieme, B. Purushothaman, M. M. Payne, J. E. Anthony, **O. Ostroverkhova**, "Small-molecule bulk heterojunctions: distinguishing between effects of energy offsets and molecular packing on optoelectronic properties", *Journal of Physical Chemistry C* **117**, 24752-24760, 2013.
8. B. Johnson, M. J. Kendrick, **O. Ostroverkhova**, "Charge carrier dynamics in organic semiconductors and their donor-acceptor composites: Numerical modeling of time-resolved photocurrent", *Journal of Applied Physics* **114**, 094508, 2013.
9. M. J. Kendrick, A. Neunzert, M. M. Payne, B. Purushothaman, B. D. Rose, J. E. Anthony, M. M. Haley, **O. Ostroverkhova**, "Formation of the donor-acceptor charge-transfer exciton and its contribution to charge photogeneration and recombination in small-molecule bulk heterojunctions", *Journal of Physical Chemistry C* **116**, 18108-18116, 2012.
10. B. Purushothaman, S. Parkin, M. J. Kendrick, D. David, J. Ward, L. Yu, N. Stingelin, O. Jurchescu, **O. Ostroverkhova**, J. E. Anthony, "Synthesis and charge transport studies of stable, soluble hexacenes", *Chemical Communications* **48**, 8261-8263, 2012.
11. A. D. Platt, M. J. Kendrick, M. Loth, J. E. Anthony, **O. Ostroverkhova**, "Temperature dependence of exciton and charge carrier dynamics in organic thin films", *Physical Review B* **84**, 235209, 2011.
12. W. E. B. Shepherd, A. D. Platt, M. J. Kendrick, M. Loth, J. E. Anthony, **O. Ostroverkhova**, "Energy transfer and exciplex formation and their impact on exciton and charge carrier dynamics in organic films", *Journal of Physical Chemistry Letters* **2**, 362-366, 2011.
13. S. Bhowmik, A. Holm, **O. Ostroverkhova**, S. Atre, "Metallic nanostructures in a polymer matrix and substrate fabrication and structural characterization", *Applied Physics A* **103**, 1117-1123, 2011.
14. W. E. B. Shepherd, A. D. Platt, D. Hofer, **O. Ostroverkhova**, M. Loth, J. E. Anthony, "Aggregate formation and its effect on (opto)electronic properties of guest-host organic semiconductors", *Applied Physics Letters* **97**, 163303, 2010. **Selected by the Editor for publication** in the *APL: Organic electronics and photonics* (October 2010)
15. M. J. Kendrick, D. H. McIntyre, and **O. Ostroverkhova**, "Wavelength dependence of optical trapping forces on dye-doped polystyrene microspheres", *Journal of the Optical Society of America B* **26**(11), 2189-2198, 2009. **Also, selected by the Editor for publication** in *Virtual Journal of Biomedical Optics* (December 2009).

16. A.D. Platt, J. Day, S. Subramanian, J. E. Anthony, **O. Ostroverkhova**, "Optical, fluorescent, and (photo)conductive properties of high-performance functionalized pentacene and anthradithiophene derivatives", *Journal of Physical Chemistry C* **113**, 14006-14014, 2009.
17. J. Day, A.D. Platt, S. Subramanian, J. E. Anthony, **O. Ostroverkhova**, "Influence of organic semiconductor-metal interfaces on the photoresponse of functionalized anthradithiophene thin films", *Journal of Applied Physics* **105**, 103703, 2009. **Also, selected by the Editor for publication** in *Virtual Journal of Ultrafast Science* (June 2009).
18. J. Day, A. D. Platt, **O. Ostroverkhova**, S. Subramanian, J. E. Anthony, "Organic semiconductor composites: influence of additives on the transient photocurrent", *Applied Physics Letters* **94**, 013306, 2009. **Also, selected by the Editors for publication** in *Virtual Journal of Ultrafast Science* (February 2009) and in *Virtual Journal of Nanoscience and Technology* (January 2009).
19. O. P. Valmikanathan, **O. Ostroverkhova**, I. S. Mulla, K. Vijayamohanan, S. V. Atre, "The effect of synthesis procedure on the structure and properties of palladium/polycarbonate nanocomposites", *Polymer* **49** (16), 3413-3418, 2008.
20. J. Day, S. Subramanian, J. E. Anthony, Z. Lu, R. J. Twieg, **O. Ostroverkhova**, "Photoconductivity in organic thin films: from picoseconds to seconds after excitation", *Journal of Applied Physics* **103**, 123715, 2008.
21. **O. Ostroverkhova**, D. G. Cooke, F. A. Hegmann, R. R. Tykwinski, S. R. Parkin, J. E. Anthony, "Anisotropy of transient photoconductivity in functionalized pentacene single crystals", *Applied Physics Letters* **89**, 192113, 2006. **Also, selected by the Editors for publication** in *Virtual Journal of Ultrafast Science*, December 2006 and in *Virtual Journal of THz Science and Technology*.
22. **O. Ostroverkhova**, D. G. Cooke, F. A. Hegmann, J. E. Anthony, V. Podzorov, M. E. Gershenson, O. D. Jurchescu, T. T. M. Palstra, "Ultrafast carrier dynamics in pentacene, functionalized pentacene, tetracene, and rubrene single crystals", *Applied Physics Letters* **88**, 162101, 2006. **Also, selected by the Editor for publication** in *Virtual Journal of THz Science and Technology*, April 2006.
23. **O. Ostroverkhova**, S. Shcherbyna, D. G. Cooke, R. Egerton, R. R. Tykwinski, S. R. Parkin, J. E. Anthony, F. A. Hegmann, "Optical and transient photoconductive properties of pentacene and functionalized pentacene thin films: Dependence on film morphology", *Journal of Applied Physics* **98**, 033701, 2005. **Also, selected by the Editor for publication** in *Virtual Journal of Ultrafast Science* **4** (9), 2005.
24. M. Asaro, M. Sheldon, Z. Chen, **O. Ostroverkhova**, W. E. Moerner, "Soliton-induced waveguides in an organic photorefractive glass", *Optics Letters* **30** (5), 519-521, 2005.
25. **O. Ostroverkhova**, D. G. Cooke, S. Shcherbyna, R. Egerton, R. R. Tykwinski, J. E. Anthony, F. A. Hegmann, "Band-like transport in pentacene and functionalized pentacene thin films revealed by sub-picosecond transient photoconductivity measurements", *Physical Review B* **71**, 035204, 2005.
26. **O. Ostroverkhova** and W. E. Moerner, "Organic Photorefractives: Mechanisms, Materials and Applications", **invited review**, *Chemical Reviews* **104** (7), 3267-3314, 2004.
27. L. Kulikovskiy, D. Neher, E. Mecher, K. Meerholz, H. Horhold, **O. Ostroverkhova**, "Photocurrent dynamics in a PPV-based photorefractive composite", *Physical Review B* **69**, 125216, 2004.
28. Z. Chen, M. Asaro, **O. Ostroverkhova**, W. E. Moerner, M. He, R. J. Twieg "Self-trapping of light in an organic photorefractive glass", *Optics Letters* **28** (24), 2509-2511, 2003.
29. **O. Ostroverkhova**, M. He, R. J. Twieg, W. E. Moerner "Role of temperature in controlling performance of photorefractive organic glasses", *ChemPhysChem* **4** (7), 732-744, 2003 (includes **cover art**).
30. **O. Ostroverkhova**, W. E. Moerner, M. He, R. J. Twieg "High-performance photorefractive organic glass with near-infrared sensitivity", *Applied Physics Letters* **82** (21), 3602-3604, 2003.
31. K. Willets, **O. Ostroverkhova**, M. He, R. J. Twieg, W. E. Moerner, "Novel fluorophores for single-molecule imaging" *Journal of the American Chemical Society* **125** (5), 1174-1175, 2003.
32. **O. Ostroverkhova**, U. Gubler, D. Wright, W.E. Moerner, M. He, A. Sastre-Santos, R.J. Twieg "Recent advances in understanding and development of photorefractive organic glasses," *Advanced Functional Materials* **12** (9), 621-629, 2002.
33. **O. Ostroverkhova** and K. D. Singer "Space-charge dynamics in photorefractive polymers", *Journal of Applied Physics* **92** (4), 1727-1743, 2002.
34. **O. Ostroverkhova**, A. Stickrath, and K.D. Singer "EFISHG studies of chromophore orientational dynamics in photorefractive polymers", *Journal of Applied Physics* **91**(12), 9481-9486, 2002.
35. V. Ostroverkhov, **O. Ostroverkhova**, R.G. Petschek, K. D. Singer, L. Sukhomlinova and R.J. Twieg, "Prospects for chiral nonlinear optical media", *IEEE Journal of Selected Topics in Quantum Electronics* **7** (5), 781-792, 2001.

36. Y. Reznikov, **O. Ostroverkhova**, K.D. Singer, J.-H. Kim, S. Kumar, O. Lavrentovich, B. Wang, and J.L. West “Photoalignment of liquid crystals by liquid crystals”, *Physical Review Letters* **84** (9), 1930-1933, 2000; Reply to Comment: **87** (24), art. No. 249602, 2001.
37. V. Ostroverkhov, **O. Ostroverkhova**, R.G. Petschek, K.D. Singer, L. Sukhomlinova, R.J. Twieg, S.-X. Wang, and L.C. Chien “Optimization of the molecular hyperpolarizability for second harmonic generation in chiral media” *Chemical Physics* **257** (2-3), 263-274, 2000.

## Conference proceedings (refereed conferences, full-size papers only)

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1. R. Harrison, A. Quinn, G. Weber, B. Johnson, J. Rath, V. Remcho, S. Robinson, **O. Ostroverkhova**, “Fungi-derived pigments as sustainable organic (opto)electronic materials” *Proc. of SPIE*, **v. 10101**, 101010U, 2017.
2. N. Quist, R. Grollman, J. Rath, A. Robertson, M. Haley, J. Anthony, **O. Ostroverkhova**, “Single molecule-level study of donor-acceptor interactions and nanoscale environment in blends” *Proc. of SPIE*, **v. 10101**, 101010K, 2017.
3. R. Grollman, W. Shepherd, A. Robertson, K. Paudel, J. Anthony, **O. Ostroverkhova**, “Photophysics of organic semiconductors: from ensemble to the single-molecule level”, *Proc. of SPIE*, **v. 9360**, 93600V, doi: 10.1117/12.2079755, 2015.
4. R. Grollman, J. Busche, **O. Ostroverkhova**, “Optical tweezers-based probe of charge transfer in organic semiconductors at microscopic scales”, *Proc. of SPIE*, **v. 9360**, 936016, doi: 10.1117/12.2079813, 2015.
5. B. Johnson, K. Paudel, O. Ostroverkhova, “Computational Modeling of Nanosecond Time-Scale Charge Carrier Dynamics in Organic Semiconductors”, *MRS Proceedings*, **v. 1737**, DOI: <http://dx.doi.org/10.1557/opl.2015.501>, 2015.
6. K. Paudel, B. Johnson, M. Thieme, J. Anthony, **O. Ostroverkhova**, “Charge carrier dynamics in small-molecule- and polymer-based donor-acceptor blends” *MRS Proceedings*, **v. 1733**, DOI: <http://dx.doi.org/10.1557/opl.2014.956>, 2014.
7. R. Grollman, K. Peters, **O. Ostroverkhova**, “Surface charge measurements and (dis)charging dynamics of organic semiconductors in various media using optical tweezers”, *Proc. of SPIE*, **v. 8983**, 89831N, 2014.
8. B. Johnson, K. Paudel, M. J. Kendrick, **O. Ostroverkhova**, “Numerical modeling of time-resolved photocurrent in organic semiconductor films”, *Proc. of SPIE*, **v. 8830**, 88301S, 2013.
9. K. Paudel, B. Johnson, A. Neunzert, M. Thieme, J. Anthony, **O. Ostroverkhova**, “Effects of energy offsets and molecular packing on exciton and charge carrier dynamics in small-molecule donor-acceptor composites”, *Proc. of SPIE*, **v. 8827**, 88270Q, 2013.
10. W. E. B. Shepherd, A. D. Platt, G. Banton, D. Hofer, M. Loth, J. E. Anthony, **O. Ostroverkhova**, “Effect of intermolecular interactions on charge and exciplex formation in high-performance organic semiconductors” *Proc. of SPIE*, **v. 7935**, 79350G, 2011.
11. W. E. B. Shepherd, A. D. Platt, M. Loth, J. E. Anthony, O. Ostroverkhova, “Optical, photoluminescent, and photoconductive properties of functionalized anthradithiophene and benzothiophene derivatives” *Proc. of SPIE*, **v. 7599**, 75990R, 2010.
12. A. D. Platt, W. E. B. Shepherd, J. E. Anthony, and **O. Ostroverkhova**, “Photophysical and photoconductive properties of organic semiconductor composites”, *SPIE Proceedings* **v.7413**, 74130S, 2009.
13. **O. Ostroverkhova**, A. D. Platt, W. E. B. Shepherd, J. Day, J. E. Anthony, “Optical and electronic properties of functionalized pentacene and anthradithiophene derivatives”, *SPIE Proceedings* **v.7413**, 74130A, 2009.
14. M. J. Kendrick, D. H. McIntyre, and **O. Ostroverkhova**, “Optical tweezers with resonant particles”, *CLEO/QELS*, Baltimore, MD, USA, June 2009.
15. M. J. Kendrick, D. H. McIntyre, and **O. Ostroverkhova**, “Wavelength dependence of optical tweezer trapping forces on resonant particles”, Optical Trapping and Applications Symposium, Vancouver, Canada, April 2009.
16. V.P. Onbattuvelli, S.V. Atre, **O. Ostroverkhova**, V.K. Pillai, “Effect of Particle Morphology and Content on the Properties of Palladium/Polycarbonate Nanocomposites”, *Nanotech* 2009 (Technical Proceedings of the 2008 NSTI Nanotechnology Conference and Trade Show), Houston, TX, USA, May 2009.
15. A. D. Platt, J. Day, J. E. Anthony, R. J. Twieg, and **O. Ostroverkhova**, “Temperature dependent properties of novel functionalized anthradithiophene and DCDHF derivatives”, *CLEO/QELS*, San Jose, CA, USA, May 2008.
16. M. J. Kendrick, D. H. McIntyre, and **O. Ostroverkhova**, “Optical tweezers with resonant particles”, *CLEO/QELS*, San Jose, CA, USA, May 2008.

17. A. D. Platt, W. Buchanan, J. Day, J. E. Anthony, and **O. Ostroverkhova**, "Novel functionalized pentacene and anthradithiophene derivatives: fluorescent and photoconductive properties", *Polymer Preprints* **49**(2), 984-985, 2008.
18. **O. Ostroverkhova**, J. Day, A. D. Platt, J. E. Anthony, R. J. Twieg, "Photoexcited charge carrier and exciton dynamics in organic semiconductors", *ICONO 10*, Santa Fe, NM, USA, May 2008.
19. S.V. Atre, S. Bhowmik, O.P. Valmikanathan, **O. Ostroverkhova**, "Fabrication and optical properties of nanoscale arrays of Au and Pd in polymers", *Nanotech* **1**, 538-541, 2008. (Technical Proceedings of the 2008 NSTI Nanotechnology Conference and Trade Show).
20. M. J. Kendrick, M. Blanding, D. H. McIntyre, and **O. Ostroverkhova**, "Optical field enhancement In tweezer trapping", *CLEO/QELS*, Baltimore, MD, USA, May 2007.
21. A. D. Platt, J. Day, M. J. Kendrick, S. Subramanian, J. E. Anthony, and **O. Ostroverkhova**, "Fluorescent and photoconductive properties of anthradithiophene and pentacene derivatives", *CLEO/QELS*, Baltimore, MD, USA, May 2007.
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## Funding

### Current/past awarded grants

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08/01/17-07/31/20, **NSF-CBET**, "SusChEM: Naturally produced fungal compounds for sustainable (opto)electronics", (OO(PI), S. Robinson (OSU Forestry) co-PI) **\$410,000**

09/01/2015-08/31/2018, **NSF-DMR**, "MRI: Acquisition of an Atomic Force Microscope with Optical, Thermal, and Electrical Analysis Capabilities" (PI: B. Aleman (U of Oregon); OO is one of 4 co-PIs) **\$305,620**

09/2015-12/2015 **OSU/FRT** "Comprehensive review of organic optoelectronics" **\$6,000**

01/2015-12/2015 **OSU/GRF** "Organic electronic devices comprised of low-toxicity, low-cost, naturally-produced fungal compounds" (PI: Vince Remcho, OO is a co-PI) **\$10,000**

09/2012-08/2015 **NSF-DMR** "Designing intermolecular interactions for high-performance small-molecule bulk heterojunctions" (OO (single PI)) **\$389,515**

01/2014 – 01/2015 **OSU/RERF** "Hyperspectral imaging facility" (PI: Matt Graham, OO is a co-PI) **\$52,460**

05/2012-05/2013 **OSU/COS Scholar Award** **\$8,000**

04/2012-06/2012 **OSU/FRT** "Handbook of organic optical and optoelectronic materials and devices" **\$6,000**

10/2010-12/2011 **ONR** "ONAMI nanometrology and nanoelectronics initiative: Intermolecular energy transfer: from exciton diffusion at nanoscales to low-threshold solid-state organic lasers" (OO (PI)) **\$93,018**

04/2008-03/2013 **NSF-DMR/CHE (CAREER)** "Charge carrier dynamics in organic semiconductors on the macroscopic and microscopic scales" (OO (single PI)) **\$535,064**

07/2009-07/2011 **Agricultural Research Foundation** "Enhanced crop production in Oregon: augmentation and management of bee pollinators" (S. Rao, OSU (PI), OO (co-PI)) **\$100,000**

05/2010-04/2013 **AFOSR** "Photorefractive polymers for 3D updateable displays" (N. Peyghambarian, U of Arizona (PI), OO is subcontracted (single PI at OSU)) **\$30,000**

03/2009-03/2010 **OSU/TRF** "Undergraduate optics lab upgrade" (OO (PI)) **\$58,769**

10/2009-10/2010 **ONR** "ONAMI nanometrology and nanoelectronics initiative: Chemical imaging of the bio-nano interface and thin film nanostructures by micro-Raman/Photoluminescence spectroscopy " (G. Rorrer, OSU (PI), OO (a co-PI)) **\$290,000**

10/2009-10/2010 **ONR** "ONAMI nanometrology and nanoelectronics initiative: Quantum Dots as Ion-Selective Optical Nanosensors " (A. Shvarev, OSU (PI), OO (a co-PI)) **\$81,319**

10/2008-10/2009 **ONR** "ONAMI nanometrology and nanoelectronics initiative: Biochemical Sensors and Integrated Measurement Platform Controlled by Optical Tweezers and Microfluidics " (D. McIntyre, OSU (PI), OO (a co-PI)) **\$240,682**

09/2007-08/2009 <b>NSF-DMR</b> (MRI) "Acquisition of a near-field scanning optical microscope " (M. Deutsch, U of Oregon (PI), OO (a co-PI))	<b>\$324,675</b>
12/2006-12/2009 <b>AFOSR</b> "Photorefractive polymers for 3D updateable displays" (N. Peyghambarian, U of Arizona (PI), OO is subcontracted (single PI at OSU))	<b>\$30,000</b>
04/2008-04/2009 <b>OSU/GRF</b> "The unanticipated effects of sunlight-induced fluorescence on native bee pollinator behavior" (OO (PI))	<b>\$10,000</b>
10/2007-12/2009 <b>ONR</b> "ONAMI nanometrology and nanoelectronics initiative: Beyond sensing under equilibrium: photoresponsive nanoprobe for rapid localized acid-base titration" (A. Shvarev, OSU (PI), OO (a co-PI))	<b>\$107,311</b>
10/2007-12/2009 <b>ONR</b> "ONAMI nanometrology and nanoelectronics initiative: Identification, imaging and manipulation of charged states in organic semiconductors: from macroscopic to microscopic optoelectronic devices " (OO (PI))	<b>\$102,632</b>
04/2007-12/2009 <b>ONR</b> "ONAMI nanometrology and nanoelectronics initiative: Optical field enhancement in tweezer trapping and single-molecule spectroscopy " (D. McIntyre, OSU (PI), OO (co-PI))	<b>\$91,037</b>
12/2006-12/2009 <b>ONR</b> "ONAMI nanometrology and nanoelectronics initiative: Charge carrier dynamics in organic semiconductors at nanoscales: towards optoelectronic nanoswitches" (OO (PI))	<b>\$102,472</b>
07/2007-07/2008 <b>OSU/RERF</b> "Acquisition of a high-sensitivity EMCCD camera for single-molecule spectroscopy" (OO ( <b>single PI</b> )),	<b>\$24,450</b>
09/2006-09/2009 <b>ACS/PRF</b> " Charge transfer in organic semiconductors: from microscopic to macroscopic electronic properties on all time scales" (OO ( <b>single PI</b> ))	<b>\$35,000</b>
08/2006-08/2007 <b>Tektronix, Inc.</b> "Probing ultrafast carrier dynamics with digital sampling oscilloscope" (OO ( <b>single PI</b> )),	<b>\$21,000</b>
08/2006-07/2007 <b>Spiricon, Inc.</b> "Laser pulse shape analyzer" (OO ( <b>single PI</b> )),	<b>\$3,500</b>
04/2006-06/2006 <b>OSU/FRT</b> "Photophysics of organic semiconductors",	<b>\$6,000</b>

## D. Service

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### 1. Department Service:

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1. Advisory Board	.....2012-2014, 2016-present
2. Undergraduate curriculum committee	..... 2014—2016
3. Graduate curriculum committee	.....2005-2014, 2017-present
4. Colloquium committee	..... Fall 2008 – Spring 2009 (chair), 2013-2015 (chair)
5. Graduate admission committee	..... Winter 2005, 2007 (chair), 2008 (chair), 2016 (chair)
6. Comprehensive exam committee	.....Fall 2010- Spring 2012
7. Graduate Open House (organizer)	..... Winter 2005-2012, 2016
8. Engineering Awareness week/Undergraduate	

Open House (participant)	.....	Fall 2006- Spring 2012
9. Graduate taskforce and Optics committee	.....	Fall 2006--2014
10. P&T committees	.....	Fall 2005 (instructor), 2012-present
11. Society of Physics Students advisor	.....	Fall 2005----Fall 2006
12. Instructor, faculty search committee	.....	Winter 2006, 2012
13. Solid State/Optics seminar	.....	Fall 2007, 2009, 2012, Spring 2011, 2014
14. Math test for incoming class	.....	Fall 2005-2006,2009
15. Department newsletter	.....	2013-2014, 2016-present
16. Department safety	.....	2016-present

## 2. University Service (outside of Physics Department):

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1. SURE Science committee .....2017
2. Faculty Senate .....2014-2016
3. Research Equipment Reserve Fund (RERF) reviewer .....2015
4. Faculty searches (Analytical and Physical Chemistry, OSU) Winter 2007,2008
5. "Breakthroughs in Science" event (2009) – one out of 4 faculty selected from the College of Science to present a project to OSU donors
6. Graduate Council Representative/Program Committee member for:

Britany Swann	Mech. Eng.	M. Sc.	current student
Steph Walker	Mech. Eng./Robotics	Ph. D.	current student
George Neuhaus	Chemistry	Ph. D.	current student
Jesse Keeler	Chem. Eng.	M. Sc.	2016
Falah Alanazi	EECS	M. Sc.	current student
Fan Zhou	EECS	Ph. D.	current student
Greg Angelos	EECS	Ph. D.	2017
Ara Alexandrian	Health Phys.	M. Sc.	2015
Younghoon Whang	EECS	Ph.D.	2016
Daniel McCaulen-Walden	Chemistry	Ph. D.	current student
Maha Alghamdi	Chemistry	M. Sc. (2014)	current Ph.D. student
Zeyu You	EECS	M.Sc. (2014)	current Ph.D. student
John McGlone	EECS	Ph.D.	2017
Dylan Fast	Chemistry	Ph. D.	current student
Cem Celik	Chemistry	Ph. D.	current student
Kileigh Petouris	Health Phys.	M. Sc.	2014
Fang-Yu Lee	Chem. Eng.	M. Sc.	2013
Chao Wang	Chemistry	Ph. D.	2013
Amanda Hoyt	Chemistry	M.Sc.	2014
Yungli Wang	Chemistry	Ph. D.	current student
Breland Oskar	Chemistry	Ph. D.	current student
Vishal Patil	Mech. Eng.	Ph. D.	2012
Steven Gaskill	EECS	M.Sc.	2010
Nessrine Chakchouk	EECS	Ph. D.	2012
Roderick Whang	EECS	Ph. D. student	current student
Weiyang Li	EECS	Ph. D. student	current student
Taehwan Oh	EECS	Ph. D.	2013
Colin Harthcock	Chemistry	Ph. D.	2015
Jeremy Campbell	Chem. Eng.	Ph. D.	2013
Sasidhar Nirudodhi	Chemistry	Ph.D.	2013
Subrata Shaw	Chemistry	Ph.D.	2014
Ramin Zanbaghi	EECS	Ph.D.	2014
Jaana Rajachidambaram	Chem. Eng.	M. Sc.	2011

Santosh Murali	EECS	M. Sc.	2011
David Dickson	Bioeng.	M.Sc.	2010
Samia El-Amrani	EECS	M. Sc.	2010
John Melbardis	Chemistry	M. Sc.	2009
Eric Edgar	Chem. Eng.	M. Sc.	2008
Kavitha Rapolu	EECS	M. Sc.	2008
Chris Lindsley	EECS	M.Sc.	2007
Wei Zhang	Chemistry	Ph.D.	2006
Arathi Sundaresan	EECS	M. Sc.	2006
Onur Acicmez	EECS	Ph.D.	2006
Arien Sligar	EECS	M.Sc.	2006

### Service to the Profession:

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1. Academic Editor for PLoS ONE (since 2014)
2. Reviewer (**~15-20 papers per year**) for: Nature Materials, Nature Communications, Scientific Reports, American Chemical Society journals (J. Phys. Chem. B and C, J. Am. Chem. Soc., Chem. Mat.), Optical Society of America journals (JOSA B, Opt. Exp., Opt. Lett., Opt. Comm.), American Institute of Physics journals (J. Appl. Phys., Appl. Phys. Lett., J. Chem. Phys., J. Res. Sol. En.), Elsevier journals (Chem. Phys., Opt. Mat., Opt. Mat. Ex.), and Wiley journals and books (Adv. Mat., Adv. Funct. Mat., ChemPhysChem, Enc. Of Polymer Science and Technology), IEEE Photonics Tech. Lett.
3. Reviewer/panelist for the National Science Foundation (DMR, EECS, CHE), Petroleum Research Fund (PRF), Department of Energy (DOE), Molecular Foundry, the American Association for Advancement in Science (AAAS), and Poland NSN (a Polish analog of the NSF).
4. Engineering Physics advisory board, Case Western Reserve University (since 2008)