

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> (Kyiv, 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

2018-present	Professor, <i>Physics Department, Oregon State University</i> , Corvallis, OR, USA
2010-2018	Associate Professor, <i>Physics Department, Oregon State University</i> , Corvallis, OR, USA
2011	Consultant, Nitto-Denko, San Diego, CA, USA
2005-2010	Assistant Professor, <i>Physics Department, Oregon State University</i> , Corvallis, OR, USA
2003-2005	Killam Memorial Postdoctoral Fellow, <i>Physics Department, University of Alberta</i> , Edmonton, AB, Canada (Postdoctoral advisor: F. A. Hegmann)
2001-2003	Postdoctoral Scholar, <i>Chemistry Department, Stanford University</i> , Stanford, CA, USA (Postdoctoral advisor: W. E. Moerner)
1997-2001	Research Assistant, <i>Physics Department, Case Western Reserve University</i> , Cleveland, OH, USA
1996-1997	Teaching Assistant, <i>Physics Department, Case Western Reserve University</i> , Cleveland, OH, USA

Honors and Awards

OSU College of Science SciRis II Award (2021) and SciRis Type 2 Award (2023)

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, 2019)

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
PH 651 Quantum Mechanics I	Fall	2018
PH 652 Quantum Mechanics II	Winter	2019
PH 653 Quantum Mechanics III	Spring	2019
PH 651 Quantum Mechanics I	Fall	2019
PH 652 Quantum Mechanics II	Winter	2020
PH 653 Quantum Mechanics III	Spring	2020
PH 651 Quantum Mechanics I	Fall	2020
PH 652 Quantum Mechanics II	Winter	2021
PH 653 Quantum Mechanics III	Spring	2021
PH 651 Quantum Mechanics I	Fall	2021
PH 652 Quantum Mechanics II	Winter	2022
PH 653 Quantum Mechanics III	Spring	2022
PH 651 Quantum Mechanics I	Fall	2022

PH 652 Quantum Mechanics II	Winter	2023
PH 653 Quantum Mechanics III	Spring	2023
PH 651 Quantum Mechanics I	Fall	2023
PH 652 Quantum Mechanics II	Winter	2024
PH 585 Atomic, Molecular, and Optical Physics	Spring	2024
PH 651 Quantum Mechanics I	Fall	2024

Student Evaluation

(since 2011)

Course	Term/Yr	Enrollment	Course Overall ranking (out of 6.0)	Department median	Instructor contribution ranking (out of 6.0)	Department median
PH 681	Fall 2011	10	5.5	4.2	5.8	4.5
PH 481	Winter 2012	25	5.5	4.3	5.6	4.6
PH 673	Fall 2012	11	5.7	4.0	5.8	4.3
PH 424	Winter 2014	34	5.3	4.3	5.7	4.7
PH 426	Spring 2014	29	5.7	4.4	5.9	4.7
PH 673	Fall 2014	10	5.8	4.3	5.8	4.6
PH 424	Winter 2015	29	5.4	4.5	5.6	4.8
PH 426	Spring 2015	28	5.7	4.5	5.8	4.9
PH 424	Winter 2016	36	5.4	4.5	5.7	4.9
PH 426	Spring 2016	34	5.7	4.6	5.8	4.9
PH 651	Fall 2016	14	5.5	4.7	5.7	4.9
PH 652	Winter 2017	10	5.9	4.6	5.9	4.9
PH 653	Spring 2017	11	5.9	4.7	5.9	5.0
PH 651	Fall 2018	14	5.7	4.6	6.0	5.1
PH 652	Winter 2019	11	5.4	4.4	5.8	4.8
PH 653	Spring 2019	13	5.8	4.5	5.9	4.9
PH 651	Fall 2019	9	6.0	4.3	6.0	4.4
PH 651	Fall 2020	14	6.0	4.5	6.0	4.8
PH 652	Winter 2021	13	6.0	4.6	6.0	4.8
PH 653	Spring 2021	12	6.0	4.5	6.0	4.7
PH 651	Fall 2021	15	6.0	4.5	6.0	4.8
PH 652	Winter 2022	14	6.0	4.7	6.0	4.9
PH 653	Spring 2022	12	6.0	4.8	6.0	5.0
PH 651	Fall 2022	14	6.0	5.0	6.0	5.3
PH 652	Winter 2023	10	6.0	4.9	6.0	5.2
PH 653	Spring 2023	9	6.0	4.8	6.0	5.1
PH 651	Fall 2023	13	5.5	4.6	5.9	5.0
PH 652	Winter 2023	10	6.0	4.7	6.0	5.1
PH 585	Spring 2023	8	6.0	4.4	6.0	4.7

Teaching approach

In all courses I teach, I strive to create an interactive and high intensity, but warm and welcoming, classroom environment and to introduce research context into the curriculum. One of the course components, which I develop for all courses, is worksheets, which are typically short questions, designed for 3-5 minutes of in-class work, given to students at every class, promptly graded and returned. This component, together with graded homework, provides efficient feedback for both the instructor and the students. Understanding of the concepts, logic, and making physical sense of results are emphasized in every course.

For many years, I have taught a graduate core Quantum Mechanics sequence (PH 65x, required for all first-year graduate students and popular with advanced undergraduates). This sequence represents a challenge for most students, since the course material is highly theoretical, and it requires physical intuition, strong mathematical skills, and ability to think in abstract terms. In addition, the pace of the courses is high, as the coverage of the material is broad and deep. For these courses to be successful, both students and the instructor must work together and significantly contribute to classes. In particular, the students must be engaged intensively throughout a year, and the instructor must maintain constant feedback from students, be responsive, and be ready to adjust the pace of the course, if needed. The welcoming atmosphere, every-day worksheets, and connections between the textbook material and modern research help the students succeed in this challenging sequence and enjoy the course material.

In courses such as optics (PH 481/581) or atomic, molecular, and optical physics (PH 585), I include experimental demonstrations in lectures; explanations of the observed phenomena or predictions of the experimental outcomes also appear as worksheet questions. Discussions of modern research papers related to the course topics are included in lectures, both in graduate and undergraduate courses; their analysis is included in homework and/or term papers in graduate courses. The “Nanoscience and Nanotechnology” graduate module (PH673) I developed is mostly based on modern research. In this course, in addition to problem solving, homework involves working through research papers and reproducing calculations and relating theory and the observed experimental data. The students are also required to submit a mini-review term paper of a topic within the course material, and the final exam involves problem solving, analysis of a research paper, and individual questions based on each student’s term paper. Several courses (PH 585, PH 653, PH 673, PH 681) incorporate mini-conferences where groups of students prepare talks and distribute abstracts and references to their peers ahead of time so that everyone has time to prepare questions; the quality of each presentation and question is evaluated by the class peers and is part of the final grade. The graduate modules have a partially research-based final exam that includes analyzing a research paper and answering questions individually crafted for each student based on the term paper.

I keep flexible and virtually unlimited office hours for all courses I teach to make myself as available as possible. The approach appears to work -- I have been a finalist for the College of Science Loyd Carter graduate teaching award four times (2007, 2013, 2016, 2019) and I won it in 2016.

Curriculum Development

Since 2005, I have taught 13 different undergraduate and graduate physics courses, and have been involved in the broader department-wide curriculum reform at both levels. I have learned that students respond enthusiastically to physics instruction when it is presented in the context of current, cutting-edge research and I try to take advantage of this enthusiasm at every opportunity.

At the graduate level, I have taught a graduate core three-course sequence in Quantum Mechanics and Atomic, Molecular, and Optical physics for first-years and 5-week intensive modules “Nanoscience and Nanotechnology”, “Modern Optics”, and “Semiconductor Optics” for second- and third-year graduate students.

Two special features that I implement in my graduate courses are emphasis on the connection between the textbook material and modern research, and daily graded worksheets.

In every graduate course there is a research-related component. Examples are (i) analysis of experimental results and calculations of various parameters from experimental data presented in recent research papers using fundamentals studied in class, (ii) a term paper that is a mini-review of a relevant topic based on 3-5 research articles, or (iii) a peer-reviewed mini-conference where groups of students prepare talks and distribute abstracts and references to their peers ahead of time so that everyone has time to prepare questions; the quality of each presentation and question is evaluated by the class peers and is part of the final grade. The graduate modules have a partially research-based final exam that includes analyzing a research paper and answering questions individually crafted for each student based on the term paper.

At an undergraduate level, I taught senior-level optics and junior-level Paradigms courses, “Central Forces” and “Waves”. The optics course is a 4-credit hour course that includes a lab component in addition to lectures. Here, again, the course was structured in a way that graded worksheets, as well as homework, were given every day, and lab reports were required for each lab experiment. Demonstrations of various phenomena were performed at almost every lecture, with a follow-up question as a worksheet. Often, the task was reversed, and the students were asked to predict what they were going to observe experimentally based on the theory. I received very positive feedback from the students, as they greatly appreciated illustrations of the connection between experimental observations and the theory behind them. The Paradigms courses (which are a part of the OSU-restructured upper division undergraduate program) involved three-week intensive modules, with 7 contact hours per week. My main contribution to these courses’ development is the introduction of graded twice-a-week worksheets, which were designed for about one hour of students’ in-class work under the supervision of the instructor and a TA. Three generations of students I taught in these courses unanimously agreed that these were extremely helpful in understanding the material as they enabled direct communication with the instructor and opportunity to formulate and ask questions.

I have been a member of the graduate and undergraduate teaching groups in the Physics Department. As a part of the graduate group, in 2010 I helped redesign the Ph.D. curriculum to provide the students with a broad spectrum of offered classes. The program contains several core courses offered every year and several specialty-topic modules, offered on a rotational basis. I have developed and taught the modules on nanoscience and nanotechnology (PH673), modern optics (PH681), and semiconductor optics (PH682). As a part of the undergraduate group, in 2016 I contributed to the restructuring of the undergraduate electronics course sequence and of the Paradigms program (Paradigms 2.0). The latter now consists of 5-week intensive modules featuring related content across disciplines. Additional participation in the department-level efforts on curriculum development and reform is listed under “Team or Collaborative Efforts”.

Team or Collaborative Efforts

- Spring 2016 - Participation in Paradigms 2.0 activities (advised on content and topic sequencing to be included in an updated, restructured upper division undergraduate curriculum) and other departmental initiatives (content and structure of graduate modules in the restructured graduate curriculum)
- Spring 2015 - Restructuring PH411, 412 – the undergraduate electronics sequence (with Profs. D. McIntyre and W. Qiu)
- Winter/Spring 2006-2011 - Experimental demonstrations in lasers and nonlinear optics for PH/ECE 482 and 483 courses (taught by Prof. T. Plant)
- Fall 2011 - Restructuring PH/ECE 481, 482, 483 – the undergraduate optics sequence (with Profs. D. McIntyre, A. Wang, T. Plant)

- Winter 2009 - Secured TRF (technology resource fee) funding to upgrade optics instructional labs (with Profs. D. McIntyre, W. Hetherington, T. Plant); designed new experiments and created necessary lab manuals for PH 481 undergraduate optics laboratory

Graduate and Undergraduate Students and Postdoctoral Trainees (where they went in parentheses)

Postdoctoral Trainees

1.	Dr. E. K. Tanyi	03/2019-03/2021 (co-advised with Prof. L.-J. Cheng) (Intel, Inc.)
2.	Dr. Keshab Paudel	10/ 2012-08/2015 (Micron, Inc.)
3.	Dr. Rajesh K. R.	12/2013-12/2014 (Professor at Sree Krishna College (India))

Major Professor

4.	Anthony Winchell	Ph.D. student	2 nd year student
5.	Kevin Dimmitt	Ph. D. student	4 th year student
6.	Matt O'Meara	Ph. D. student	M.S. 2024, 4 th year student
7.	Vivek Jain	M. S.	2023 (PhD studies at U Kansas)
8.	Piper Aislinn	Ph. D. student	M.S. 2024, 4 th year student
9.	Evan Lambertson	M. S.	2022 (PhD studies at Oregon State)
10.	Michael Chase	Ph.D. student	M.S. 2023, 5 th year student
11.	Roshell Lamug	Ph.D. student	M.S. 2022, 5 th year student
12.	Winston Goldthwaite	Ph.D. student	M.S. 2021, 6 th year student
13.	Carter Webber	M. S.	2021 (Tektronix, Inc.)
14.	Jonathan Van Schenck	Ph. D.	2021 (Nova Dynamics, LLC)
15.	Greg Giesbers	Ph. D.	2021 (Intel, Inc.)
16.	Novela Auparay	M. S.	2018 (Microsoft, Inc.)
17.	Robert Harrison	M. S.	2017 (Comm. College teaching)
18.	Nicole Quist	Ph. D.	2021 (beatBread, Inc. senior data scientist)
19.	Rebecca Grollman	Ph. D.	2017 (Bsquare, Inc. – data scientist)
20.	Brian Johnson	Ph. D.	2015 (Data Science Dojo, Inc. – data scientist)
21.	Kati Bilty	M. S.	2013 (Radiant Zemax, Inc.)
22.	Whitney Shepherd	Ph.D.	2012 (Intel, Inc.)
23.	Mark Kendrick	Ph.D.	2012 (Intel, Inc.)
24.	Andrew Platt	Ph. D. student	2005-2010 (NREL)
25.	Jonathan Day	Ph.D.	2008 (HS teaching)

Co-advisor (Ph.D. students)

1.	Siddhartha Bhowmik (co-advised with Prof. S. Atre)	Ph.D. (Mech.Eng.)	2009
2.	Evan Lambertson (co-advised with Prof. T. Zuehlsdorff)	Ph.D. student	

Senior Project Mentor

1.	Kieran King	B.S. (Physics)	expected 2027
2.	Aidan Harlow	B.S. (Physics)	expected 2027
3.	Josiah Chan	B. S. (Physics)	expected 2025
4.	James Nelson	B.S. (Physics, Math)	expected 2025
5.	Nathan Duggan	B.S. (Physics)	expected 2025
6.	Corey Cleveland	B.S. (Physics, Math)	expected 2026
7.	Madalyn Gragg	B.S. (Physics, Mech. Eng.)	expected 2025
8.	Lucas Parvin	B. S. (Zoology, Honors)	2022 (PhD studies at Auburn U)
9.	Rebecca Munk	B.S. (Physics)	2023 (PhD studies at UW)
10.	Ross Dewbury	B.S. (Physics)	2020 (NanoVox, Inc.)
11.	Richard Puro	B.S. (Physics)	2021 (PhD studies at CU Boulder)
12.	Cameron Wiesner	B.S. (Physics)	2020 (MS studies at Oregon State)

13.	Reid Center	B.S. (Physics)	2020 (Intel, Inc.)
14.	Jasper Spafford	B.S. (Physics)	2020 (Thermo Fisher Scientific)
15.	David Haas	B.S. (Physics)	2019
16.	Ryan Tollefsen	B.S. (Physics, Honors)	2020 (PhD studies at UC Berkeley)
17.	Mark Li	B.S. (Chem E)	2019 (PhD studies at Arizona State)
18.	Richard Wallace	B.S. (Physics)	2017
19.	Alexander Quinn	B.S. (Physics)	2018 (PhD studies at U of Oregon)
20.	Graham Founds	B.S. (Physics)	2017 (PhD studies at Oregon State)
21.	Jeremy Rath	B.S. (Physics)	2016 (PhD studies at Northwestern)
22.	Jacob Busche	B.S. (Physics, Honors)	2015 (PhD studies at UW)
23.	Alex Robertson	B. S. (Nucl. Eng.)	2015 (Law School at Willamette U)
24.	Mattson Thieme	B.S. (Physics)	2014 (MS studies at U of Oregon)
25.	Kyle Peters	B. S. (Physics)	2013 (PhD studies at Case Western)
26.	Afina Neunzert	B. S. (Physics, Honors)	2013 (PhD studies at U Michigan)
27.	Keith Schaefer	B. S. (Physics)	2012
28.	Kyle Williams	B.S. (Physics)	2012
29.	Thomas Hathaway	B. S. (Physics)	2011 (Air Force)
30.	Jessica Gifford	B. S. (Physics, Honors)	2011 (PhD studies at Arizona State)
31.	Garrett Banton	B. S. (Nucl. Eng.)	2011 (Sulzer Pumps, Inc.)
32.	Mark Mazurier	B.S (Physics)	2007
33.	Joseph Peterson	B.S. (Physics)	2006 (PhD studies at New Mexico State U)
34.	Zach Peterson	B.S. (Physics)	2006 (MS studies at Oregon State)

Summer/Internship Project Mentor

1.	Kien Peter	B.S. (Physics)	expected 2026
2.	Aidan Bagshaw	B.S. (Physics)	expected 2025
3.	Claire Swarz	B.S. (Physics, Chem.)	2024
4.	Roan Luikart	B.S. (Physics, Math.)	expected 2025
5.	Jason Culley	B.S. (Physics)	2024
6.	Johannes Huurman	B. S. (Physics, Math)	expected 2025
7.	Michael Hilderbrandt	B. S. (Physics)	
8.	Mallory Kirms	B.S. (Physics)	
9.	Ryan Leopold	B.S. (Physics)	2022 (Navair)
10.	Alex Widmer	B.S. (Physics)	
11.	Michael Brodeur	B. S. (Chem)	2023 (PhD studies at Penn State)
12.	Malachi Fisher	B.S. (EECS)	2020
13.	Michael Trumbull	B.S. (Physics)	2019
14.	Mirek Brandt	B.S. (Physics)	2018 (PhD studies at UCSB)
15.	Thomas Gilray	B.S. (Comp. Sc.)	2010 (PhD studies at U Utah)
16.	David Hofer	post-bacc (Physics)	2010
17.	Guy Cutting	B.S (Comp. Phys.) student	2008
18.	Dustin Quandt	B.S. (Env. Sc.)	2010
19.	Samuel Peterson	B. S. (Physics)	2008 (PhD studies at Oregon State)

Graduate/Honors College Committee Member

1.	Mans Mattsson	Ph. D.	current student
2.	Trevor Reid	Ph.D.	current student
3.	Brett Clark	Ph.D.	current student
4.	Augustin Griswald	Ph.D.	current student
5.	Jared Parker	Ph. D.	current student
6.	Christian Cunningham	Ph. D.	current student
7.	Vuela Guay	Ph. D.	current student
8.	Lupe Macintosh	Ph. D.	current student
9.	Lucas Kolanz	Ph. D.	current student
10.	Robin Case	Ph. D.	current student

11.	Dublin Nichols	Ph. D.	2024
12.	Yuan Gao	Ph. D.	current student
13.	Guanyu Li	Ph. D.	2023
14.	Spencer Thorp	Ph. D.	current student
15.	Nathan Walker	Ph. D.	current student
16.	Ben Bauml	Ph. D.	M.S. 2023, current Ph.D. student
17.	Pritha Biswas	Ph.D.	2024
18.	Max Siebersma	B.S. (Hon.)	2023
19.	Michelle Jeliazkova	B.S. (Hon.)	2021
20.	Alden Bradley	Ph. D.	2018-2022
21.	George Mattson	Ph.D.	2022
22.	Gina Mayonado	Ph.D.	2023
23.	Kirstie Finster	Ph. D.	2022
24.	Carly Fengel	Ph. D.	2021
25.	Mitchell Senger	Ph. D.	2021
26.	Daniel McCulley	Ph. D.	2020
27.	Amani Alobaidi	Ph. D.	2018
28.	Ali Mousavian	Ph. D.	2018
29.	Jihan Kim	Ph. D.	2019
30.	Kyle Vogt	Ph. D.	2020
31.	Andrew Stickel	Ph. D.	2016
32.	Lee Aspitarte	Ph. D.	2017
33.	Matt Cibula	Ph. D.	2015
34.	Michael Paul	Ph. D.	2014
35.	Peter Wojcik	M. S.	2012
36.	Louis Maizy	M.S.	2012
37.	Chris Reidy	Ph. D.	2018
38.	Tal Sharf	Ph. D.	2014
39.	Tristan DeBorde	Ph. D.	2014
40.	Jason Francis	Ph. D.	2013
41.	Zach Thomson	Ph. D.	2015
42.	Ali Almaqwashi	M. S.	2012
43.	Sukosin Thongrattanasiri	Ph.D.	2010
44.	Andriy Zakutayev	Ph. D.	2010
45.	Nicholas Kuhta	Ph. D.	2012
46.	Seongweon Park	Ph.D.	2012
47.	Matt Leyden	Ph. D.	2011
48.	Joseph Tomaino	Ph.D.	2011
49.	Andy Jameson	Ph.D.	2012
50.	Landon Prsbrey	Ph.D.	2011
51.	Denny Jackson	Ph. D.	2011
52.	Vincent Rossi	Ph. D.	2015
53.	Robynne Kirkpatrick	Ph.D.	2008
54.	Zachary Wiren	Ph.D.	2008
55.	Jon Shanks	M. S.	2007
56.	Matt Neel	M. S.	2007
57.	Joel Wetzel	M.S.	2006

Honors and awards for mentored graduate students

- 2024 Winston Goldthwaite – SPIE Student Travel Award
- 2024 Roshell Lamug – SPIE Student Travel Award
- 2024 Winston Goldthwaite – OSU Physics Graduate Research award

- 2024 Roshell Lamug – Oregon Sports Lottery Scholarship
- 2023 Roshell Lamug – APS Ovshinsky Travel award
- 2023 Kevin Dimmitt - Graduate School Professional Development award
- 2022 Matthew O’Meara – Graduate School Professional Development award
- 2021 Jonathan Van Schenck – OSU CGS/ProQuest Distinguished Dissertation award
- 2021 Gregory Giesbers – OSU Physics Graduate Research award
- 2021 Jonathan Van Scheck – Graduate School Dissertation Completion award
- 2020 Jonathan Van Schenck – OSU Physics Graduate Research award
- 2020 Nicole Quist – the Whiteley Scholarship
- 2018 Nicole Quist - Graduate School Travel award
- 2016 Nicole Quist – SPIE Travel award
- 2015 Brian Johnson – OSU Physics Graduate Research award
- 2012 Mark Kendrick – OSU Physics Graduate Research award
- 2011 Whitney Shepherd – SPIE Scholarship
- 2010 Andrew Platt – OSU Physics Graduate Research award
- 2010 Mark Kendrick – Oregon Sports Lottery Scholarship
- 2009 Whitney Shepherd – Oregon Sports Lottery Scholarship
- 2009 Whitney Shepherd – SPIE Travel award

Honors and awards for mentored undergraduate students

- 2024 Madalyn Gragg – Rice University Gulf Coast Undergraduate Research Symposium travel grant
- 2024 Madalyn Gragg –Barry Goldwater Scholarship
- 2023 Madalyn Gragg – SURE Science Scholarship
- 2022 Rebecca Munk – WIC senior thesis award finalist
- 2021 Richard Puro - WIC senior thesis award
- 2021 Richard Puro - APS LeRoy Apker award nominee
- 2020 Ryan Tollefsen – WIC senior thesis award finalist
- 2020 Ryan Tollefsen – APS LeRoy Apker award nominee
- 2019 Ryan Tollefsen – Barry Goldwater Scholarship
- 2017 Mark Li – OSU URISC award
- 2017 Mirek Brandt (co-mentored with Prof. M. Graham) – Barry Goldwater Scholarship
- 2016 Alex Quinn – OSU URISC award
- 2016 Graham Founds – OSU URISC award
- 2015 Jeremy Rath – OSU URISC award
- 2015 Jake Busche - APS LeRoy Apker award nominee
- 2014 Jake Busche - OSU URISC award
- 2013 Mattson Thieme – OSU URISC award
- 2013 Kyle Peters - APS LeRoy Apker award nominee
- 2013 Afina Neunzert – College of Science Outstanding Undergraduate Researcher (honorable mention)
- 2011 Afina Neunzert - Janet Richens Wiesner University Honors College Scholarship for Undergraduate Women in Science
- 2009 Garrett Banton – OSU URISC award
- 2009 Jessica Gifford - OSU URISC award
- 2006 Mark Mazurier – OSU URISC award

Team or Collaborative Efforts

- 2024-present Team leader for OSU Transdisciplinary Seed Fund award (OSU Physics, OSU EECS, OSU Wood Science and Engineering, NASA) on fungi-derived materials for energy harvesting and biosensing
- 2023-present Team leader for College of Science SciRis Type II award (OSU Physics, OSU Mathematics, OSU EECS, OSU Chemistry) on spin waves in 2D magnets
- 2023- present Scientific consultant for NativeBees on implementing visual signals in attracting wild bees
- 2023 Scientific consultant for Terra Bioforge, Inc. on applications of fungi-derived pigments

2020–present Team leader for OSU Photonics in UW/OSU NSF-NNCI-funded collaboration on PNW Nanoscience and Nanotechnology infrastructure

2019-present Senior investigator, supervisor of graduate student team of superusers of NSF MRI-funded ultrafast laser center (collaboration between OSU Physics, OSU Chemistry, OSU EECS)

2018-present Team leader for NSF-funded interdisciplinary collaboration (OSU Physics, OSU EECS) on polaritonic devices (Prof. L. Cheng)

2017-2021 Team leader for interdisciplinary collaboration (OSU Physics, OSU Chemistry, OSU Wood Science and Engineering) on NSF-funded research program on fungi-derived pigments for sustainable electronics)

2007-present Senior investigator, interdisciplinary collaboration (OSU Physics, OSU Soil Science, OSU Wood Science and Engineering – Behavioral Ecology, Prof. J. Rivers) on using visual signal to manipulate wild bee populations; consultant for SpringStar, Inc.)

2005-present NSF MIP, MRSEC, PIRE, MRI proposals

2018 Active participant in Paradigms 2.0 activities

2006-2010 Experimental demonstrations in lasers and nonlinear optics for ECE482 and 483 courses (taught by Prof. T. Plant)

2008 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 (underlined names are undergraduate authors)

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24. 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.
25. M. J. Kendrick, D. H. McIntyre, and **O. Ostroverkhova**, "Optical tweezers with resonant particles", *CLEO/QELS*, San Jose, CA, USA, May 2008.
26. 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.
27. **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.
28. 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).
29. M. J. Kendrick, M. Blanding, D. H. McIntyre, and **O. Ostroverkhova**, "Optical field enhancement In tweezer trapping", *CLEO/QELS*, Baltimore, MD, USA, May 2007.
30. 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.
31. S.V. Atre, O.P. Valmikanathan, V.K. Pillai, I.S. Mulla and **O. Ostroverkhova**, "The effect of nanoparticle distribution on the structure and properties of palladium/polycarbonate nanocomposites", *Nanotech* **1**, 158-161, 2007. (Technical Proceedings of the 2007 NSTI Nanotechnology Conference and Trade Show).
32. 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.

33. J. Day, **O. Ostroverkhova**, J. E. Anthony, "Fast photoresponse in functionalized pentacene and anthradithiophene thin films", in *Organic Thin-Film Electronics -- Materials, Processes, and Applications*, edited by A.C. Arias, J.D. MacKenzie, A. Salleo, N. Tessler (Mater. Res. Soc. Symp. Proc. **1003E**, Warrendale, PA, 2007), 1003-009-22.
34. **O. Ostroverkhova**, D. G. Cooke, S. Shcherbyna, R. F. Egerton, F. A. Hegmann, R. R. Tykwinski, J. E. Anthony, V. Podzorov, M. E. Gershenson, O. D. Jurchescu, T. T. Palstra, "Ultrafast carrier dynamics in organic semiconductors", in *Materials Research for THz applications*, edited by O. Mitrofanov, X-C. Zhang, R. Averitt, K. Hirakawa, A. Tredicucci (Mater. Res. Soc. Symp. Proc. **935E**, Warrendale, PA, 2006), 0935-K03-07.
35. **O. Ostroverkhova**, D. G. Cooke, F. A. Hegmann, R. R. Tykwinski, S. R. Parkin, J. E. Anthony, "Ultrafast charge carrier dynamics in organic semiconductors", invited, *Organic Thin Films for Photonic Applications, ACS National Meeting*, San Francisco, CA, USA, September 2006.
36. **O. Ostroverkhova**, D. G. Cooke, S. Shcherbyna, R. F. Egerton, F. A. Hegmann, R. R. Tykwinski, J. E. Anthony, V. Podzorov, M. E. Gershenson, O. D. Jurchescu, T. T. Palstra, "Ultrafast photoconductivity in organic semiconductors", *Organic Thin Films Conference, OSA Annual Meeting*, Tucson, AZ, USA, October 2005.
37. **O. Ostroverkhova**, D. G. Cooke, S. Shcherbyna, R. F. Egerton, F. A. Hegmann, R. R. Tykwinski, J. E. Anthony, V. Podzorov, M. E. Gershenson, O. D. Jurchescu, T. T. Palstra, "Ultrafast Photogeneration and Band-like Transport of Mobile Charge Carriers in Organic Semiconductors", *Optical Terahertz Science and Technologies Topical Meeting*, Orlando, FL, USA, March 2005.
38. **O. Ostroverkhova**, W. E. Moerner, Z. Chen, M. Asaro, M. Sheldon, M. He, R. J. Twieg, "Recent advances in photorefractive organic materials", *OSA Trends in Optics and Photonics Series (TOPS)*, **v.99** (Photorefractive Effects, Materials and Devices), 307-312, 2005.
39. **O. Ostroverkhova**, S. Shcherbyna, D. G. Cooke, R. Egerton, R. R. Tykwinski, J. E. Anthony, F. A. Hegmann, "Fast photoresponse in organic semiconductors: understanding the mechanisms and structure-property relationships", *SPIE Proceedings*, **v.5517**, 163-174, 2004.
40. K. Willets, **O. Ostroverkhova**, S. Hess, M. He, R. J. Twieg, W.E. Moerner "Novel chromophores for single molecule imaging", *SPIE Proceedings*, **v.5222**, 150-157, 2003.
41. **O. Ostroverkhova**, U. Gubler, D. Wright, W.E. Moerner, M. He, R.J. Twieg "High performance photorefractive polymer composites and glasses: understanding mechanisms and limitations", *SPIE Proceedings*, **v.4802**, 21-32, 2002.
42. M. He, R.J. Twieg, **O. Ostroverkhova**, U. Gubler, D. Wright, W.E. Moerner "Dicyanomethylenedihydrofuran photorefractive materials", *SPIE Proceedings*, **v.4802**, 9-20, 2002.
43. **O. Ostroverkhova** and K. D. Singer "Influence of composition on the photoconductive and photorefractive properties of PVK composites", *SPIE Proceedings*, **v. 4462**, 163-177, 2001.
44. 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.

Invited seminars and meetings and symposia participation

Invited seminars and colloquia:

1. **Dept. of Physics, Reed College, Portland, OR**, "*Graduate program at Oregon State: from applications to Ph.D.*" (October 2024)
2. **Dept. of Physics, Case Western Reserve University, Cleveland, OH**, *KenFest* (September 2024)
3. **Dept. of Physics, University of San Francisco, San Francisco, CA**, "*Photophysics of organic materials: from ancient pigments to high-performance organic electronics and entomology*" (September 2023)
4. **Dept. of Electrical Engineering, Penn State University, State College, PA**, "*Photophysics and photochemistry of organic semiconductors in microcavities*" (November 2022)
5. **Dept. of Physics, Reed College, Portland, OR**, "*Photophysics of organic materials: from ancient pigments to high-performance organic semiconductors*" (February 2022)
6. **Dept. of Physics, University of Kentucky, Lexington, KY**, "*Photophysics of organic materials: from ancient pigments to high-performance organic semiconductors*" (October 2021)
7. **Dept. of Chemistry, University of Oregon, Eugene, OR**, "*Photophysics of organic materials: from ancient pigments to high-performance organic semiconductors*" (February 2020)

8. **Dept. of Physics, University of Missouri, Columbia, MS**, "*Photophysics of organic materials: from single crystals to single molecules and from (opto)electronics to entomology*" (**April 2019**)
9. **Dept. of Physics and 50/50 WAVES, University of Massachusetts, Lowell, MA**, presented "*Photophysics of organic materials: from (opto)electronics to entomology...and lessons learned in between*" (**November 2018**)
10. **OSU Innovation Showcase, Corvallis, OR**, presented "Fungi-derived materials for (opto)electronics" (**November 2018**)
11. **Dept. of Physics, OSU, Corvallis, OR**, presented "*Photophysics of organic materials: from single crystals to single molecules and from (opto)electronics to entomology*" (**November 2017**)
12. **Materials Science seminar, OSU, Corvallis, OR**, presented "*Photophysics of organic semiconductors: from single molecules to single crystals*" (**February 2017**)
13. **Dept. of Physics, Case Western Reserve University, Cleveland, OH**, presented "*Photophysics of organic semiconductors: from thin films to the single-molecule level*" (**March 2016**)
14. **Dept. of Physics, Portland State University, Portland, OR**, presented "*Photophysics of organic semiconductors: from thin films to the single-molecule level*" (**March 2015**)
15. **Dept. of Physics, University of Montreal, Montreal, Canada**, presented "*Understanding physics of organic semiconducting materials*" (**January 2012**)
16. **Dept. of Physics, Willamette University, Salem, OR**, presented "*Understanding physics of organic semiconducting materials*" (**November 2011**)
17. **Dept. of Physics, OSU, Corvallis, OR**, presented "*High-performance organic semiconductors: understanding charge carrier and exciton dynamics*" (**November 2009**)
18. **Materials Science Institute, OSU, Corvallis, OR**, presented "*High-performance organic semiconductors: photophysical and photoconductive properties and their manipulation by doping*" (**October 2009**)
19. **Dept. of Chemistry, U of Texas in Austin, Austin, TX**, presented "*High-performance organic semiconductors: photophysical and photoconductive properties and their manipulation by doping*" (**September 2009**)
20. **Dept. of Chemistry, U of Michigan, Ann Arbor, MI**, presented "*High-performance organic semiconductors: photophysical and photoconductive properties and their manipulation by doping*" (**September 2009**)
21. **Dept. of Physics, Case Western Reserve U, Cleveland, OH**, presented "*High-performance organic semiconductors: photophysical and photoconductive properties and their manipulation by doping*" (**September 2009**)
22. **Dept. of Physics, U of Oregon, Eugene, OR**, presented "*Recent advances in organic optoelectronic materials*" (**February 2009**)
23. **Dept. of Physics, Washington State U, Pullman, WA**, presented "*Organic optoelectronic materials: understanding charge carrier dynamics*" (**March 2008**)
24. **College of Optical Sciences, Tucson, AZ**, presented "*Understanding and optimizing performance of photorefractive polymers*" (**April 2006**)

Conference participation and invited talks

1. **(invited) NOMA Mediterranean Workshop, Cetraro, Italy**, scheduled to present "*Light-matter interactions: from singlet fission materials and nature-derived pigments to 2D magnets*" (**June 2025**)
2. **MRS Spring meeting, Seattle, WA**, co-authored a presentation scheduled to present by my student P. Aislinn "Understanding spin waves in 2D magnets: a combined experimental, computational, and mathematical theory approach" (April 2025)
3. **OMQ Symposium, Eugene, OR**, co-authored six presentations given by my students W. Goldthwaite, R. Lamug, M. Gragg (UG), M. Chase (September 2024)
4. **SPIE Optics and Photonics 2024, San Diego, CA**, co-authored two presentations, "*Polariton formation in functionalized tetracene for manipulating excited states dynamics and photochemistry*" and "*Morphology Dependent Singlet Fission and Photodegradation in Functionalized Tetracenes*", to be presented by my students R. Lamug and W. Goldthwaite, respectively (August 2024)

5. **(invited) Workshop on New Frontiers in Fungal Biology, Army Research Lab** (virtual), "Spalting fungi: resource capture, toxicity, applications" **(April 2024)**
6. CUWiP conference, Stanford, CA, co-authored two presentations given by my undergraduate students M. Gragg and C. Swartz (January 2024)
7. **(invited) MRS Fall meeting, Boston, MA**, presented "Photophysics, photochemistry, and optoelectronics of singlet fission materials in microcavities" **(November 2023)**
8. OMQ Symposium, Eugene, OR, co-authored six presentations given by my students W. Goldthwaite, R. Lamug, M. Gragg (UG), K. Dimmitt, M. O'Meara, Piper Aislinn (September 2023)
9. **(invited) NOMA Mediterranean Workshop, Cetraro, Italy**, presented "Photophysics, photochemistry, and optoelectronics of organic semiconductors in microcavities" **(June 2023)**
10. CLEO conference 2023, San Jose, CA, co-authored two presentations, "Optomagnetic control of singlet fission charge multiplication dynamics in single organic semiconductor crystals" and "Highly sensitive detector based on inorganic-organic heterojunction phototransistor", presented by a collaborator (Prof. M Graham, **invited**) and a co-advised student A. Ullah respectively (May 2023)
11. APS March meeting 2023, Las Vegas, NV, co-authored two presentations, "Photophysics and (opto)electronics of functionalized acenes and anthradithiophenes in cavities" and "Photophysics and photochemistry of singlet fission materials in microcavities", presented by my students R. Lamug and W. Goldthwaite, respectively (March 2023)
12. **(invited) SPIE Optics and Optoelectronics, San Diego, CA**, presented "Photophysics and photochemistry of functionalized acene and anthradithiophene derivatives in microcavities" **(August 2022)**
13. CLEO conference 2021, virtual, co-authored a presentation, "Strong coupling between ADT molecules and 2D nanohole Ag grating", presented by a co-advised postdoc K. Tanyi (May 2021)
14. CLEO conference 2020, virtual, co-authored two presentations, "Packing morphology-dependent singlet fission in single crystal ADT derivatives" and "Controlling the level of coupling between quantum emitters and planar HMMs", presented by co-advised student G. Mayonado and a postdoc K. Tanyi (May 2020)
15. **(invited) MS&T Fall meeting, Portland, OR**, presented "Understanding photophysics of organic materials: towards stable and sustainable materials for (opto)electronics" **(October 2019)**
16. MRS Spring meeting 2019, Phoenix, AZ, co-authored two presentations (both accepted for oral presentations), "Photophysical and (opto)electronic properties of fungi-derived pigments and their polymer blends" and "Molecular packing dependent photophysics and (opto)electronic properties of functionalized anthradithiophene single crystals", presented by my students G. Giesbers and J. Van Schenck, respectively (April 2019)
17. OMQ Symposium, Eugene, OR, co-authored "Fungi-Derived Pigments for Sustainable Organic (Opto)Electronics" given by my student G. Giesbers (September 2018)
18. MRS Spring meeting 2018, Phoenix, AZ – co-authored two presentations, "Fungi-Derived Pigments for Sustainable Organic (Opto)Electronics" and "Molecular Packing-Dependent Exciton and Polaron Dynamics in Anthradithiophene Organic Crystals", given by my students G. Giesbers and J. Van Schenck, respectively (April 2018)
19. SPIE Photonics West 2018, San Francisco, CA – co-authored a presentation "Effect of molecular side groups and local nanoenvironment on photodegradation and its reversibility", given by my student N. Quist (February 2018)
20. SPIE Photonics West 2017, San Francisco, CA – co-authored two presentations, "Fungi-derived pigments as sustainable organic (opto)electronic materials" and "Single molecule-level study of donor-acceptor interactions and nanoscale environment in blends", given by my students R. Harrison and N. Quist, respectively (February 2017)
21. **(invited) OMQ Symposium, Eugene, OR**, presented "Photophysics of organic semiconductors: from single molecules to single crystals" **(September 2016)**
22. **(invited) NW OSA meeting, Corvallis, OR**, presented "Photophysics of organic semiconductors: from thin films to the single-molecule level" **(May 2016)**
23. F-pi 12 meeting, Seattle, WA, presented "Photophysics of organic semiconductors: from thin films to the single-molecule level" (July 2015)
24. SPIE Photonics West 2015, San Francisco, CA – co-authored two presentations, "Photophysics of organic semiconductors: from ensemble to the single-molecule level" and "Optical tweezers-based probe of charge transfer in organic semiconductors at microscopic scales", given by my student R. Grollman (February 2015)

25. **(invited) EMN Photovoltaics Meeting, Orlando, FL**, presented "*Photophysics of organic semiconductors: from thin films to single molecules*" **(January 2015)**
26. MRS Fall meeting 2014, Boston, MA – co-authored two presentations, "*Time-resolved exciton and charge carrier dynamics in organic semiconductors*" and "*Numerical modeling of time-resolved charge carrier dynamics in organic semiconductors*", given by my postdoc Dr. K. Paudel and student B. Johnson, respectively (December 2014)
27. **(invited) NLO Symposium, Pullman, WA**, presented "*Photophysics of organic semiconductors*" **(August 2014)**
28. NW APS Meeting, Seattle, WA – co-authored a presentation "*Time-resolved exciton and charge carrier dynamics in organic semiconductors*" given by my postdoc Dr. K. Paudel (May 2014)
29. SPIE Photonics West 2014, San Francisco, CA – co-authored a presentation "*Charge measurements in organic semiconductors using optical tweezers*" given by my student R. Grollman (February 2014)
30. SPIE Optics and Photonics 2013, San Diego, CA – co-authored two presentations, "*Time-resolved charge carrier dynamics in organic semiconductors*" and "*Numerical modeling of time-resolved charge carrier dynamics in organic semiconductors*", given by my postdoc Dr. K. Paudel and student B. Johnson, respectively (August 2013)
31. **(invited) Materials Science Institute Annual Meeting, Eugene, OR**, presented "*Understanding physics of organic semiconducting materials*" **(September 2012)**
32. **(invited) NW APS meeting, Corvallis, OR**, presented "*Recent advances in organic semiconducting materials*" **(October 2011)**
33. **(invited) NW AVS meeting, Portland, OR**, presented "*Recent advances in organic semiconducting materials*" **(September 2011)**
34. SPIE Photonics West 2011, San Francisco, CA – co-authored a presentation "*Effect of intermolecular interactions on charge and exciplex formation in high-performance organic semiconductors*" given by my student W. Shepherd (January 2011)
35. CLEO/QELS 2010, San Jose, CA – co-authored a presentation "*pH/ion nanoprobe with optical tweezers*" given by my student M. Kendrick
36. APS March meeting, Portland, OR – co-authored five presentations, "*Energy and charge transfer in select organic semiconductor composites*", "*Influence of metal-organic interfaces on charge carrier dynamics*", "*Single molecule studies of anthradithiophene derivatives*", "*Nanoprobes with optical tweezers for biological applications*", "*pH/ion nanosensors with optical tweezers in a lab-on-a-chip*", given by my students A. Platt (2), W. Shepherd, and M. Kendrick (2) (March 2010)
37. Entomological Society of America annual meeting, Indianapolis, IN; co-authored a presentation "*The buzz on supernormal attraction of native bees to blue vane traps*" given by my collaborator S. Rao (December 2009)
38. ONAMI MicroNano Breakthrough conference, Portland, OR; coauthored a presentation given by my students W. Shepherd and A. Platt (September 2009)
39. **(invited) SPIE, San Diego, CA**, presented "*High-performance organic semiconductors: photophysical and photoconductive properties and their manipulation by doping*"; also co-authored another presentation given by my student A. Platt **(August 2009)**
40. CLEO/QELS 2009, Baltimore, MD – coauthored a poster presentation given by my student M. Kendrick (June 2009)
41. Nanotech 2009, Houston, TX – coauthored a talk given by my collaborator S. Atre (May 2009)
42. OTA/OSA Symposium 2009, Vancouver, Canada – coauthored a talk given by my student M. Kendrick (April 2009)
43. Oregon Center for Optics annual retreat, Eugene, OR – coauthored two posters presentation given by my students A. Platt, W. Shepherd, and D. Quandt (September 2008)
44. MicroNano Breakthrough Conference, Portland, OR – coauthored a talk given by my student S. Bhowmik (September 2008)
45. ACS National Meeting, Philadelphia, PA – coauthored two poster presentations given by my students A. Platt and W. Shepherd (August 2008)
46. **(invited) ICONO10, Santa Fe, NM**, presented "*Photoexcited charge carrier and exciton dynamics in organic semiconductors*" **(May 2008)**

47. **(invited) NW APS meeting, Portland, OR**, presented "Organic optoelectronic materials: understanding charge carrier dynamics" **(May 2008)**
48. CLEO/QELS 2008, San Jose, CA - coauthored a talk and a poster presentation given by my students A. Platt and M. Kendrick (May 2008)
49. PittCon ACS, New Orleans, LA – coauthored a talk given by my collaborator A. Shvarev (March 2008)
50. MicroNano Breakthrough Conference, Portland, OR – coauthored a talk given by my collaborator S. Atre (September 2007)
51. NSTI Nanotech 2007, Santa Clara, CA – coauthored a talk given by my collaborator S. Atre (May 2007)
52. CLEO/QELS 2007, Baltimore, MD – coauthored two poster presentations given by my students A. Platt and M. Kendrick (May 2007)
53. MRS National Meeting, San Francisco, CA – coauthored a poster presentation given by my student J. Day (April 2007)
54. **(invited) Oregon Center for Optics, Eugene, OR**, presented "Ultrafast charge carrier dynamics in organic semiconductors" **(October 2006)**
55. Oregon Center for Optics annual retreat, Eugene, OR – coauthored a poster presentation given by my student J. Day (September 2006)
56. **(invited) OTF/ACS Symposium, San Francisco, CA**, presented "Ultrafast charge carrier dynamics in organic semiconductors" **(September 2006)**
57. **(invited) OTF/OSA Symposium, Tucson, AZ** presented "Ultrafast photoconductivity in organic semiconductors" **(October 2005)**
58. **(invited) Int. Conf. on PR Effects, Sanya, China**, presented "Recent advances in photorefractive organic materials" **(July 2005)**
59. OTST/OSA Symposium, Orlando, FL - coauthored a paper presented by former advisor F. Hegmann (March 2005)
60. **(invited) OTF/ACS Symposium** – presented "Recent advances in photorefractive organic materials", also presented another talk **(August 2004)**
61. **(invited) SPIE, Denver, CO** – "Fast photoresponse in organic semiconductors: understanding the mechanisms and structure-property relationships" **(August 2004)**
62. Int. Conf. on pi-conjug. Mat., Ithaca, NY – presented a talk (June 2004)
63. CLEO/IQEC 2004, San Francisco, CA – coauthored a talk given by my collaborator Z. Chen (May 2004)
64. APS March meeting, Montreal, Canada – presented one and coauthored another talk given by J. Gao (March 2004)
65. ISOPL-3, Sedona, AZ - presented a talk (September 2003)
66. (invited) SPIE Photonics West, San Jose, CA– "Picosecond transient photoconductivity in organic molecular crystals" - coauthored invited presentation given by my former advisor F. Hegmann (January 2004)
67. SPIE, San Diego, CA – *coauthored a presentation given by K. Willets* (August 2003)
68. Int. Conf. on PR effects, Nice, France – coauthored a presentation given by my collaborator Z. Chen (June 2003)
69. (invited) CLEO/QELS 2003, Baltimore, MD – coauthored invited presentation given by K. Willets and contributed presentation given by Z. Chen (May 2003)
70. **(invited) MB&E 2, Tokyo, Japan** presented "Recent advances in photorefractive organic materials" **(March 2003)**
71. **(invited) SPIE, Seattle, WA** – "High-performance photorefractive polymer composites and glasses" **(July 2002)**
72. Flory Conf., Stanford, CA – presented a poster
73. (invited) ICONO6, Tucson, AZ – coauthored an invited presentation given by my former advisor K. Singer (December 2001)
74. CLEO/QELS 2001, Baltimore, MD - poster presentation (May 2001)
75. ACS National Meeting, Washington D.C. – presented one and coauthored two more talks (August 2000)
76. ACS Reg. Meeting, Covington, KY – coauthored a presentation given by my former advisor K. Singer (May 2000)
77. ICONO 2005, Davos, Switzerland – coauthored one invited and one contributed talk given by my former advisor K. Singer

78. OTF/ACS Symposium, Santa Clara, CA – presented one poster and coauthored one talk
79. Int. Meet. On Optics of LCs, Humacao, Puerto Rico – coauthored two papers presented by my former advisor K. Singer and my collaborator Y. Reznikov (September 1999)
80. CLEO/QELS 1999, Baltimore, MD – coauthored a paper presented by my advisor K. Singer (May 1999)
81. APS March Meeting – coauthored a paper presented by my collaborator J. Lando (March 1999)

Funding

Current/past awarded grants

- 01/01/25 – 12/31/25 **Simons Foundation** “Non-commutative Fourier transformation for quantum materials, simulations and experiments” (Pivot Fellow: A. Rodriguez (OSU Math), OO and E. Corwin (U of O) are Pivot Mentors) **\$50,000**
- 07/01/24 – 06/30/25 **OSU/Transdisciplinary Fund** “Harnessing Light-Matter Interactions From Native Oregonian Forest Fungi for Next-Generation Solar Energy Harvesting and Advanced Biosensing” (PI: OO, co-PIs: L. Cheng (OSU EECS), S. Robinson (OSU Wood Science and Engineering), M. Chang (NASA)) **\$50,000**
- 07/01/23 – 06/30/24 **OSU/SciRIS Type 2** “Polariton-controlled spin waves in quantum magnets for next-generation spintronics” (PI: OO, co-PIs: A. Rodriguez (OSU Math), C. Fang (OSU Chem), T. Zuehlsdorff (OSU Chem), P. Dhagat (OSU EECS)) **\$75,000**
- 08/01/23 - 07/30/24 **OSU/RERF** “Micromanipulation system for building atomically clean stacks of two-dimensional crystals” (PI: E. Minot, OO is one of 4 co-Is) **\$51,800**
- 02/15/21 – 02/14/22 **OSU/SciRIS II** “Understanding properties of quantum materials for spintronics and magnon valleytronics” (PI: OO, co-PI: P. Dhagat (OSU EECS)) **\$10,000**
- 09/01/20 - 08/31/24 **NSF-CHE** “Strong coupling in microcavities for enhancing photostability of organic semiconductors” (OO (single PI)) **\$382, 896**
- 09/01/20 – 08/31/2025 **NSF-NNCI** “Northwest Nanotechnology Infrastructure” (PI: K. Bohringer, OO is one of 10 topical area leaders – OSU Photonics lead) **\$5,000,000**
- 08/01/19 – 07/31/22 **NSF-DMR** “MRI: Development of joint-use ultrafast pump-probe instrument for thin-films experimental research” (PI: P. Dhagat (OSU EECS), OO is one of 4 co-Is) **\$1,384,653**
- 06/01/19 – 05/31-20 **OSU/RERF** “Advanced TCSPC system” (PI: L Cheng (OSU EECS), OO is the co-PI) **\$51, 875**
- 08/01/18-07/31/23, **NSF-DMR**, “Designing light-matter hybrid states for high-performance organic (opto)electronics”, (OO(PI), L. Cheng (OSU EECS) co-PI) **\$449,985**
- 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, 2016-2021
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), 2022- 2023 (chair)
5. Graduate admission committee	2005, 2007 (chair), 2008 (chair), 2016 (chair), 2019 (chair), 2020 (chair), 2021 (chair), 2024 (chair)
6. Comprehensive exam committee	.....Fall 2010- Spring 2012
7. Graduate Open House (organizer)	..... Winter 2005-2012, 2016, 2019-2021
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	..... 2005--- 2006
12. Instructor, faculty search committee	..... 2006, 2012, 2021
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, 2016-2020
16. Department safety	.....2016-2018
17. Core Advising Committee	.....2020-present, 2022-2023 (chair)
18. Astrophysics faculty search committee	.....2022

2. University Service (outside of Physics Department):

1. Heat Plant steering committee2023-present
2. X-ray manager search committee2022
3. X-ray facilities advisory board2024-present
4. CIC steering committee2022-2023
5. COS P&T committee2022-2024
6. COS Awards committee2021-2023
7. Graduate O'Neill Fellowship committee2019
8. SURE Science committee2017
9. Faculty Senate2014-2016
10. Research Equipment Reserve Fund (RERF) reviewer2015
11. Faculty searches (Analytical and Physical Chemistry, OSU) 2007, 2008, 2018, 2019
12. "Breakthroughs in Science" event (2009) – one out of 4 faculty selected from the College of Science to present a project to OSU donors
13. Graduate Council Representative/Program Committee member for:

Kyle Smith	Chemistry	Ph. D.	current student
Ahasan Ullah	EECS	Ph. D.	current student
Anizoba Ebuka	Chemistry	Ph. D.	current student
Clara Wheeler	Chemistry	Ph. D.	current student
Stanislau Stanisheuski	Chemistry	Ph. D.	2024
Fernando Angulo	Mathematics	Ph. D.	current student
Xavier Quintana	Mat. Sci.	Ph.D.	current student
Brooklyne Thompson	Chem. Eng.	Ph. D.	current student
Kaylee Cayton	Chemistry	Ph. D.	current student
Javier Corona	EECS	Ph. D.	current student
Molly Vitale-Sullivan	Chem. Eng.	Ph. D.	current student
Krishna Padavala	Chem. Eng.	Ph. D.	2024
Jacob Hirschi	Chemistry	Ph. D.	current student
Bo Wu	EECS	Ph. D.	2022
Mahsa Khoshbakht	Chemistry	Ph. D.	2021
Trever Schwichtenberg	Chemistry	Ph. D.	2022
Layhna Plagmann	Chemistry	Ph. D.	M.S. 2021, Ph.D. student
Quinn Carvalho	Chem. Eng.	Ph. D.	2023
Alastair Thurlbeck	EECS	Ph. D.	2022
Ajmal Vadakkan	EECS	Ph. D.	current student
Jesse Howe	Biochemistry	Ph. D.	current student
Dongjun Lee	EECS	Ph. D.	M. S. 2022, Ph. D. student
GilSoo Kim	Chemistry	Ph. D.	2022
Megan McCormick	EECS	M. S.	2022
Shauna Otto	Biochemistry	Ph. D.	2022
Jacob Buchanan	Chemistry	Ph. D.	2019
Taisiia Feoktistova	Chemistry	Ph. D.	2022
Eliseo Quiroz	Chemistry	Ph. D.	2023
Chris Malmberg	Chemistry	Ph. D.	2018
Ni Trieu	EECS	Ph. D.	2019
Britany Swann	Mech. Eng.	M. Sc.	2017
Steph Walker	Mech. Eng./Robotics	Ph. D.	2018
George Neuhaus	Chemistry	Ph. D.	2019
Jesse Keeler	Chem. Eng.	M. S.	2016
Falah Alanazi	EECS	M. S.	2016
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.	2018
Maha Alghamdi	Chemistry	Ph. D.	2019
Zeyu You	EECS	M.Sc.	2014
John McGlone	EECS	Ph.D.	2017
Dylan Fast	Chemistry	Ph. D.	2018
Cem Celik	Chemistry	M.S.	2018
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.S.	2010
Nessrine Chakchouk	EECS	Ph. D.	2012
Roderick Whang	EECS	Ph. D.	2015
Weiyang Li	EECS	Ph. D.	2015
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 Aciicmez	EECS	Ph.D.	2006
Arien Sligar	EECS	M.Sc.	2006

Service to the Profession:

1. Editorial Board for *Journal of Physical Chemistry A/B/C* (invited for 2024-2027)
2. Editorial Board for *Materials Today Quantum* (2023-present)
3. Special Issue Guest Editor (Optical quantum materials) for *Materials Today Quantum*
4. Academic Editor for *PLoS ONE* (2014-2023)
5. Reviewer (~15-20 papers per year) for 45 journals including 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.
6. Reviewer/panelist (1-3 panels per year) for the National Science Foundation (DMR, EECS, CHE), ACS Petroleum Research Fund (PRF), Department of Energy (DOE), Molecular Foundry, the American Association for Advancement in Science (AAAS), and Swiss, German, Austrian, Dutch, UK, and Poland funding agencies
7. NSF Committee of Visitors (2023)

8. Engineering Physics advisory board, Case Western Reserve University (since 2008)
9. External reviewer of P&T cases (~2 per year)
10. Focus session organizer (APS March Meeting 2022)

K-12 and public outreach:

- Consultant for entomologists and bee keepers (UK, Australia, USA) on bee attraction to visual stimuli
- Lab tours and hands-on activities for OSU Juntos and OSU Tribal Youth program participants (2023- present)
- Corvallis High School – organized OSU Physics visit by CHS Science Club and gave an invited lecture at CHS (2023)
- Madras High School – virtual lab tours (2023)
- On-site and virtual lab tours for Oregon middle-school and high-school students (since 2006)