

Oksana G. Ostroverkhova

Curriculum Vita

A. Education and Employment Information

Education

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

Professional Appointments

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

Honors and Awards

- 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 59th and 64th 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

Instructional summary

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
PH 651 Quantum Mechanics I	Fall	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 (2nd year)
4. Greg Giesbers Ph. D. student current student (2nd year)
5. Novela Auparay M. S. 2018
6. Robert Harrison M. S. 2017
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

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

1.	Michael Trumbull	B.S. (Physics) student	expected 2019
2.	Ryan Tollefsen	B.S. (Physics, Hon.) student	expected 2019
3.	Mark Li	B.S. (Chem E) student	expected 2018
4.	Richard Wallace	B.S. (Physics)	2017
5.	Alexander Quinn	B.S. (Physics) student	expected 2018
6.	Graham Founds	B.S. (Physics)	2017
7.	Jeremy Rath	B.S. (Physics)	2016
8.	Jacob Busche	B.S. (Physics, Honors)	2015
9.	Alex Robertson	B. S. (Nucl. Eng.)	2015
10.	Mattson Thieme	B.S. (Physics)	2014
11.	Kyle Peters	B. S. (Physics)	2013
12.	Afina Neunzert	B. S. (Physics, Honors)	2013
13.	Keith Schaefer	B. S. (Physics)	2012
14.	Kyle Williams	B.S. (Physics)	2012
15.	Thomas Hathaway	B. S. (Physics)	2011
16.	Jessica Gifford	B. S. (Physics, Honors)	2011
17.	Garrett Banton	B. S. (Nucl. Eng.)	2011
18.	Mark Mazurier	B.S (Physics)	2007
19.	Joseph Peterson	B.S. (Physics)	2006
20.	Zach Peterson	B.S. (Physics)	2006

Summer/Internship Project Mentor

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

1.	Carly Fengel	Ph. D.	current student
2.	Mitchell Senger	Ph. D.	current student
3.	Daniel McCulley	Ph. D.	current student
4.	Amani Alobaidi	Ph. D.	current student
5.	Ali Mousavian	Ph. D.	current student
6.	Jihan Kim	Ph. D.	current student
7.	Kyle Vogt	Ph. D.	current student
8.	Andrew Stickel	Ph. D.	2016
9.	Lee Aspitarte	Ph. D.	2017
10.	Matt Cibula	Ph. D.	2015
11.	Michael Paul	Ph. D.	2014
12.	Peter Wojcik	M. S.	2012
13.	Louis Maizy	M.S.	2012
14.	Chris Reidy	Ph. D.	current student

15.	Tal Sharf	Ph. D.	2014
16.	Tristan DeBorde	Ph. D.	2014
17.	Jason Francis	Ph. D.	2013
18.	Zach Thomson	Ph. D.	2015
19.	Ali Almaqwashi	M. S.	2012
20.	Sukosin Thongrattanasiri	Ph.D.	2010
21.	Andriy Zakutayev	Ph. D.	2010
22.	Nicholas Kuhta	Ph. D.	2012
23.	Seongweon Park	Ph.D.	2012
24.	Matt Leyden	Ph. D.	2011
25.	Joseph Tomaino	Ph.D.	2011
26.	Andy Jameson	Ph.D.	2012
27.	Landon Prsbrey	Ph.D.	2011
28.	Denny Jackson	Ph. D.	2011
29.	Vincent Rossi	Ph. D.	2015
30.	Robynne Kirkpatrick	Ph.D.	2008
31.	Zachary Wiren	Ph.D.	2008
32.	Jon Shanks	M. S.	2007
33.	Matt Neel	M. S.	2007
34.	Joel Wetzel	M.S.	2006

Team or Collaborative Efforts

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

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

Full Publication List

Books and Invited book chapters

1. "Handbook of Organic Materials for Electronic and Photonic Devices", edited by **O. Ostroverkhova**, 2nd 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, 2nd 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.

Refereed journal articles

1. R. Grollman, G. Founds, R. Wallace, and **O. Ostroverkhova**, "Simultaneous fluorescence and surface charge measurements on organic semiconductor-coated silica microspheres in (non)polar liquids", *Optics Express* **25**, 29161-29171, 2017.
2. 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).
3. **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>).
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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)

16. M. J. Kendrick, D. H. McIntyre, and **O. Ostroverkhova**, "Wavelength dependence of optical trapping forces on dyed-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).
17. 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.
18. 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).
19. 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).
20. 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.
21. 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.
22. **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*.
23. **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.
24. **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.
25. 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.
26. **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.
27. **O. Ostroverkhova** and W. E. Moerner, "Organic Photorefractives: Mechanisms, Materials and Applications", **invited review**, *Chemical Reviews* **104** (7), 3267-3314, 2004.
28. 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.
29. 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.
30. **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**).
31. **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.
32. 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.
33. **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.
34. **O. Ostroverkhova** and K. D. Singer "Space-charge dynamics in photorefractive polymers", *Journal of Applied Physics* **92** (4), 1727-1743, 2002.
35. **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.

36. 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.
37. 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.
38. 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)

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.
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23. M. Bothara, S. Atre, S. Park, R. German, T. Sudarshan, R. Radhakrishnan, and **O. Ostroverkhova**, "Nanoscale SiC sintered Structures for Advanced Microsystems and Power Electronics Packaging", in *Proceedings of 2007 IMAPS/ACerS 3rd International Conference and Exhibition on Ceramic Interconnect and Ceramic Microsystems Technologies*, Co-Published by International Microelectronics and Packaging Society and The American Ceramic Society, Denver, CO, 373-380, 2007.
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35. V. Ostroverkhov, **O. Ostroverkhova**, R.G. Petschek, K.D. Singer, L. Sukhomlinova and R.J. Twieg "Optimization of the nonlinear optical response in chiral media", *SPIE Proceedings*, v.**4279**, 25-36, 2001.

Funding

Current/past awarded grants

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 **NSF-DMR** (MRI) "Acquisition of a near-field scanning optical microscope " (M. Deutsch, U of Oregon (PI), OO (a co-PI))
\$324,675

12/2006-12/2009 **AFOSR** "Photorefractive polymers for 3D updateable displays" (N. Peyghambarian, U of Arizona (PI), OO is subcontracted (single PI at OSU))
\$30,000

04/2008-04/2009 **OSU/GRF** "The unanticipated effects of sunlight-induced fluorescence on native bee pollinator behavior" (OO (PI))
\$10,000

10/2007-12/2009 **ONR** "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))
\$107,311

10/2007-12/2009 **ONR** "ONAMI nanometrology and nanoelectronics initiative: Identification, imaging and manipulation of charged states in organic semiconductors: from macroscopic to microscopic optoelectronic devices " (OO (PI))
\$102,632

04/2007-12/2009 **ONR** "ONAMI nanometrology and nanoelectronics initiative: Optical field enhancement in tweezer trapping and single-molecule spectroscopy " (D. McIntyre, OSU (PI), OO (co-PI))
\$91,037

12/2006-12/2009 **ONR** "ONAMI nanometrology and nanoelectronics initiative: Charge carrier dynamics in organic semiconductors at nanoscales: towards optoelectronic nanoswitches" (OO (PI))
\$102,472

07/2007-07/2008 **OSU/RERF** "Acquisition of a high-sensitivity EMCCD camera for single-molecule spectroscopy" (OO (single PI)),
\$24,450

09/2006-09/2009 **ACS/PRF** " Charge transfer in organic semiconductors: from microscopic to macroscopic electronic properties on all time scales" (OO (single PI))
\$35,000

08/2006-08/2007 **Tektronix, Inc.** "Probing ultrafast carrier dynamics with digital sampling oscilloscope" (OO (single PI)),
\$21,000

08/2006-07/2007 **Spiricon, Inc.** "Laser pulse shape analyzer" (OO (single PI)),
\$3,500

04/2006-06/2006 **OSU/FRT** "Photophysics of organic semiconductors",
\$6,000

D. Service

1. Department Service:

- | | |
|---------------------------------------|--|
| 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):

1. SURE Science committee2017
2. Faculty Senate2014-2016
3. Research Equipment Reserve Fund (RERF) reviewer2015
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:

Ni Trieu	EECS	Ph. D.	current student
Britany Swann	Mech. Eng.	M. Sc.	2017
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.	2017
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.	2017
Breland Oskar	Chemistry	Ph. D.	2017
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 Zambaghi	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:

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)