Alexandra Boltasseva

Ron and Dotty Garvin Tonjes Distinguished Professor of Electrical and Computer Engineering
Professor of Materials Engineering (courtesy)
Elmore Family School of Electrical and Computer Engineering
Birck Nanotechnology Center and Purdue Quantum Science and Engineering Institute
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Summary:

Prof. Boltasseva's team specializes in nano- and quantum photonics, optical materials, plasmonics, optical metamaterials, and nanofabrication. The central theme of Boltasseva's research is to find new ways for the discovery, realization, and machine-learning-assisted optimization of nanophotonic structures - from material growth to advanced photonic designs and device demonstrations. Prof. Boltasseva's team aims at developing new platforms to unlock properties of nanophotonic structures in previously unavailable designs and wavelength regimes and to enable new generations of low-loss, tunable, reconfigurable, semiconductor-compatible devices for applications in on-chip circuitry, information processing, data recording/storage, sensing, medical imaging and therapy, energy conversion and quantum information technologies.

Education and Training:

1999	B.S. Applied Physics & Mathematics, Moscow Institute of Physics and Technology, Russia (summa cum laude) (Dr. A. Bogatov)
2000	M.S. Applied Physics & Mathematics, Moscow Institute of Physics and Technology, Russia (summa cum laude) (Dr. A. Bogatov)
2004	Ph.D. Electrical Engineering, Research Center COM, Technical University of Denmark, Denmark (Prof. S. Bozhevolnyi)

Professional Career:

Ron and Dotty Garvin Tonjes Distinguished Professor of ECE	08/2023 – present
Ron and Dotty Garvin Tonjes Professor of ECE	08/2020 – present
Professor, Materials Engineering, courtesy appointment, Purdue University	10/2018 – present
Professor of ECE, Purdue University	08/2016 – present
Associate Prof. (tenured) of ECE, Purdue University	08/2013 - 07/2016
Adjunct Associate Professor, DTU Fotonik, Technical University of Denmark	10/2011 - present
Assistant Prof. (tenure track) at ECE, Purdue University	09/2008 - 08/2013
Guest Prof. at SAOT, Universität Erlangen-Nürnberg, Germany	11/2009 - 12/2012
Associate Prof. (tenured) at DTU Fotonik, Technical University of Denmark	07/2008 - 08/2010
Assistant Professor at COM•DTU, Technical University of Denmark	2007 – 2008
Post. Doc. at COM•DTU, Technical University of Denmark	2005 – 2007
Research Scientist at Alight Technologies A/S, Denmark	2004 – 2005
Research Assistant (Ph.D. candidate) at Micro Managed Photons A/S, Denmark	2002 – 2004
Research Assistant (M.S. candidate) at P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia	1998 – 2000

Professional Recognitions, Honors, Appointments and Awards:

2024	**Highly Cited Researcher** (Cross-Field), Web of Science Researcher (Years: 2024, 2022, 2021, 2020)
2023	**Fellow of American Physical Society (APS)**
2023	**R. W. Wood Prize**, Optica
2023	**MRS Meeting Chair**, Materials Research Society 2023 Fall Meeting
2022	**Guggenheim Fellow**
2021	**Fellow of the MRS** – Materials Research Society
2020	**Fellow of the National Academy of Inventors (NAI)**
2020	Ron and Dotty Garvin Tonjes Named Professor of ECE, Purdue University

2020 **Fellow of the IEEE** - the Institute of Electrical and Electronics Engineers
2019 Inaugural Discovery Park Fellow, Purdue University
2018 **Blavatnik National Award Finalist**, Young Scientists in Physical Sciences and Engineering
2017 **Fellow of the SPIE** - International Society for Optical Engineers
2016 **Editor-in-Chief**, Optical Society of America (OSA)'s Optical Materials Express (2016 - 2021)
2015 National Academy of Engineering (NAE) U.S. Frontiers of Engineering (FOE) Symposium Invited Speaker, September 9-11, 2015, National Academies' Beckman Center in Irvine, California, USA
2015 **Fellow of the OSA** - Optical Society of America
2014 Selected to Purdue Innovator Hall of Fame, Purdue Research Foundation, Purdue University
2014 Inaugural "DANIELA PUCCI" prize at NanoPlasm Conference, June 16-20, 2014, Cetraro, Italy
2014 Elected to **MRS Board of Directors** - Materials Research Society (two-year term 2014-2016)
2014 University **Faculty Scholar**, College of Engineering, Purdue University *(awarded to faculty "on an accelerated path toward academic distinction" with additional funding for research)*
2013 **Materials Research Society (MRS) Outstanding Young Investigator Award** *(awarded annually to one young scientist for "interdisciplinary scientific work in materials research and "exceptional promise as a developing leader in the materials area")*
2013 **Institute of Electrical and Electronics Engineers (IEEE) Photonics Society Young Investigator Award** *(awarded annually to an individual who has made outstanding technical contributions to photonics prior to his or her 35th birthday)*
2012 National Academy of Engineering (NAE) U.S. Frontiers of Engineering (FOE) Symposium participant, September 13-15, 2012, GM Technical Center, Warren, Michigan, USA *(invitation-only symposium gathering 78 outstanding engineers under the age of 45)*
2012 Purdue College of Engineering **Early Career Research Award** *(for 'early excellence with clear potential for future preeminence in research')*
2011 **MIT Technology Review TR35 Award** *(Technology Review magazine published by MIT 'honors 35 innovators under 35 each year whose work promises to change the world')*
2010 The Acorn Award: Seed for Success, Purdue *(PI and co-PIs garnering $1 million or more in research grants, with Prof. Shalaev and Prof. Narimanov)*
2009 Erlangen Graduate School in Advanced Optical Technologies (SAOT) **Young Researcher Award in Advanced Optical Technologies**, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany *('awarded annually to an outstanding young scientist in the field of optics and photonics', prize money EUR 100,000 to be used freely for establishing collaborative activities and research links to SAOT)*
2009 Chicago Alumni New Faculty Award, Purdue faculty start-up package
2008 **Young Researcher Participant, 58th Meeting of Nobel Prize Winners in Physics**, Council for the Lindau Nobel Laureate Meetings, Lindau, Germany *(Nomination by the Danish Research Council, chosen in closed competition among young scientists worldwide, 1 out of total 2 participants from Denmark)*
2008 **"Ung Eliteforskerpris": Young Elite-Researcher Award** from the Danish Councils for Independent Research, Denmark *(awarded annually to only 20 scientists across all disciplines, including liberal arts)*
2006 "UBVAs forfatterlegat": Danish Confederation of Professional Associations prize for PhD dissertation
2004 **"Talent Project" grant** from the Danish Technical Research Council, Denmark *(independent postdoc grant to establish own activities)*
1999 Lenin's scholarship for academic excellence, Russia *(the highest award for academic excellence)*
1996-1999 Moscow Institute of Physics and Technology Lenin Scholarship for academic excellence, Russia
1993,1994 Winner of High-School Physics Olympics of Chuvash Republic, Russia
1993 Honor Award for the best experimental work at All-Russian Physics Olympics, Russia (1993)

Research Grants and Contracts Received:

[1] Principal Investigator (**PI**), Surface Plasmon Polariton Optics Using Advanced Nanotechnology, Danish Technical Research Council (FTP) grant #26–04–0268, $300,000, 2005-2007
[2] **PI**, On-Chip Nano-Imaging Using Superlens (NanoMIUS), Danish Research Council for Technology and Production Sciences (FTP) grant #274–07–0057, $900,000, 2009-2011
[3] PI, Improved Plasmonic Materials for Nanophotonics, Purdue Research Foundation (PRF) grant, $16,750, 2009-2010
[4] **PI**, Searching for Better Plasmonic Materials, Army Research Office (ARO), grant #W911NF–09–1–0516, $50,000, 09/15/2009 – 06/14/2010

[5] co-PI (PI: D. Smith, DukeU), Transformation Optical Metamaterials, Army Research Office (ARO) Multidisciplinary University Research Initiative (MURI), grant #56154-PH-MUR (W911NF-09-1-0539), Boltasseva's part $0.6M, 09/28/2009 – 01/27/2014

[6] **PI**, School in Advanced Optical Technologies (SAOT) Young Researcher Award in Advanced Optical Technologies, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany, total funds ~$145,000, 2009-2012

[7] **PI**, Glancing Angle Deposition System for Transformation-Optics Devices, Defense University Research Instrumentation program (DURIP), Army Research Office (ARO), grant #57566-PHRIP (W911NF-10-1-0380), $150,000, 08/10/2010-09/09/2011

[8] co-PI (PI: N. Engheta, UPenn) Large-Area 3D Optical Metamaterials with Tunability and Low Loss, Office of Naval Research (ONR) Multidisciplinary University Research Initiative (MURI), grant #N00014-10-1-0942, Boltasseva's part $0.9M, 08/01/2010-07/31/2015

[9] **PI**, Unlocking new physics with improved plasmonic materials, Army Research Office (ARO), grant #57981-PH (W911NF-11-1-0359), $400,000, 08/01/2011-07/30/2014

[10] Co-PI, (PI: T. Norris, University of Michigan), Center for Photonic and Multiscale Nanomaterials (C-PHOM), NSF grant DMR-1120923, Materials Research Science and Engineering Center (MRSEC), Boltasseva's part 100k/year, 09/15/2011-08/31/2018

[11] **PI**, Office of the Vice President for Research (OVPR) Laboratory Equipment Program, Purdue University, grant #206391, proposal #13055326, $50,000, 01/05/2012-31/12/2013

[12] co-PI (PI: V. Shalaev, Purdue), Flat Photonics with Metasurfaces, Army Research Office (ARO), grant #106619, total $1M; Boltasseva's part $0.5M ($100,000/year), 07/01/2013-06/30/2017

[13] Co-PI, (PI: M. Stockman, Georgia State University), Office of Naval Research (ONR) Multidisciplinary University Research Initiative (MURI), Novel Nonlinear Optical Processes in Active, Random, and Nanostructured Systems, Boltasseva's part $180,000/year, 10/01/2013-08/31/2020

[14] **PI**, Air Force Office of Scientific Research (AFOSR), CMOS-Compatible Plasmonics for Hybrid Nanophotonic Circuits, total $600,000, 06/01/2014 - 05/31/2017

[15] **PI**, Air Force Office of Scientific Research (AFOSR) equipment grant, Tunable Femtosecond Laser System for Advanced Linear and Nonlinear Investigation of Novel Alternative Plasmonic Materials and Devices, $318,623.00, 06/01/2015 - 05/31/2017

[16] Co-PI, (PI: F. Capasso, Harvard), Air Force Office of Scientific Research (AFOSR) MURI, Active Metasurfaces for Advanced Wavefront Engineering and Waveguiding, Boltasseva's part $160K/year, 07/01/2014 – 06/30/2019

[17] **PI**, National Science Foundation, Enabling High-Temperature Photonics with Plasmonic Ceramics, Total $500,000, 09/01/2015-08/31/2018

[18] **PI**, Office of the Vice President for Research (OVPR) Laboratory Equipment Program, Purdue University, $37,349.35, 12/16/2015-06/01/2016

[19] Co-PI, (PI: V. Shalaev, Purdue), Office of Naval Research (ONR) DURIP, Time-Resolved Fluorescence Spectroscopy with Nanoscale Manipulation Capability for Novel On-Chip Nanophotonic Quantum Devices, $278,000, 07/15/2016-07/14/2017

[20] Co-PI, (PI: E. Marinero, Purdue), Office of Naval Research (ONR), Merging Spintronics and Nanophotonics: The Confluence of Spin, Photons, Plasmons and Charge for Novel Hybrid Photonics and Nano-electronic Device, Total $300,000, 09/01/2016-08/31/2018

[21] **PI**, Sandia National Laboratory, Near Infrared Nanophotonics through Dynamic Control Carrier Density in Conducting Ceramics, $55,000/year, 11/2016-10/2019

[22] **PI**, Air Force Office of Scientific Research (AFOSR), Hot-Electrons Generation in New Plasmonic Materials for Integrated On-Chip Devices, total $750,000, 04/27/2017 – 04/26/2020

[23] **PI**, Office of Naval Research (ONR), Defense University Research Instrumentation program (DURIP), Optical Characterization System for Novel On-Chip Nanoscale Light Sources, Total $170,000, 06/01/2017-05/31/2018

[24] co-PI (PI: V. Shalaev), Air Force Office of Scientific Research (AFOSR), Space-Time Photonic Metamaterials: From Design and Materials to Device Concepts, total $795,000; Boltasseva's budget $125,000/year, 11/15/2017-05/31/2022

[25] **PI**, Basic Energy Sciences (BES), U.S. DOE Office of Science, Control of light-matter interaction with epsilon-near-zero homogeneous alternative plasmonic materials, total $1,309,000, 07/01/2017-06/30/2020

[26] Co-PI (PI: Y. Chen, Purdue), Purdue University, Big Idea Challenge Research Grant, Photonics Technologies for Bio Security, Food Safety and other Health Applications, Boltasseva's budget 30k, 04/01/2017-03/31/2019

[27] Co-PI, Office of Naval Research (ONR) DURIP, Versatile Sputtering Tool for New Optical Materials for High-Temperature Plasmonics, Robust On-chip Nanophotonics, and Quantum Devices, $456,000, 07/15/2018-07/14/2019

[28] Co-PI, (PI: E. Marinero, Purdue), Office of Naval Research (ONR), Topology and Magneto-Photonics: Novel Platform for Advanced Metasurface and Magnonic Devices, Total $450,000, 08/01/2018-07/31/2021

[29] Co-PI (PI: V. Shalaev, Purdue) Office of Naval Research (ONR) DURIP, Advanced Pulsed Laser Deposition for Ultrafast, Tunable Metal and Magneto Oxide Nanophotonic Devices, $162,150, 7/1/2019-6/30/2020

[30] **PI**, Office of Naval Research (ONR), Extreme Nonlinear Optics with Low-Index Materials, total $300,000, 01/01/2020 -01/31/2023

[31] **PI**, Air Force Office of Scientific Research (AFOSR), Trans-Dimensional Photonics: From Evolution of Material Properties to Exploring, total: $800K, 01/01/2020 -05/31/2024

[32] co-PI, (PI: V. Shalaev, Purdue), Office of Naval Research (ONR) DURIP, Ultra-high Vacuum Tool for Growth of Hybrid Magnetic and Plasmonic/Photonic Materials for Novel Magnetophotonic Devices and Quantum Information, $968,275; 02/01/2020-01/31/2021

[33] **PI**, Breakthrough Prize Foundation, Exploring Materials and Nanophotonic Structures for LightSail: From Termperature-Dependent Properties to Global Design Optimization, total $150,000; 11/1/2019-10/31/2021

[34] **PI**, Basic Energy Sciences (BES), U.S. DOE Office of Science, Opening New Frontiers of Near-Zero-Index Optics: from Photonic Time Crystals to Non-Reciprocity and Novel Localization Regimes, renewal; total $1,403,000, 07/01/2020-06/30/2023

[35] Co-PI (PI: V. Shalaev, Purdue), National Science Foundation, Quantum MetaQuantum: Hybrid Photonic Meta-Structures for Quantum Information Systems, total $420,000; 09/15/2020-12/31/2023

[36] **PI**, National Science Foundation, Machine-Learning-Optimized Refractory Metasurfaces for Themophotovoltaic Energy Conversion, $450,000; 09/15/2020-12/31/2024

[37] Co-PI (PI: M. Khajavikhan, University of Southern California), Air Force Office of Scientific Research (AFOSR) Multidisciplinary University Research Initiative (MURI), Novel Light-Matter Interactions in Topologically Non-Trivial Weyl Semimetal Structures and Systems, Total $2,483,750; Boltasseva part $200,000; 09/15/2020-10/14/2025

[38] Co-PI, (PI: V. Shalaev, Purdue University), Office of Naval Research (ONR) Multidisciplinary University Research Initiative (MURI) renewal, Novel Materials and Approaches for Nanolasing, Total $4,826,764, Boltasseva part $400,000/year; 09/01/2020-12/31/2024

[39] Co-PI (Purdue PI: Y. Chen), Quantum Workforce Development LEAD, the U.S. Department of Energy (DOE) Office of Science National Quantum Information Science Research Center, the Quantum Science Center (QSC), Total $11,066,000; Purdue $1.466M (Y1), $2.4M (Y2-Y5); Boltasseva part $250,000/year, 10/01/2020-09/30/2025

[40] Co-PI (PI: E. Marinero, Purdue), Office of Naval Research (ONR), Magneto-Plasmonic Magnonics: Spin Wave Manipulation and Topological Magnonic and Photonic Crystals, Total $300,000, 07/01/2021-06/30/2024

[41] **PI**, (co-PI: F. Capasso, Harvard) Office of Naval Research (ONR), Meta-Cavity-Mediated Strong Light-Matter Coupling in Two-Dimensional Materials, total award $1,050,000, 07/01/2022 -06/30/2026

[42] Co-PI (PI: V. Shalaev, Purdue), Air Force Office of Scientific Research (AFOSR), Hybrid, Room-Temperature, Quantum On-Chip Photonic Systems: Integrating Quantum Emitters with Nanoplasmonics, Boltasseva's part $150,000/year, 07/01/2022-06/30/2026

[43] **PI**, the U.S. DOE Office of Science, Basic Energy Sciences (BES), Control of light-matter interaction with epsilon-near-zero homogeneous alternative plasmonic materials, Renewal, total $1,400,000, 07/01/2023-06/30/2026

[44] Collaborator (PI: H. Alaeian), Department of Defense, 2022 Defense Established Program to Stimulate Competitive Research (DEPSCoR) Research Collaboration, Rydberg Photonics: Quantum Many-Body Simulator with Photons, 05/31/2023-04/30/2024

[45] Co-PI (PI: H. Alaeian), Air Force Office of Scientific Research (AFOSR), total $600,000, 08/01/2023-07/31/2026

[46] Co-PI (PI: L. Huang, Purdue), DEPUTY DIRECTOR, The U.S. Department of Energy (DOE) Energy Frontier Research Center (EFRC) Quantum Photonics Integrated Design Center (QuPIDC), total amount $16,000,000, 09/2024-08/2028

[47] Co-PI (PI: J. Liu, Northeastern), National Science Foundation (NSF) Collaborative Research: DMREF: Accelerating the Design and Development of Engineered Photonic Materials on a Data-Driven Deep Learning Approach, Boltasseva's part $375,000; 10/01/2024-09/30/2029

[48] Co-PI (PI: H. Alaeian), The U.S. Department of Energy (DOE) Energy, Basic Energy Sciences (BES), Quantum Rydberg Photonics, total $900,000, 03/2024-02/2027

[49] Co-PI (PI: A. Banerjee, Purdue), WM Keck Foundation, Uncovering Elusive Kitaev Topological States with Strain and Optical Probes, total amount $1,200,000 01/01/2025-12/31/2027

[50] National Science Foundation (NSF) National Quantum Virtual Laboratory (NQVL) Quantum Science and Technology Demonstration (QSTD) center: Quantum Photonic Integration and Deployment (QuPID), participant, Boltasseva's part 100,000/year, 12/2024-11/29

[51] Army Research Office (ARO), Ultrafast Space-Time Photonics and Single-Photon Optical Modulators, total amount $950,000 01/2025-12/2027

Professional Activities and Affiliations:

Leadership:

- 2023 **MRS Fall Meeting** Chair
- The White House National Quantum Initiative Center Summit invitee, the National Quantum Coordination Office (NQCO) (October 2022)
- OPTICA Publication Council member (2022-present)
- **Elmore ECE Emerging Frontiers Center** "Crossroads of Quantum and AI," Elmore Family School of Electrical and Computer Engineering, Purdue University, Director (2021-present)
- **Workforce Development Lead**, the U.S. Department of Energy (DOE) Office of Science National Quantum Information Science Research Center, the Quantum Science Center (QSC) (10/01/2020 - present)
- **Deputy Director**, the U.S. Department of Energy (DOE) Energy Frontier Research Center (EFRC) Quantum Photonics Integrated Design Center (QuPIDC)
- Purdue Faculty Representative, Chicago Quantum Exchange (CQE) Steering Committee (2024-present)

Professional Society activities and memberships:

American Physical Society (APS) **Fellow** (2023)
Materials Research Society (MRS) **Fellow** (2021)
National Academy of Inventors (NAI) **Fellow** (2020)
The Institute of Electrical and Electronics Engineers, **IEEE Fellow** (2020)
International Society for Optical Engineers, **SPIE Fellow** (2017)
OPTICA (formerly Optical Society of America OSA) **Fellow** (2015)
Elected member of the Materials Research Society, **MRS Board of Directors** (2014-2017)
Materials Research Society, **MRS Congressional Visits** Day participant, United States Congress, Washington, DC (2014)
Optical Society of America OSA Student chapter advisor, Purdue (2014-present)
SPIE, International Society for Optical Engineers Student chapter advisor, Purdue (2014-present)
Purdue Performance Collaborative faculty advisor (2017-present)
Member of the Advisory Network, Optical Society of America OSA (since 2011)
Member, Optical Society of America OSA (since 2009), senior member (since 2011)
Member, SPIE, International Society for Optical Engineers (since 2008), senior member (since 2015)
Member, Danish Optical Society, DOPS (2007-2009)
Member, Network for Women in Physics in Denmark, KIF (2005-2010)
Member, Nordic Network for Women in Physics, NorWiP (2005-2010)

Editorial:

ACS Photonics	Editorial Advisory Board member (2023-2025)
Applied Physical Reviews	Member of the Editorial Board (2021-present)
Optical Materials Express	**Editor-in-Chief** (01/2016 – 12/2021)
Optical Materials Express	Guest Editor, focus issue "Plasmonics" (2015)
MRS Communications	Guest Editor, focus issue "Frontiers in Photonics, Plasmonics and Metamaterials" (2015)

Optics Letters	Topical Editor (03/2011 - 03/2014) (04/2014 – 12/2015)
ACS Photonics	Member of the Editorial Board (2015-2016)
Advanced Optical Materials	Editorial advisory board member (2014-2016)
Scientific Reports (Nature Publishing Group)	Editorial Board member, Topical Editor (2014-2016)
EDP (publisher of European Physics Journal and EPL)	Editorial Board member (2013-2016)
Advances in OptoElectronics	Guest Editor, special issue, Modern Trends in Metamaterial Applications (2012)
Advanced Electromagnetics	Editor and editorial board member (ISSN 2119-0275) (2011-2012)
Journal of Optics	Topical Editor, Nanophotonics and Plasmonics (2011-2012)
Materials	Guest Editor, special issue on Next Wave of Metamaterials (ISSN 1996-1944) (2010-2011)
Journal of Optics	Deputy Topical Editor, Nanophotonics and Plasmonics (2009-2010)

Advisory Boards and Awards Committees:

- Purdue Faculty Representative, **Chicago Quantum Exchange (CQE)** Steering Committee (2024-present)
- Division of Laser Science, American Physical Society (APS) (2024-present) - Nomination Committee member
- IEEE Photonics Society Emerging Technologies Taskforce committee member on Climate Action/Brain Initiative (2023-present)
- 2023 IEEE Photonics Society (IPS) Joint Awards Committee (JAC) member
- **Center for Polariton-driven Light-Matter Interactions (POLIMA)**, University of Southern Denmark, Advisory Board member (2022-present)
- **Constructor University**, Strategic Advisory Board member (2022-present)
- **Australian Research Council Centre of Excellence for Transformative Meta-Optical Systems (TMOS)**, Scientific Advisory Board member (2021-present)
- IEEE Photonics Society (IPS) Awards committee member (2022-2023)
- IEEE Photonics Society Emerging Technologies Taskforce committee member on Quantum Photonics (2021-2024)
- **Transformative Quantum Technologies (TQT)** center, University of Waterloo, Scientific Advisory Committee (SAC) member (2021-present)
- EU TOCHA program on "Dissipationless topological channels for information transfer and quantum metrology", Scientific Advisory Board Member (2019-2022)
- Quantum Economic Development Consortium (QED-C), Workforce Committee member (2019-2021)
- 2019 Nick Holonyak Jr. Award Committee **Chair** (Past Chair, 2020) (03/2019-02/2021)
- Technical University of Denmark, Department of Nanotechnology (2019), External Member of the search committee
- European VISORSURF: A Hardware Platform for Software-driven Functional Metasurfaces program, Advisory Board Member (2017-2021)
- 2018 Nick Holonyak Jr. Award Committee member, Optical Society of America (OSA) (2018-2020)
- Marie Curie Co-funding of Regional, National and International Programmes (COFUND) program MULTIPLY Selection & Evaluation Committee, Member (2017-2018)
- "Japan Prize" (awarded to one scientist in each field, approx. US$450,000), Official Nominator http://www.japanprize.jp/en (2015, 2016, 2023)
- 2015 Prize for Research into the Science of Light Jury committee, Quantum Electronics and Optics Division (QEOD), European Physical Society (EPS), Member (8 in total) (2014)

International expert/reviewer panels (on-site):

- The Optica Foundation Challenge, selection committee member (awards 10 US$100,000 grants to early-career professionals "to use optics to change the world for the better") (2023 and 2024)
- **Novo Nordisk Foundation**, Denmark, the Natural and Technical Sciences committee member (2020-present)
- Helmholtz Association evaluation panel, Germany - review of the **Karlsruhe Institute of Technology (KIT)** in the field of "Key Technologies – Material"), Karlsruhe, Germany (2017, 2025)
- President of Ireland Future Research Leaders Programme, **Science Foundation Ireland** (2017)

Activities as Referee/Jury:

Referee for Journal of Optical Society of America B, Optics Letters, Nature Photonics, Metamaterials, Materials, Nano Letters, Science, Nature Physics, Optics Express, Journal of Lightwave Technology, Optics Communications, IEEE Journal of Quantum Electronics, IEEE Photonics Technology Letters, IEEE Antennas and Wireless Propagation Letters, Microelectronic Engineering
Reviewer: Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials (2008, 2010, 2011, 2012, 2013, 2015, 2016, 2017, 2018, 2021, 2022, 2023)
Referee for Funding Agencies: *USA:* National Science Foundation NSF, Divisions ECCS and EPM (Electronic and Photonic Materials), Division of Materials Research (DMR); Army Research Office; U. S. Department of Energy DOE Office of Basic Energy Sciences (BES), DOE Early Career program
International: General Research Fund Hong Kong; Swiss National Science Foundation; U.S.-Israel Binational Science Foundation; European Commission programs; Science Foundation Ireland, Dublin; Estonian Science Foundation, ETH Zurich Research Commission; Israel Science Foundation; DFG/German Research Foundation

Conference Committees:

1. International Conference on Materials for Advanced Technologies, ICMAT 2009, Singapore, June 28-July 3, 2009 – Member of the program committee
2. Conference on Lasers and Electro-Optics and Conference on Quantum Electronics and Laser Science CLEO/QELS 2009, Baltimore, Maryland, USA, May 31-June 5, 2009 – Member of the QELS technical subcommittee "Fundamentals of Metamaterials"
3. CLEO/QELS 2010, San Jose, California, USA, May 16-21, 2010 – Member of the QELS-03 "Metamaterials and Complex Media" technical subcommittee
4. International Conference on Coherent and Nonlinear Optics (ICONO-2010), Kazan, Russia, August 23-27, 2010 – Member of program subcommittee on "Physics of Metamaterials, Periodic and Random Media"
5. International Conference on Fiber Optics and Photonics, "PHOTONICS – 2010," Guwahati, India, December 11 – 15, 2010 - Member of the International Advisory Committee
6. Electronic Materials Conference 2011, Santa Barbara, CA, USA, June 22-24, 2011 – Member of the organizing committee
7. CLEO/QELS 2012 – Member of the QELS "Metamaterials and Complex Media" technical subcommittee
8. International Workshop "Novel Ideas in Optics: From Advanced Materials to Revolutionary Applications," West Lafayette, IN, USA, May 31-June 2, 2012 – Member of the organizing committee
9. CLEO/Europe 2013 – Member of the "Micro and Nano Photonics" subcommittee
10. International Conference on Coherent and Nonlinear Optics and Conference on Lasers, Applications, and Technologies ICONO/LAT 2013, Moscow, Russia, June 18-22, 2013 – **co-chair** of the ICONO subcommittee on "Nano-Optics and Plasmonics"
11. International Conference on Materials for Advanced Technologies, ICMAT 2013, Singapore, June 30-July 5, 2013 – **co-chair** of the symposium on "Plasmonics and Metamaterials"
12. SPIE Optics and Photonics, San Diego, California, USA, August 25-29, 2013 – member of the program committee on "Metamaterials"
13. 2013 IEEE Photonics Conference, September 8-12, 2013 – member of the Photonic Materials and Metamaterials Subcommittee
14. 8th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2014, Copenhagen, Denmark, August 25-28, 2014 - member of the Technical Program Committee
15. SPIE Optics and Photonics, San Diego, CA, USA, August 17-21, 2014 - members of the Program Committee of the "Metamaterials, Metadevices, and Metasystems" conference
16. 2014 IEEE Photonics Conference, San Diego, California USA, October 12-16, 2014 – member of the Photonic Materials and Metamaterials Subcommittee, *special event organizer:* ***panel discussion*** on Metamaterials
17. 5th International Topical Meeting on Nanophotonics and Metamaterials (NANOMETA-2015), Seefeld, Tirol, Austria, 5-8 January, 2015 – member of Technical Programme Committee
18. CLEO/Europe and European Quantum Electronics Conference (EQEC) 2015, Munich, Germany, June 21 - 25, 2015 – member of the sub-committee "Micro- and Nano-Photonics"
19. SPIE Optics and Photonics, San Diego, CA, USA, August 5-12, 2015 – members of the Program Committee of the "Metamaterials, Metadevices, and Metasystems" conference
20. 2015 MRS Fall Meeting, November 29 - December 4, 2015, Boston, Massachusetts, USA – member of the organizing committee

21. 9th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2015, September 7-12, 2015, Oxford, UK – member of the Technical Program Committee
22. Novel Optical Materials and Applications (NOMA), Advanced Photonics Congress, OSA, 27 June – 1 July, 2015, Boston, MA, USA – member of the program committee
23. New Materials for Photonics, Integrated Photonics Research (IPR), Silicon and Nano Photonics OSA topical meeting, 27 June – 1 July, 2015, Boston, MA, USA – subcommittee member
24. 2015 IEEE Photonics Conference, 28th Annual Conference of the IEEE Photonics Society, Hyatt Regency Reston, Reston, Virginia USA, October 4-8, 2015 – subcommittee member
25. IEEE Photonics Society meeting, 2015 - Nanophotonics subcommittee member
26. New Materials for Photonics, Integrated Photonics Research (IPR), Silicon and Nano Photonics OSA topical meeting, 2016 – subcommittee member
27. "Novel Optical Materials and Applications Conference", OSA Advanced Photonics Congress, Vancouver, Canada, July 18-20, 2016 – Program Committee member
28. The European Optical Society Bi-Annual Meeting, Adlershof, Berlin, September 26-30, 2016 – scientific committee member of "Trends in resonant nanophotonics"
29. IEEE Photonics Conference (IPC), 2016, Hawaii and 2017, Orlando – Nanophotonics (NANO) committee member
30. 2017 MRS Spring meeting - symposium organizer
31. CLEO/Europe-EQEC 2017 - program committee member
32. Integrated Optics: Devices, Materials, and Technologies XXI, SPIE Photonics West, January 20-27, 2017 - program committee member.
33. PR 2017 - Integrated High-precision Photonics, New Orleans, Louisiana, USA, 24 - 28 July 2017 – program committee member
34. Advanced Solid-State Lasers (ASSL), Nagoya, Japan, 1 October – 5 October 2017 – program committee member
35. SPIE Photonics West, Integrated Optics Conference 2018 – committee member
36. 2018 MRS Spring Meeting – symposium organizer
37. SPIE Photonics Europe, April 2018, Strasbourg, France – committee member
38. IEEE RAPID Conference, Miramar Beach, FL, USA, 22-24 August 2018 – session organizer, opening address
39. OSA Nonlinear Photonics conference, Zurich, Switzerland, 02 - 05 July 2018 – member of the technical program subcommittee on the topic “Nonlinear Nanophotonics, Plasmonics, and Metamaterials”
40. European Optical Society Annual Meeting (EOSAM), Delft, Netherlands, 8-12 October 2018 – member of the Scientific Committee
41. Metamaterials 2018, the 12th International Congress on Engineered Material Platforms for Novel Wave Phenomena, Finland August 27--September 1, 2018 – member of Technical Program Committee (TPC)
42. Advanced Solid-State Lasers (ASSL) 2018 – Material Committee Member
43. SPIE Photonics West Integrated Optics Conference 2019 – committee member
44. IEEE RAPID Conference, Miramar Beach, FL, USA, 19-21 August 2019 – session organizer
45. SPIE Optics and Photonics, San Diego, California, USA, 2019 – Metamaterials, Metadevices, and Metasystems conference, committee member
46. Advanced Solid-State Lasers (ASSL) 2019, Vienna, Austria, 29 September 2019 – 03 October 2019, – Material Committee Member
47. Photonics in Switching and Computing (PSC), part of OSA Advanced Photonics Congress, Montréal, Canada, July 12-16, 2020 - technical program committee member for "Photonics in computing systems and deep learning applications” (online conference)
48. Annual meeting of the European Optical Society (EOSAM), Porto, Portugal, September 7-11, 2020 – Scientific Committee of the TOM 5 “Metamaterials, Plasmonics and Resonant Nanophotonics”
49. Nonlinear Photonics (NP) 2020, OSA conference, part of the Advanced Photonics Congress 2020, July 13-16 2020, Montreal, Canada - subcommittee member on "Nonlinear conservative systems and interactions in photonic structures"
50. SPIE Optics and Photonics, San Diego, California, USA, August 2020 – Metamaterials, Metadevices, and Metasystems conference, committee member
51. IEEE RAPID Conference, Miramar Beach, FL, USA, 18-20 August 2020 – session organizer, session chair (online conference)
52. The 51th Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 5-9, 2022 – session organizer (postponed from 2021)
53. Annual meeting of the European Optical Society (EOSAM) 2021, Rome, Italy, September 13-17, 2021 – Scientific Committee of the TOM 5 “Metamaterials, Plasmonics and Resonant Nanophotonics”

54. OSA Topical Meeting on Photonics in Switching and Computing 2021, September 27-29, 2021 – Member of the Technical Program Committee (online conference)
55. SPIE Photonics West, Integrated Optics Conference 2022 – committee member
56. SPIE Optics and Photonics, San Diego, California, USA, August 2022 – Metamaterials, Metadevices, and Metasystems conference, committee member
57. The 51st Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 8-13, 2023 – session organizer
58. The 14th International Congress on Artificial Materials for Novel Wave Phenomena (Metamaterials), Siena, Italy, September 12-17, 2022 – Technical Program Committee member, reviewer
59. The 52nd Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 8-13, 2023 – session organizer
60. SPIE Photonics West, Integrated Optics Conference 2023 – committee member
61. The 17th International Congress on Artificial Materials for Novel Wave Phenomena, Metamaterials 2023, Crete (Greece), September 11-16, 2023 – member of the Scientific Advisory Board, reviewer
62. SPIE Optics and Photonics, San Diego, California, USA, August 20-24, 2023 – Metamaterials, Metadevices, and Metasystems conference, committee member
63. The 5th International Conference of Telecommunication and Photonics, ICTP 2023 - International Advisory Committee (IAC) member
64. International Topical Meeting on Nanophotonics and Metamaterial Conference (NANOMETA 2024), Seefeld (Tirol), Austria, January 3-6, 2024 – technical program committee member
65. The 53rd Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 7-12, 2024 – session organizer
66. 2024 SPIE Photonics West Integrated Optics Conference – committee member
67. 2024 SPIE Photonics Europe, 'Machine learning in photonics' sub-conference – committee member
68. SPIE Optics & Photonics, San Diego, California, USA, August 18-22, 2024 – Conference OP105, Photonic Computing: From Materials and Devices to Systems and Applications, committee member
69. SPIE Optics & Photonics, San Diego, California, USA, August 18-22, 2024 – Conference OP101, Metamaterials, Metadevices, and Metasystems conference, committee member
70. The 17th International Conference on Near Field Optics, Nanophotonics and Related Techniques (NFO-17), Melbourne, Australia, 2-6 December 2024 – member of International Program Committee
71. The 18th International Congress on Artificial Materials for Novel Wave Phenomena, Metamaterials 2024, Crete (Greece), September 9-14, 2024 – member of the Scientific Advisory Board, reviewer
72. The Frontiers in Optics + Laser Science Conference, annual meeting of Optica and the APS Division of Laser Science, Denver, USA, September 23-26, 2024 - Subcommittee Chair for LS1: Nanophotonics, Plasmonics, and Metamaterials
73. Fast ML conference, Purdue University, October 15-18, 2024 – organizer, session chair, closing remarks
74. 2025 SPIE Photonics West Integrated Optics Conference – committee member
75. The Waves in Time Varying Media Workshop, Madrid, Spain, May 20-22, 2025 – member of the Advisory Committee
76. SPIE OP105 conference, Photonic Computing: From Materials and Devices to Systems and Applications, SPIE Optics + Photonics, August 3–7, 2025, San Diego, California – member of the conference committee
77. 2026 SPIE Photonics Europe, 'Machine learning in photonics' sub-conference – committee member

Conferences with Session Chairing/Presiding Invitations:

1. 2006 SPIE Optics and Photonics, Plasmonics: Nanoimaging, Nanofabrication, and Their Applications II, San Diego, California, USA, August 13-17, 2006
2. CLEO/QELS and PhAST 2007, Baltimore, Maryland, USA, May 6-11, 2007
3. 33rd International Conference on Micro- and Nano-Engineering MNE07, Copenhagen, Denmark, September 23-26, 2007 - **Plenary session chair**
4. 2nd European Topical Meeting on Nanophotonics and Metamaterials (NANOMETA 2009) Seefeld, Austria, January 5-8, 2009
5. CLEO/IQEC 2009, Baltimore, Maryland, USA, May 31-June 5, 2009
6. International Conference on Materials for Advanced Technologies, ICMAT 2009, Singapore, June 28 - July 3, 2009
7. SPIE Optics and Photonics: Plasmonics, San Diego, California, USA, August 2-6, 2009
8. SPIE Photonics Europe, Brussels, Belgium, April 12 – 16, 2010
9. SPIE Optics and Photonics, San Diego, California, USA, August 21-25, 2011

10. Physics of Quantum Electronics, Snowbird, Utah, USA, January 2-7, 2012
11. CLEO/QELS 2012, San Jose, CA, USA, May 6-11, 2012
12. OSA meeting, Integrated Photonics Research (IPR), Colorado Springs, Colorado, USA, June 17-22, 2012
13. 6th Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2012, St. Petersburg, Russia, September 17-22, 2012
14. 4th International Topical Meeting on Nanophotonics and Metamaterials (NANOMETA 2013), Seefeld, Austria, January 2-6, 2013
15. CLEO/QELS 2013, San Jose, CA, USA, June 9-14, 2013 – session chair
16. 7th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics – Metamaterials 2013, Bordeaux, France, September 16-21, 2013
17. SPIE Optics and Photonics, San Diego, California, USA, August 16-21, 2014
18. 8th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics – Metamaterials 2014, Copenhagen, Denmark, August 25-28, 2014
19. 5th International Topical Meeting on Nanophotonics and Metamaterial Conference (NANOMETA 2015), Seefeld (Tirol), Austria, 5-8 January, 2015 – **Breakthrough session chair**
20. Summer school on Complex Photonics, International School of Physics "Enrico Fermi", Como lake, Italy, July 12-18, 2015 – lectures chairing and discussion leader
21. 2015 OSA Frontiers in Optics/Laser Science Conference, San Jose, CA, October 18-22, 2015 – session chair
22. CLEO/QELS 2016, San Jose, CA, USA, June 5-10 – session chair
23. 2016 Gordon Research Conference on Nanophotonics and Plasmonics, Sunday River Resort, Newry, Maine, USA, July 9-14, 2016 – Discussion leader
24. CLEO/QELS 2017, San Jose, CA, USA, May 14-18, 2017 – session chair
25. The 8th International Conference on Surface Plasmon Photonics (SPP8), Taipei, Taiwan, May 22-26, 2017 – session chair
26. 13th Mediterrenian Workshop and Topical Meeting "Novel Optical Materials and Applications" NOMA2017, June 4-10, 2017 – session chair
27. SPIE Optics and Photonics, San Diego, California, USA, August 6-11, 2017 – session chair
28. Nanoplasm, Cetraro, Italy, June 10-16, 2018 – **Plenary session** chair
29. META 2018, the 8th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Costa Diadema, June 24 - July 1, 2018 – session chair
30. IEEE RAPID Conference, Miramar Beach, FL, USA, 22-24 August 2018 – session chair, opening address
31. Novel Concepts in Photonics Research 2019 conference, Ein Gedi, Israel, February 10 – 15, 2019 – session chair
32. 14th Mediterranean Workshop and Topical Meeting "Novel Optical Materials and Applications" NOMA2019, Cetraro, Italy, June 2-9, 2019 – session chair
33. "Topological Photonics and Beyond," Tianjin, China, June 30 - July 3, 2019 – session chair
34. SPIE Optics and Photonics, San Diego, California, USA, August 11-16, 2019 – session chair
35. IEEE RAPID Conference, Miramar Beach, FL, USA, 19-21 August 2019 – session chair
36. The 13th International Congress on Artificial Materials for Novel Wave Phenomena (Metamaterials), Rome, Italy, September 16-21, 2019 – session chair
37. IEEE RAPID Conference, Miramar Beach, FL, USA, 18-20 August 2020 – session chair (online)
38. 95th IUVSTA Workshop on Plasmonic Thin Films: Theory, Synthesis and Applications, City of Guimarães, Portugal, June 20-23, 2022 – session chair
39. NanoPlasm, Cetraro, Italy, June 13-17, 2022 – session chair
40. The 14th International Congress on Artificial Materials for Novel Wave Phenomena (Metamaterials), Siena, Italy, September 12-17, 2022 – session chair
41. The 52nd Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 8-13, 2023 – session chair
42. The 53rd Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 7-12, 2024 – session chair
43. Forefront of Ultrafast Nanophotonics (Meta FUN), Palermo, Italy, July 23-26, 2024 – session chair
44. Fast ML conference, Purdue University, October 15-18, 2024 – organizer, session chair
45. The 54th Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 5-10, 2025 – session chair
46. 2025 SPIE Photonics West Integrated Optics Conference – session chair

Committee Activities at Purdue:
Search committee member for EVPR (2025)

Search committee for COE quantum hire, chair (2023-2024)
Search committee for Dean of Engineering, co-chair (2022)
Birck Nanotechnology Center Internal Advisory Committee (2009)
Birck Policy and Procedure Committee (2009)
Graduate Admission Committee (2009-present)
ECE Curriculum Committee (2010-2013)
ECE Graduate Curriculum Committee (2013-2016)
Search committee for faculty for Atomic and Molecular Optics area, Physics Department, member (2014)
Search committee for faculty for "Quantum Photonics" Preeminent team, member (2014-2016)
Search committee for faculty for Turner Professor of Engineering School of Materials Engineering and Electrical and Computer Engineering, member (2014-2015)
Search committee for Chief Scientist & Executive Director of Discovery Park, member (2014-2015)
Discovery Park Internal Strategy Advisory Board member (2016-present)
Engineering Advisory Council member (Senior faculty representative) (2016-2019)
Birck Nanotechnology Faculty Leadership Council member (2017-present)
Head of Search committee for the Head of Bindley bioscience Center (2017-2018)
Search committee for CSE faculty, ECE, member (2018-2019)
Search committee for Head of Department of ECE, member (2018-2019)
150th Anniversary cross-cutting committee, member (2018-2019)
Big Idea Challenge organizer, as part of Discovery Park Fellow activities
Purdue Galleries Advisory Council (2019-present)

Other:
- Member of the Steering Committee of the Russian-speaking Academic Science Association (RASA)
- Member of the organizing committee for the workshop of Russian and former Soviet Union scientists "On the way to Nanotechnological Revolution," France, October 5-11, 2008

Recognitions, Honors, and Awards Received by Students:

2025 **SPIE Optical Design and Engineering Scholarship** ($5000, Yuheng Chen)
2024 The School of Electrical and Computer Engineering **Bilsland Dissertation Fellowship**, Peigang Chen (co-advised with V. Shalaev)
2024 The School of Electrical and Computer Engineering **Bilsland Dissertation Fellowship**, Mustafa Ozlu (co-advised with V. Shalaev)
2024 **Society of Vacuum Coaters Foundation (the SVC Foundation)** "SVC Foundation Scholarship" ($2,500, Miroslava Marinova)
2024 **Society of Vacuum Coaters Foundation (the SVC Foundation)** "Clark & Karen Bright Endowed Scholarship honoring Angus Macleod" ($2,500, Jae-Ik Choi)
2024 **Society of Vacuum Coaters Foundation (the SVC Foundation)** "SVC Foundation Scholarship" ($5,000, Artem Kryvobok, co-advised with V. Shalaev)
2023 **Corning Women in Optics Award** (Xiaohui Xu)
2022 SPIE Optics and Photonics Education Scholarship ($4000) (Xiaohui Xu)
2022 IEEE Photonics Society Graduate Student Scholarship (Xiaohui Xu)
2022 First place in the oral and poster presentations of the 9th Annual Graduate Industrial Research Symposium at Purdue (Xiaohui Xu)
2022 Phi Kappa Phi Love of Learning Award (Xiaohui Xu)
2022 **Corning Women in Optical Communications Scholarship** (Sarah Chowdhury)
2022 **Maria Goeppert Mayer Fellowship**, Argonne National Lab (Soham Saha)
2021 Director's Fellowship, Los Alamos National Lab (Soham Saha)
2021 COE **Outstanding Graduate Student Research Award**, College of Engineering, Purdue University (Soham Saha)
2021 **Corning Women in Optical Communications Scholarship** (Deesha Shah)
2022 **J.A. Woollam Company Scholarship**, the Society of Vacuum Coaters Foundation ($2,500) (Sarah Chowdhury)
2021 The School of Electrical and Computer Engineering **Bilsland Dissertation Fellowship** (Deesha Shah)
2021 The **2021 Dimitris N. Chorafas Foundation award** (Soham Saha)
2021 SPIE Optics and Photonics Education Scholarship ($4000) (Sarah Choudhury)
2021 Inaugural Quantum Science Center Postdocs and Graduate Students Poster Session, top poster award (Xiaohui Xu)
2021 IEEE Photonics Conference 2021 Best Student Paper Award, 3rd place (Xiaohui Xu)

2020 Best Student Presentation Award, 2020 MRS Fall Meeting (Sarah Choudhury)
2020 The **2024 Foundation Scholarship**, Society of Vacuum Coaters ($5,000) (Xiaohui Xu)
2019 The Society of Vacuum Coaters Foundation (SVC Foundation) travel scholarship (Sarah Choudhury)
2019 SPIE Optics and Photonics Education Scholarship (Soham Saha)
2019 COE **Outstanding Graduate Student Research Award**, College of Engineering, Purdue University (Krishnakali Chaudhuri)
2018 **Outstanding Poster Presentation Award**, OSA Optical Material Studies Technical Group, CLEO 2018 (Shaimaa Azzam)
2018 Best Poster Award in **Gordon Research Conference** on Lasers in Micro, Nano and Bio Systems (Shaimaa Azzam)
2018 **Society of Vacuum Coaters Foundation (the SVC Foundation) scholarship**, the Bernard Henry Fund of SVCF (Deesha Shah)
2018 **SPIE Optics and Photonics Education Scholarship** (Oksana Makarova)
2018 Purdue Office of Undergraduate Research Scholarship (Oksana Makarova)
2018 University of Waterloo travel grant, Undergraduate School on Experimental Quantum Information Processing (Oksana Makarova)
2017 **Dimitris N. Chorafas Foundation Award for Outstanding PhD Dissertation** (Justus Ndukaife)
2017 **Society of Vacuum Coaters Foundation (the SVC Foundation) scholarship**, the Bernard Henry Fund of SVCF (Soham Saha)
2016 Elected **Gordon Research Seminars** co-chair, GRS 2018 (Justus Ndukaife)
2016 **Gordon Research Conference** Emerging Topic Talk (Selected One out of all participants), GRC on Plasmonics and Nanophotonic, 2016 (Justus Ndukaife)
2016 Selected to give an invited talk at the 2016 **Gordon Research Seminar** (GRS) on Plasmonics and Nanophotonics (Justus Ndukaife)
2016 **Outstanding Graduate Student Research Award**, College of Engineering, Purdue University (Justus Ndukaife)
2015 '**Best Poster**' award for "Hybrid Electrothermoplasmonic Nanotweezer," NSF student poster competition, ASME 2015 International Mechanical Engineering Congress, Houston, Texas, USA, November 17-19, 2015 (Justus Ndukaife)
2015 Symposium Chair Assistant, MRS Fall meeting (Justus Ndukaife)
2015 SPIE Active Photonics **Best Student Paper Award**, SPIE Optics and Photonics conference, August 9-13, 2015, San Diego, CA, USA (Nathaniel Kinsey)
2015 Engineering Travel Grant to attend 2015 IEEE Photonics Society Summer Topicals meeting, College of Engineering, Purdue University (Nathaniel Kinsey)
2015 **Outstanding Graduate Student Research Award**, College of Engineering, Purdue University (Nathaniel Kinsey)
2015 Symposium Chair Assistant, MRS Spring meeting, Session Chair for Symposium V: Resonant Optics - Fundamentals and Applications (Jongbum Kim)
2015 **Bilsland Fellowship**, Purdue University graduate school (Nathaniel Kinsey)
2014 **Golden Torch Award** by the National Society of Black Engineers (Justus Ndukaife)
2014 SPIE travel grant, SPIE Optics and Photonics, San Diego, CA, August 16-21, 2014 (Naresh Emani)
2013 **IEEE** Photonics Society (IPS) **2013 Graduate Student Fellowship** (Gururaj Naik)
2013 **Outstanding Graduate Student Research Award**, CoE, Purdue University (Gururaj Naik)

Media Interviews and Other Coverage:

1. ''8 Forskerhistorier 2006'', Danish Research Council for Technology and Production Sciences report (2006) *(highlighting 8 granted research projects every year)*
2. ''Superlinse kan spare medicinforsøg'', **Ingeniøren** (2007) *(major Danish engineering Newspaper)*
3. Danish Agency for Science, Technology and Innovation press-release (2007) *(highlighting only 2 research projects out of all granted in 2007 in Denmark)*
4. Articles in major Danish newspapers: ''Spåkonen og superlinsen'', Politiken; ''Forgyldt nanoforsker udvikler superlinser'', Børsen; ''Forskerkarierren har mest at byde på'', **Ingeniøren** (2008)
5. ''Nobelprisvindere forventer flere store gennembrud i fysik'', Danish scientific news media **Videnskab.dk** on Lindau Nobel meeting and Danish participants (07-21-2008)
6. In ''News and Highlights'', **Laser & Photonics Reviews** 3, 4, A31-A32 (2009)
7. P. West, S. Ishii, G. Naik, N. Emani and A. Boltasseva, ''Identifying low-loss plasmonic materials'', SPIE Newsroom (2010-10-10), DOI: 10.1117/2.1201009.003167; Featured article on **MaterialsViews**.com (10-21-2010)

8. Numerous Science blogs: sciencedaily.com, scienceblog.com, nextbigfuture.com and others (2011) *(on Science Perspective paper on New Plasmonic Materials)*
9. A. Boltasseva and H. Atwater, "New materials could turn near-fantastic devices like invisibility cloaks and hyperlenses into reality", **2Physics** (02-27-2011)
10. R. Won, "In search of new materials", in News and Views, **Nature Photonics** 5, 139–140 (2011), DOI: 10.1038/nphoton.2011.30
11. M. May, "Magnifying biology with metamaterials", **BioOptics World** (11-10-2011)
12. G. Naik and A. Boltasseva, "Plasmonics and metamaterials: looking beyond gold and silver", **SPIE Newsroom** (2012-01-30), DOI:10.1117/2.1201201.004077
13. "Researchers Discover a New Path for Light Through Metal: Novel Plasmonic Material May Merge Photonic and Electronic Technologies", **OSA press-release** (03-27-2012) and numerous science blogs (03-2012) *(on Optical Materials Express 2, 478-489 (2012) paper)*
14. K. Krieger, "Metamaterials step into the light", **IEEE Spectrum** (04-2012) (*on Invited talk at APS March meeting 2012*)
15. G. Naik and A. Boltasseva, "Near-infrared metamaterials go beyond metals", **2Physics** (06-2012)
16. IEEE Photonics Society News featuring 2013 Young Investigator Award recipient: Alexandra Boltasseva, **IEEE Photonics Society News journal** (02-2013)
17. Interview on **MRS TV** 2013 Spring Meeting in connection with the 2013 Outstanding Young Investigator Award, http://www.websedge.com/videos/mrs_tv_2013_spring_meeting (04-2013)
18. S. Karlin, "Alexandra Boltasseva: A Rising Star – Creating new materials to manipulate light," profile contribution, **IEEE Photonics Spectrum** (6 December 2013)
19. N. Kinsey, M. Ferrera, V. Shalaev, A. Boltasseva, "A platform for practical plasmonics," **SPIE Newsroom** (2014-05-08), DOI: 10.1117/2.1201404.005462
20. **Wiles Magazine**'s annual **Hot List of female engineers** featuring Alexandra Boltasseva (August 21, 2014)
21. Alexandra Boltasseva, Garbi Schmidt, Vi er for ringe til at fastholde højtuddannede udlændinge i landet, Politiken, 2014
22. Featured in **SPIE Women in Optics** Planner, 18-months calendar-planner distributed in more than 25 countries (2015)
23. Y. Tsuboi, "Plasmonic optical tweezers: A long arm and a tight grip," News and Views, Nature Nanotechnology 11, 5–6 (November 02, 2015) *(on our Nature Nanotechnology paper on electrothermoplasmonic nanotweezer)*
24. "Where now for plasmonics?" Nature Nanotechnology 11, 1 (2016) *(on our Faraday Discussions paper "Plasmonics on the slope of enlightenment: the role of transition metal nitrides")*
25. Alexandra Boltasseva interview featured on **OSA 100** stories, http://www.osa.org/en-us/100/osa_stories/
26. "Catching and controlling light rays," Fireside chat, Discovery Park Open House and Convergence Conference, September 23, 2016
27. Alexandra Boltasseva, "Discovering new plasmonic materials," Interview, 9 January 2017, **SPIE Newsroom**. DOI: 10.1117/2.3201701.02 1.
28. "Complex Refractory Plasmonic Designs," by Advanced Science News (April 16, 2017) on our work published in Advanced Optical Materials http://www.advancedsciencenews.com/complex-refractory-plasmonic-designs/
29. Interview with International Business Times, "Beyond Graphene: New Nanomaterials For Solar Energy, Computers, Curing Cancer And A Lot More," by Himanshu Goenka, http://www.ibtimes.com/beyond-graphene-new-nanomaterials-solar-energy-computers-curing-cancer-lot-more-2565725 (July 14, 2017)
30. "Faces of Photonics" social media campagn by **SPIE** www.instagram.com/explore/tags/facesofphotonics/ (August 2017)
31. Purdue-in-the-know TED talk, Purdue Homecoming (September 2017)
32. A. Boltasseva, J. Hu, New Journal prize to recognize the best paper from an emerging researcher, Optical Materials Express 8 (6), 1695-1695 (June 1, 2018)
33. **2018 Blavatnik Science Symposium**, The New York Academy of Science (July 16-17, 2018) LIVE interview https://www.facebook.com/blavatnikawards/videos/1087987621355886/
34. Featured in The New York Academy of Sciences (NYAS) **Ask Me Anything** (AMA) online program (October 2018)
35. Interview for **Materials Zone** | Distributed Scientific Research: www.materials.zone https://www.youtube.com/watch?time_continue=6&v=cUKhY_HoMAM
36. "Single NV centers produce 30 million photons per second at room temperature," **Optics and Photonics News** (December 2018)
37. A. Boltasseva, "Overcoming Doubts with Help from Advisors and Role Models," The New York Academy of Sciences NYAS.org, published February 01, 2019

38. Featured lecture at The New York Academy of Sciences (NYAS) “Manipulating light using novel materials” webinar, May 22, 2020
39. Featured interview with The New York Academy of Sciences NYAS.org, “Blending Artificial Intelligence and Physical Sciences: What Can We Expect?” by L. Dong, September 14, 2020
40. A. Boltasseva, “Machine-Learning-Assisted Photonics” webinar, The New York Academy of Sciences, Webinar on “AI for Materials: from Discovery to Production,” October 6-7, 2020
41. S. Saha, D. Shah, V. M. Shalaev, A. Boltasseva, “Tunable Metasurfaces: Controlling Light in Space and Time,” Optical Society of America, Optics and Photonics News Journal 32 (7), 34-41, July 1, 2021
42. A. Boltasseva, “From Basic Research to a Quantum-Smart Society: Merging AI and Quantum Science,” Quantum for the People: Connecting Quantum Information Science and Society session, 2022 American Association for the Advancement of Science (AAAS) Annual Meeting, February 2022, invited talk, panelist
43. 2022 NVIDIA GPU Technology Conference (GTC), Accelerating Quantum Computing Research with GPUs panelist, September 19-22, 2022
44. PillarQ&A interview, “Research and Workforce Development at the Intersection of Quantum and Artificial Intelligence,” October 27, 2022
45. “Campfire Session: Machine Learning and Photonics - Great Successes and Open Challenges,” OPTICA Optoelectronics Technical Group webinar, October 4, 2023
46. “Advancing Photonics with Machine Learning,” Photonics Media (200,000+ subscribers) webinar (targeted audience of engineers, researchers, VPs, CTOs, business owners, educators, students) November 1, 2023
47. S. Martin, “Purdue deep-learning innovation secures semiconductors against counterfeit chips,” Purdue University press-release, September 16, 2024
48. “Purdue researchers tame the interplay of light and matter to build a 'playground' for novel physics,” Purdue University press-release, December 5, 2024

Invited Seminars/Webinars:

- Materials Engineering Colloquium speaker, Stanford, January 29, 2025 – Prof. A. Mannix
- ETH, Zurich, Switzerland, June 3, 2024 – Prof. E. Demler
- ICFO - The Institute of Photonic Sciences, Barcelona, Spain, May 30, 2024 – Prof. J. Garcia de Abajo
- CREOL - The College of Optics and Photonics Orlando, USA, April 11, 2024 – Prof. K. Vodopyanov
- Purdue Physics Department Colloquium, January 25, 2024 – Prof. D. Nolte
- Photonics Media webinar, November 1, 2023
- Institute of Nanoscience CNR-NANO Instituto Nanoscienze, Modena, Italy, June 2023 – Dr. Arrigo Calzolari
- Center for Nano Science and Technology (CNST), Istituto Italiano di Tecnologia (IIT), Milan, Italy, June 2023 – Dr. A. Ambrosio
- Center for Polariton-driven Light-Matter Interactions (POLIMA), University of Southern Denmark, June 2023 – Prof. N. A. Mortensen
- London Centre for Nanotechnology, the Net-Zero Centre and London Institute for Advanced Light Technologies, King’s College London, May 2023 – Prof. A. Zayats
- Technion, Israel, December 2022 – Prof. M. Segev
- Australian Research Council Centre of Excellence for Transformative Meta-Optical Systems (TMOS), November 2022 – Prof. D. Neshev
- University of Technology Sydney, November 2022 – Prof. I. Aharonovich
- Advanced Science Research Center, CUNY, New York, NY, USA, October 2022 – Prof. Andrea Alu
- Georgia Institute of Technology, October 2022 – Prof. Wenshan Cai
- 2022 NVIDIA GPU Technology Conference (GTC), Accelerating Quantum Computing Research with GPUs, September 2022 – panelist
- Technical University of Denmark, June 2022 – Profs. D. Zibar and A. Lavrinenko
- Quantum Seminar, Harvard University, November 2021 – Prof. E. Hu and Prof. M. Lukin
- Karlsruhe School of Optics and Photonics (KSOP) “Days of Photonics” webinar lecture, November 2021 – Prof. U. Lemmer
- Invited webinar, an International Seminar Series on Nanophotonics, Ludwig-Maximilians Univeristy Munich (LMU), November 10, 2021 – Prof. S. Maeir, Prof. A. Tittle, Prof. L. Menezes
- Quantum Seminar, Niels Bohr Institute, University of Copenhagen, June 2021 – Prof. E. Polzik
- University of Southern Denmark, June 2021 – Prof. S. Bozhevolnyi

- Invited webinar, European Association of Mechanical, Acoustic and Thermal Metamaterials, April 14, 2021 - Dr Bogdan Ungureanu, Imperial College London
- Optical Society of America webinar, January 27, 2021
- Mid-infrared Discussions (MIDI), webinar series, University of Southampton, November 5, 2020 - Prof. S. De Liberato and Prof. S. Maier
- The New York Academy of Sciences (NYAS) webinar, "AI for Materials: from Discovery to Production," October 6-7, 2020
- The New York Academy of Sciences (NYAS) "Manipulating light using novel materials" webinar, May 22, 2020
- University of Oklahoma, October 19, 2019 – Prof. T. Diaz de la Rubia
- Joint Quantum Seminar, Harvard University, November 20, 2019 – Prof. E. Hu and Prof. M. Lukin
- Indiana University Purdue University Indianpolis (IUPUI), November 15, 2019 – Prof. Chair A. D. Gavrin
- Case Western University, October 31, 2019 – Prof. G. Strangi
- Stanford, May 2019 – Prof. J. Fan
- Materials Science Seminar, MIT, April 2019
- GE Global Research, June 2018 – Dr. L. Tsakalakos
- The 2nd George Stegeman Symposium, College of Optics and Photonics/CREOL, March 12-13, 2018, Orlando, Florida – Profs D. Christodoulides, R. Stegeman, D. Hagan
- The Princeton Institute for the Science and Technology of Materials (PRISM) and the Princeton Center for Complex Materials (PCCM) Seminar Series, Princeton University (February 2018) – Prof. N. de Leon
- Northwestern University (February 2018) – Profs. N. Stern, A. Tchekhovskoy
- University of Maryland (February 2018) – Prof. M. Leite
- Argonne National Laboratory, Center for Nanoscale Materials (January 2018) – Dr. G. Wiederrecht
- Siberian Federal University, Institute of Physics, Russia (July 2017) – Prof. A. Vyunishev
- Hebrew University, Jerusalem, Israel (June 2017) – Prof. U. Levy
- DTU Nanotech, Technical University of Denmark, invited seminar (April 2017) – Prof. A. Kristensen
- Collaborative Research Center "Hybrid Inorganic/Organic Systems for Opto-Electronics (HIOS)" invited seminar, Berlin (January 2017) – Prof. O. Benson
- Technical University of Denmark, Center for Nanostructured Graphene, Denmark (May 2016) – Prof. A. N. Mortensen
- ICFO, The Institute of Photonic Sciences, Barcelona, Spain (May 2016) – Prof. J. Garcia de Abajo & F. Koppens
- Niels Bohr Institute, University of Copenhagen, Denmark (March 2016) – Prof. P. Lodahl
- Heriot-Watt University, Scotland, UK (March 2016) – Prof. M. Ferrera
- Technical University of Denmark, DTU Fotonik, Denmark (March 2016) – Prof. A. Lavrinenko
- University of Southampton, Optoelectronics Research Centre retreat (March 2016) – Prof. N. Zheludev
- Joint Quantum Sciences Seminar, Harvard Quantum Optics Center (HQOC) and Institute for Theoretical Atomic Molecular and Optical Physics (ITAMP), Harvard-Smithsonian Center for Astrophysics (February 2016) – Prof. M. Lukin
- Data Storage Institute, A*STAR, Singapore (December 2015) – Prof. A. Kuznetsov
- National University of Singapore (December 2015) – Prof. V. Venkatesan
- University of Southern Denmark (June 2015) – Prof. S. Bozhevolnyi
- Applied Physics Department, Yale University (January 2015) – Prof. H. Cao
- Institute for Nanoscale Science and Engineering, Vanderbilt University (January 2015) – Prof. R. F. Haglund
- Indiana University-Purdue University Indianapolis (January 2015) – Prof. G. Vemuri
- Kazan Federal University, Russia (June 2014) – Prof. S. Kharintsev
- Krasnoyarsk Institute of Physics, Russia (June 2014) – Prof. V. Zyryanov
- UCLA (June 2014) – Prof. M. Jarrahi
- Northwestern University (April 2014) – Prof. K. Aydin
- Technion-Israel Institute of Technology, Haifa, Israel (October 2013) – Prof. M. Segev
- University of California, Berkeley, CA, USA (June 2013) – Prof. X. Zhang
- Kirensky Institute of Physics, Krasnoyarsk, Russia (February 2013) – Prof. V. Zyryanov
- Moscow Institute of Physics and Technology, Moscow, Russia (February 2013) – Dr. Y. Alasheev
- Russian Quantum Center, Moscow, Russia (February 2013) – Dr. A. Akimov
- Lebedev Physical Institute, Russian Academy of Sciences, Moscow, Russia (February 2013) – Dr. A. Akimov
- Geballe Laboratory for Advanced Materials, Stanford student OSA/SPIE chapter, Stanford University (February 2013) – Prof. M. Brongersma, Mr. F. Afshinmanesh
- ECE Silicon Valley Symposium, School of Electrical and Computer Engineering, Purdue (February 2013) – Prof. and Head of ECE, V. Balakrishnan

- ECE Advisory Board Meeting, School of Electrical and Computer Engineering, Purdue (October 2012) – Prof. and Head of ECE, V. Balakrishnan
- Technical University of Denmark, Denmark (April 2012) - Prof. A. Lavrinenko
- Condensed Matter Seminar, Physics Department, Purdue University (March 2012) - Prof. Y. Chen
- Instrument Technology Research Center and National Taiwan University, Taiwan (December 2010) - Prof. Din Ping Tsai
- Ilmenau University, Institute of Micro and Nanotechnology, Germany (June 2010) – Prof. Thomas Klar
- Harvard University, Applied Physics Colloquium, USA (March 2010) – Prof. Eric Mazur
- Moscow Institute of Physics and Technology, Moscow, Russia (October 2009) – Prof. Vladimir Lebedev, Prof. Mikhail Trunin
- Institut für Physik, Humboldt-Universität zu Berlin, Berlin, Germany (May 2009) – Prof. Dr. Oliver Benson
- SAOT Erlangen Graduate School in Advanced Optical Technology, Erlangen, Germany (November 2008) – Prof. Dr. Alfred Leipertz
- Institute of Optics, Information and Photonics (Max Planck Research Group), University of Erlangen-Nuremberg, Germany (June 2008) – Prof. Dr. Gerd Leuchs
- Tyndall Photonics Seminar, Cork, Ireland (April 2008) - Dr. Tomasz J. Ochalski
- Nano•DTU, DTU, Denmark (November 2007) – Prof. Jesper Mørk
- Ecole Supérieur de Physique et de Chimie Industrielles, Paris, France (July 2007) – Dr. Samuel Gresillon
- University of Iceland, Reykjavík, Iceland (November 2006) – Prof. Kristjan Leosson
- Max-Planck Institute for Polymer Research, Mainz, Germany (June 2005) – Prof. Dr. Wolfgang Knoll

Conferences with Invited Talks and Invited Lectures:

- SPIE Photonics West, San Francisco, California, January 17-22, 2026 – two invited talks
- 2025 MRS Fall Meeting, Boston, MA, USA, December 1-6, 2025 – two invited talks
- Workshop on Metamaterials: Origin, Present and Frontiers, Philadelphia, PA, USA, October 9-10, 2025 – invited talk
- 2025 SPIE Optics & Photonics conference, San Diego, USA, August 3-7, 2025 – **KEYNOTE** and invited talks
- META 2025 conference, Malaga, Spain, July 22-27, 2025 – **KEYNOTE** talk
- Workshop on Time-Varying Media, Cetraro, Italy, July 15-22, 2025 – Invited talk
- International Workshop: Emerging Trends in Optics, Odense, Denmark, June 18-20, 2025 – Invited talk
- The 17th Mediterranean Workshop and Topical Meeting "Novel Optical Materials and Applications" NOMA 2025, Cetraro, Italy, June 7-15, 2025 – Invited talk
- 2025 Photonics North Conference, Ottawa, Canada, May 20-22, 2025 – **PLENARY** talk
- 2025 Conference on Lasers and Electro-Optics (CLEO), Long Beach, California, USA, May 4-9, 2025 – **PLENARY and Tutorial** talks
- 2025 MRS Spring Meeting, Seattle, Washington, USA, April 7-11, 2025 – Invited talk
- SPIE Photonics West, San Francisco, CA, USA, January 25-30, 2025 – 3 Invited talks
- 2024 MRS Fall Meeting, Boston, MA, USA, December 1-6, 2024 – Invited talk
- Simons Collaboration Annual Meeting, October 23-25, 2024, New York, USA – Invited talk
- 2024 SPIE Optics & Photonics conference, San Diego, USA, August 18-22, 2024 – **PLENARY, KEYNOTE** and invited talks
- The 1st International Conference on Physics of Excitons and Polaritons in Semiconductors (PEPS), Reykjavík, Iceland, August 6-10, 2024 – Invited talk
- META 2024 conference, Toyama, Japan, July 16-19, 2024 – Invited talk
- 2024 Plasmonics and Nanophotonics Gordon Research Conference, Newry, Maine, USA, July 7-12, 2024 – Invited talk
- 2024 Gordon Research Seminar (GRS), Newry, Maine, USA, July 6 -7, 2024 – **KEYNOTE** talk
- Asia Photonics Exhibition 2024 and the Light Conference 2024, Singapore, March 6-9, 2024 – **PLENARY** talk
- SPIE Photonics West, San Francisco, CA, USA, January 27-February 1, 2024 – Invited talk
- The 53d Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 8-13, 2024 – **PLENARY** talk, session organizer
- Australian Research Council Centre of Excellence for Transformative Meta-Optical Systems (TMOS) META Together conference, Adelaide, Australia, December 11-16, 2023 – Invited talk
- 2023 MRS Fall Meeting, Boston, MA, USA, November 27-December 1, 2023 – 2 invited talks

- The 17th International Congress on Artificial Materials for Novel Wave Phenomena, 2023 Metamaterials Congress, Crete, Greece, September 11-16, 2023 – Invited talk
- US-Ukraine Quantum Forum 2023, online workshop, August 28-31, 2023 – Invited talk
- 2023 SPIE Optics & Photonics conference, San Diego, USA, August 20-24, 2023 – **PLENARY** (cancelled due to hurricane), **KEYNOTE** and invited talks
- The 13th International Conference on Metamaterials, Photonic Crystals and Plasmonics META 2023, Paris, France, July 18-21, 2023 – **KEYNOTE** talk
- The 2023 Optica Nonlinear Optics Topical Meeting, Honolulu, Hawaii, USA, July 10 – 13, 2023 – Invited talk
- Optics of Excitons in Confined Systems conference, Lecce, Italy, June 12-16, 2023 – invited talk
- The 16th Mediterranean Workshop and Topical Meeting "Novel Optical Materials and Applications" NOMA 2023, Cetraro, Italy, June 4-10, 2023 – Invited talk
- Photonics for Quantum and Net-Zero symposium, Kings College London, May 31, 2023 – Invited speaker
- The 10th International Conference on Surface Plasmon Photonics (SPP10), Houston, Texas, May 21-26, 2023 – Invited talk
- The 2nd "Waves in Time-Varying Media" workshop, New York, NY, USA, May 2-5, 2023 – Invited talk
- The 52nd Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 8-13, 2023 – **PLENARY** talk, session organizer
- International workshop on Photonics and Artificial Intelligence, Boston University Photonics Center, December 1, 2022 – Invited talk
- MRS Fall Meeting, Boston, MA, USA, November 29-December 2, 2022 – two invited talks
- The 14th International Congress on Artificial Materials for Novel Wave Phenomena (Metamaterials), Siena, Italy, September 12-17, 2022 – Invited talk
- 2022 NVIDIA GPU Technology Conference (GTC), Accelerating Quantum Computing Research with GPUs, September 19-22, 2022 – Invited **panelist**
- Lake Como School on Advanced Studies on Machine Learning Photonics, Como, Italy, August 28 to September 2, 2022 – Invited lecturer
- 2022 SPIE Optics & Photonics conference, San Diego, USA, August 21-25, 2022 - **KEYNOTE**, invited talks
- Metamaterials 3.1 workshop, Cetraro, Calabria, Italy, August 1-5, 2022 – Invited talk (postponed from 2020)
- 022 OPTICA Advanced Photonics Congress, Maastricht, the Netherlands, 25-28 July 2022 – Invited talk
- META 2022, the 12th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Torremolinos, Spain, July 19 - 22, 2022 - **PLENARY** Talk
- 30th Annual International Laser Physics Workshop (LPHYS), July 18-22, 2022 – Invited talk
- Gordon Research Conference on Plasmonics and Nanophotonics, Nanoscale Light-Matter Interactions for Sustainability, Newry, ME, United States, July 10 - 15, 2022 – Invited talk (cancelled)
- International Workshop on Structured materials and structured light, Erice, Sicily, Italy, July 3-9, 2022 – Invited talk
- 95th IUVSTA Workshop on Plasmonic Thin Films: Theory, Synthesis and Applications, City of Guimarães, Portugal, June 20-23, 2022 – Invited talk
- NanoPlasm, Cetraro, Italy, June 13-17, 2022 – **PLENARY** talk (postponed from 2020)
- 15th Mediterranean Workshop and Topical Meeting "Novel Optical Materials and Applications" NOMA 2022, Cetraro, Italy, May 24-28, 2022 – Invited talk
- 2022 SPIE Photonics Europe Conference, Strasbourg, France, 3-7 April 2022 – **KEYNOTE** talk
- 2022 American Association for the Advancement of Science (AAAS) Annual meeting, February 2022 – Invited talk and **panelist**
- The 2022 American Physical Society March Meeting, March 14-18, 2022, Chicago, Illinois, USA – Invited talk
- Photonics West, San Francisco, CA, USA, 22 - 27 January 2022 – Invited talk (withdrawn due to illness)
- The 51th Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 9-13, 2022 – **PLENARY** talk, session organizer (postponed from 2021) (withdrawn due to illness)
- 2021 MRS Fall meeting, Boston, MA, USA, November 29 – December 2, 2021 – 2 Invited talks, **Tutorial**
- The 67th Annual AVS International Symposium and Exhibition (AVS 67), Denver, CO, October 24-29, 2021 – Invited talk (online, postponed from 2020)
- OSA Frontiers in Optics & Laser Science, Washington DC, 26-30 September 2021 – Invited talk (online)
- METANANO 2021, 13-17 September 2021, Tbilisi, Republic of Georgia – **KEYNOTE** talk (online conference)
- The VIII International School and Conference on Photonics (Photonica2021), Belgrade, Serbia, August 24-27, 2021 – Invited lectures (online)
- 2021 SPIE Optics & Photonics symposium, San Diego, USA, August 2-5, 2021 – 2 Invited talks
- 2021 Metamaterials Congress, New York, USA, August 2-7, 2021 - **PLENARY** Talk (online)

- OSA Advanced Photonics Congress, Montreal, Quebec, Canada, July 26-29, 2021 – Invited talk (online)
- The 6th International Conference on Quantum Technologies (ICQT-2021), Moscow, Russia, July 2021 – Invited talk (online)
- Photonics North Conference, May 31st - June 2nd, 2021 – Invited talk (online)
- MRS Spring meeting 2021 – Invited talk (online)
- SPIE Photonics West, San Francisco, CA, March 6-11, 2021 – Invited talk (online)
- NSF Future of Semiconductors and Beyond Workshop, March 1-2, 2021 – Invited **panelist**
- Russian American Science Association (RASA-America) and RASA Global conference, December 5-6, 2020 – Invited talk (online)
- MRS Fall meeting 2020 – Invited talk (online)
- Asia Communications and Photonics Communications (ACP 2020), October 24-27, 2020, Beijing, China – Invited talk (online)
- The 14th International Congress on Artificial Materials for Novel Wave Phenomena, New York, USA, September 28 - October 1, 2020 – Invited Talk (online)
- International Summer School on Nonlinear Optics, August 25-27, 2020, Novosibirsk State University, Novosibirsk – Invited lecture (online)
- IEEE RAPID Conference, Miramar Beach, FL, USA, 10-12 August 2020 – **PLENARY** talk (online)
- Photonics North 2020, May 26-28, 2020, Niagara Falls – **KEYNOTE** talk (online)
- MRS Spring meeting, Phoenix, AZ, USA, April 13-17, 2020 – Invited talk (online, Fall 2020)
- Optical Society of America (OSA) Incubator on Flat Optics: Recent Advances and Future Opportunities, February 26-28, 2020 – Invited talk
- The 50th Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 6-11, 2020 – Invited talk
- The International Symposium on Plasmonics and Nanophotonics iSPN, Japan, November 11-14, 2019 – **KEYNOTE** talk
- USA-Middle East Science symposium, New York City, USA, November 4-6, 2019 – Invited talk
- Northrop Grumman University Research Symposium, Anaheim, CA, USA, October 23-24, 2019 – Invited talk
- Corning Optics Summit, Corning, NY, USA, October 21, 2019 – Invited talk
- The 13th International Congress on Artificial Materials for Novel Wave Phenomena, Rome, Italy, September 16-21, 2019 – Invited Talk
- IEEE RAPID Conference, Miramar Beach, FL, USA, 19-21 August 2019 – Invited talk, Opening Address
- SPIE Optics & Photonics symposium, San Diego, USA, August 11-15, 2019 – Invited Talk
- SPIE Optics & Photonics symposium, San Diego, USA, August 11-15, 2019 – **KEYNOTE** Talk
- "Novel Optical Materials and Applications" (NOMA) Conference, OSA Advanced Photonics Congress, San Francisco, CA, from 29 July – 1 August, 2019 – **TUTORIAL**
- "Novel Optical Materials and Applications" (NOMA) Conference, OSA Advanced Photonics Congress, San Francisco, CA, from 29 July – 1 August, 2019 – Invited Talk
- The 10th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2019), Lissboa, Portugal, July 23-26, 2019 – **PLENARY** talk
- The 5th International Conference on Quantum Technologies (ICQT-2019), Moscow, Russia, July 15-19, 2019 – Invited talk
- "Topological Photonics and Beyond," Tianjin, China, June 30 - July 3, 2019 – Invited talk
- Second International Workshop "Tailor-Made Multiscale Material Systems," Hamburg, Germany, June 19-21, 2019 – Invited talk
- Artificial Intelligence in Nanophotonics workshop, International Work-Conference on Artificial Neural Networks (IWANN2019), Gran Canaria, Canary Islands, Spain, June 12-14, 2019 – Invited talk
- 14th Mediterrenian Workshop and Topical Meeting "Novel Optical Materials and Applications" NOMA 2019, Cetraro, Italy, June 2-9, 2019 – Invited Talk
- The 9th International Conference on Surface Plasmon Photonics (SPP9), Copenhagen, Denmark, May 26-31, 2019 – Invited talk
- Electronic Materials Symposium, Stanford University, May 10, 2019 – Invited talk
- Faraday Discussion meeting, the Royal Society of Chemistry, Burlington House, Piccadilly, London, UK, February 18-20, 2019 – Invited talk
- SPIE Photonics West, San Francisco, CA, USA, February 2-7, 2019 – two Invited Talks
- The 49th Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 6-11, 2019 – **PLENARY** talk
- 2018 MRS Fall Meeting, Boston, MA, USA, November 25-30, 2018 – Invited talk

- Micro and Nano engineering conference MNE 2018, Copenhagen, Denmark, September 25-27, 2018 - **PLENARY** talk
- OSA Frontiers in Optics & Laser Science, Washington DC, 16 - 20 September 2018 – Invited talk
- Photon 2018, Birmingham, United Kingdom, September 1-5, 2018 - **PLENARY** talk
- 12th International Congress on Engineered Material Platforms for Novel Wave Phenomena (Metamaterials 2018), Espoo, Finland, August 27-30, 2018 – invited talk
- IEEE RAPID Conference, Miramar Beach, FL, USA, 22-24 August 2018 – Opening Address
- 2018 SPIE Optics and Photonics, Plasmonics：Design, Materials, Fabrication, Characterization, and Applications XVI, San Diego, CA, USA, August 19-23, 2018 – **KEYNOTE** talk
- 2018 SPIE Optics and Photonics, Active Photonic Platforms X conference, San Diego, CA, USA, August 19-23, 2018 – **KEYNOTE** talk
- Gordon Research Conference on Plasmonics & Nanophotonics, Sunday River, Newry, Maine, USA, July 8-13, 2018 – Invited talk
- META 2018, the 8th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Costa Diadema, June 24 - July 1, 2018 – Invited talk, **KEYNOTE** talk
- Nanoplasm, Cetraro, Italy, June 10-16, 2018 – **PLENARY** talk
- "Waves in Complex Photonics Media: Fundamentals and Device Applications," Anacapri, Island of Capri, Italy, June 4-7, 2018 – Invited talk
- Photonics West 2018, San Francisco, CA, USA, January 27 – February 1, 2018 – Invited talk
- Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 7-12, 2018 – Invited talk
- 2017 MRS Fall meeting, Boston, MA, USA, November 26-December 1, 2017 – Invited talk
- American Vacuum Society (AVS) meeting, Tampa, FL, USA, October 2017 – Invited talk
- 11th International Congress on Engineered Material Platforms for Novel Wave Phenomena (METAMATERIALS'2017), Marseille, France, August 28–31, 2017 – Invited talk
- 2017 International Optical MEMS and Nanophotonics (OMN), Santa Fe, New Mexico, August 13-17, 2017 – Invited talk
- SPIE Optics and Photonics, San Diego, August 6-10, 2017 – 2 Invited talks
- Laser Physics Workshop (LPHYS'17), Kazan, Russia, July 17- 21, 2017 – Invited talk
- 4th International Conference on Quantum Technologies (ICQT-2017), Moscow, Russia, July 12-16, 2017 – Invited talk
- Photonics North 2017, Ottawa, Canada, June 6-8, 2017 – Invited talk
- 13th Mediterranean Workshop and Topical Meeting "Novel Optical Materials and Applications" NOMA 2017, Cetraro, Italy, June 4-10, 2017 – Invited talk
- The 8th International Conference on Surface Plasmon Photonics (SPP8), Taipei, Taiwan, May 22-26, 2017 – Invited talk
- 2017 Conference on Lasers and Electro-Optics (CLEO:2017), San Jose, CA, USA, May 14-19, 2017 – Invited talk
- American Chemical Society (ACS) Spring meeting, San Francisco, CA, USA, April 2-6, 2017 – Invited talk
- SPIE Photonics West, San Francisco, CA, USA, January 28 – February 2, 2017 – Invited talk
- 6th International Topical Meeting on Nanophotonics and Metamaterial Conference (NANOMETA 2017), Seefeld (Tirol), Austria, January 4-7, 2017 – Invited talk
- Materials Research Society MRS Fall meeting, Boston, MA, USA, November 28-December 2, 2016 – Invited talk
- SPIE Optics and Photonics, San Diego, August 28-September 1, 2016 – **PLENARY** talk, 2 Invited talks
- META'16, the 7th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Malaga, Spain, July 25-28, 2016 – Invited talk
- OSA Integrated Photonics Research conference, July 18-20, 2016, Vancouver (Canada) – Invited talk
- 13th International Conference on Nanosciences &Nanotechnologies – NN16, Thessaloniki, Greece, 5-8 July 2016 – **KEYNOTE** talk
- The International Symposium on Nano-Optics and Plasmonics, Hengyang, China, June 27-29, 2016 – Invited talk
- Nanoplasm conference, Cetraro, Italy, June 13-17, 2016 – Invited talk
- SPIE Photonics Europe, in Brussels, April 4-7, 2016 – 2 Invited talks
- 2016 MRS Spring meeting Phoenix, AZ, USA, March 28 – April 1, 2016 – Invited talk
- Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 3-8, 2016 – Invited talk

- 2015 MRS Fall Meeting, November 29 - December 4, 2015, Boston, Massachusetts, USA – Invited talk
- Frontiers in Optics, San Jose, CA, USA, October 18-22, 2015 – Invited talk
- CECAM workshop on Computational plasmonics: an ab initio and multiscale perspective workshop, Lausanne, Switzerland, November 2-4, 2015 – Invited talk
- 2015 OSA Frontiers in Optics/Laser Science Conference, San Jose, CA, October 18-22, 2015 – Invited talk
- National Academy of Engineering (NAE) U.S. Frontiers of Engineering (FOE) Symposium, September 9-11, 2015, National Academies' Beckman Center in Irvine, California, USA – Invited speaker
- 9th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2015, Oxford, UK, September 7-12, 2015 – Invited talk
- SPIE Optics and Photonics Congress, Active Photonic Materials VII conference, San Diego, CA, USA, 9-13 August 2015 – Invited talk
- SPIE Optics and Photonics Congress, Plasmonics: Metallic Nanostructures and Their Optical Properties conference, San Diego, CA, USA, 9-13 August 2015 – Invited talk
- SPIE Optics and Photonics Congress, Metamaterials, Metadevices, and Metasystems conference, San Diego, CA, USA, 9-13 August 2015 – Invited talk
- META'15, the 6th International Conference on Metamaterials, Photonic Crystals and Plasmonics, City College of New York, New York City, NY, USA, August 4-7, 2015 – **KEYNOTE** talk
- 2015 IEEE Photonics Society Summer Topicals, "On-chip Optical Interconnects", July 13-15, 2015, British Colonial Hilton, Nassau, Bahamas – Invited talk
- Course on Complex Photonics, International School of Physics "Enrico Fermi", Como lake, Italy, July 12-18, 2015 – Invited lecturer
- Progress in Electromagnetics Research Symposium PIERS 2015, Special Session "SC3: Optical Properties of Resonant Dielectric and Plasmonic Nanostructures", Prague, Czech Republic, July 06-09, 2015 – Invited talk
- Progress in Electromagnetics Research Symposium PIERS 2015, Session " "Planar Optics based on Metasurfaces," Prague, Czech Republic, July 06-09, 2015 – Invited talk
- ETOPIM 10, June 21 - 26, 2015, Neveh Ilan, Israel - Invited talk
- SPP7, Jerusalem, Israel, May 31 - June 5, 2015 – Invited talk
- E-MRS 2015 Spring Meeting, Lille, France, May 11-15, 2015 – Invited talk - cancelled
- 5th International Topical Meeting on Nanophotonics and Metamaterial Conference (NANOMETA 2015), Seefeld (Tirol), Austria, 5-8 January, 2015 – Invited talk, breakthrough session chair
- 8th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2014, Copenhagen, Denmark, August 25-28, 2014 – invited talk, sessions chair
- SPIE Optics and Photonics, Active Photonic Materials VI conference, San Diego, California, USA, August 17-21, 2014 – 3 Invited talks on different topics, session chair
- 2014 IEEE Summer Topical Meeting, "Functional Meta- and Two-Dimensional materials (FMTM)" symposium, Delta Montréal, Montreal, Canada, July 14-16, 2014 – Invited talk, *panel discussion* on Metamaterials
- 2014 Gordon Research Conference on Plasmonics, Sunday River Resort, Newry, Maine, USA, July 6-11, 2014 – Invited talk
- Nanoplasm 2014: "New frontiers in Plasmonics and Nano-optics," Cetraro, Italy, June 16-20, 2014 – Invited talk
- MRS Spring Meeting, San Francisco, California, USA, April 21-25, 2014 – Invited talk
- SPIE Photonics Europe, Brussels, Belgium, April 14-17, 2014 – Invited talk
- Workshop on Optical Plasmonic Materials, OSA Research in Optical Sciences Congress, Berlin, Germany, March 19, 2014 – Invited talk
- SPIE Photonics West, San Francisco, California, United States, February 1-6, 2014 – Invited talk
- The 44th Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 5-9, 2014 – Invited talk
- 7th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics – Metamaterials 2013, Bordeaux, France, September 16-21, 2013 – Invited talk, session chair
- Summer School on Plasmonics, University of Toronto, Toronto, Canada, August 26-30, 2013 – Invited lecturer
- Fundamental optical processes in semiconductors (FOPS)-2013, Kodiak Island, Alaska, USA, August 12-16, 2013 - Invited talk
- Frontiers of Nonlinear Physics (FNP'13), Nizhny Novgorod, Russia, July 28-August 2, 2013 – Invited talk
- International Conference on Materials for Advanced Technologies, ICMAT 2013, Singapore, June 30 - July 5, 2013 - Invited talk, co-chair of the symposium on "Plasmonics and Metamaterials"
- Materials Research Society (MRS) Spring meeting, San Francisco, CA, USA, April 1-5, 2013 - MRS Outstanding Young Investigator Award talk

- Meta'13, the 4th International Conference on Metamaterials, Photonic Crystals, and Plasmonics, Sharjah, UAE, March 18-22, 2013 – **KEYNOTE** talk
- SPIE Photonics West, San Francisco, CA, USA, February 2-7, 2013 – Invited talk
- 6th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2012, St. Petersburg, Russia, September 17-22, 2012 - **PLENARY** Talk
- SPIE Optics & Photonics, San Diego, California, USA, August 12-16, 2012 - Invited talk
- International School of Quantum Electronics, 52nd Course on Advances in Nanophotonics, Erice, Sicily, Italy, July 17-29, 2012 - Invited lecturer
- OSA meeting, Integrated Photonics Research (IPR), Colorado Springs, Colorado, USA, June 17-22, 2012 - Invited talk
- Gordon Conference on Plasmonics, Colby College, Waterville, Maine, USA, June 10-15, 2012 - Invited talk
- META'12, Paris, France, April 19-22, 2012 - Invited talk, Session chair
- International Workshop on Electromagnetic Metamaterials (IWEM-V), Albuquerque, New Mexico, USA, March 26-27, 2012 - Invited talk
- APS Meeting, Boston, MA, USA February 27- March 2, 2012 - Invited talk
- Physics of Quantum Electronics, Snowbird, Utah, USA, January 2-7, 2012
- 5th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2011, Barcelona, Spain, October 10-15, 2011 - Invited talk
- SPIE Optics and Photonics, San Diego, California, USA, August 21-25, 2011 - Invited talk
- Nanometa conference, Seefeld, Austria, January 3-7, 2011 - Invited talk
- 4th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2010, Karlsruhe, Germany, September 13-18, 2010 - Invited talk
- International Conference on Coherent and Nonlinear Optics (ICONO-2010), Kazan, Russia, August 23-27, 2010 - Member of program subcommittee, Invited talk
- SPIE Optics and Photonics: Plasmonics, San Diego, California, USA, August 1-5, 2010 - 2 invited talks
- 4th International Conference "Frontiers of Nonlinear Physics," Nizhny Novgorod, Russia, July 13-20, 2010 - Invited talk
- 19th International Laser Physics Workshop (LPHYS'10), Foz do Iguacu, Brazil, July 5 - 9, 2010 - Invited talk
- CIMTEC 2010, 12th International Conference on Modern Materials and Technologies, Symposium FM on Electromagnetic Metamaterials, Montecatini Terme, Tuscany, Italy, June 6-18, 2010 - Invited talk
- META'10, International Conference on Metamaterials, Photonic crystals and Plasmonics, "THz and Optical Plasmonic Waveguides and Antennas" session, Cairo, Egypt, February 22-25, 2010 - Invited talk
- Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 3-7, 2010 - Invited talk
- 2009 Fall MRS Symposium, Boston, MA, USA, November 30 - December 4, 2009 - Invited talk
- 3rd International Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2009, London, UK, August 30-September 4, 2009 - Invited talk
- SPIE Optics and Photonics, San Diego, California, USA, August 2-6, 2009 - Invited talk, Session chair
- International Laser Physics Workshop (LPHYS'09), Barcelona, Spain, July 13 - 17, 2009 - Invited talk
- International Conference on Materials for Advanced Technologies, ICMAT 2009, Singapore, June 28 - July 3, 2009 - Invited talk, Session chair, Member of the program committee
- Annual Meeting of Nordic Network for Women in Physics (Denmark, Sweden), Lyngby, Denmark, June 15, 2009 - Invited talk
- Metamorphose PhD school on "Fabrication and optical properties of nanostructured metamaterials," Rethymnon, Crete, Greece, June 12-13, 2009 - Invited lecturer
- ETOPIM 8, Crete, Greece, June 7-12, 2009 - Invited talk
- 2009 MRS Spring Meeting, San Francisco, California, USA, April 13-17, 2009 - Invited talk
- 2009 IEEE/LEOS Winter Topical Meetings, Innsbruck, Austria, January 12 – 14, 2009 - Invited talk
- 2nd European Topical Meeting on Nanophotonics and Metamaterials (NANOMETA 2009), Seefeld, Austria, January 5-8, 2009 - Invited talk, Session chair
- 2nd Congress on Advanced Electromagnetic Materials in Microwaves and Optics: Metamaterials 2008, Pamplona, Spain, September 21-26, 2008 - Invited talk
- Photon08, Heriot-Watt University Campus, Edinburgh, UK, August 25-28, 2008 - Invited talk
- SPIE Optics and Photonics: Plasmonics, San Diego, California, USA, August 10-14, 2008 - Invited talk
- XIII International Conference "Laser Optics'2008," St. Petersburg, Russia, June 23 – 28, 2008 - Invited talk
- META'08 - the NATO Advanced Research Workshop: Metamaterials for Secure Information and Communication Technologies, Marrakesh, Morocco, May 7-10, 2008 - Invited talk

- Women in Photonics (WiP) School on Photonic Metamaterials, Paris, France, April 13-17, 2008 - Invited lecturer
- SPIE Photonics Europe, Strasbourg, France, April 7-11, 2008 - Invited talk
- SPIE Optics and Photonics, San Diego, California, USA, August 26-30, 2007 - Invited talk
- 16th International Laser Physics Workshop, León, Mexico, August 20-24, 2007 - Invited talk
- International Conference on Coherent and Nonlinear Optics (ICONO 2007), Minsk, Belarus, May 28-June 1, 2007 - Invited talk
- CLEO/QELS and PhAST 2007, Baltimore, Maryland, USA, May 6-11, 2007 - Invited talk, Session chair
- 2006 SPIE Optics and Photonics, Plasmonics: Nanoimaging, Nanofabrication, and Their Applications II, San Diego, California, USA, August 13-17, 2006 - Invited talk, Session chair

Issued and Pending Patents and Patent Applications:

- G. Naik, B. Saha, T. D. Sands, A. Boltasseva, V. M. Shalaev, TIN/(AL,SC)N metal/dielectric superlattices for metamaterial applications in the visible range, provisional number 61/711,548, PCT/US2013/064057
- V. M. Shalaev, A. V. Kildishev, A. Boltasseva, N. Kinsey, M. Brongersma, Systems and Methods for the Advanced Control of Waveguiding Properties using Metasurfaces, provisional number 61/863,010
- V. M. Shalaev, A. V. Kildishev, A. Boltasseva, N. Kinsey, Methods to Enhance the Efficiency of Semiconductor Based Light Sources Using Metasurfaces, provisional number 61/862,999
- V. M. Shalaev, A. V. Kildishev, A. Boltasseva, N. Kinsey, Methods for Enhancing the Efficiency of Solar Cells using Metasurfaces, provisional number 61/862,995
- V. M. Shalaev, A. V. Kildishev, A. Boltasseva, G. V. Naik, U. Guler, W. Li, Ceramic Absorber, provisional number 61/876,241&61/934,786, PCT/US2014/04123
- V. M. Shalaev, A. Boltasseva, M. Brongersma, A. V. Kildishev, N. Kinsey, Solar-cell efficiency enhancement using metasurfaces, US Patent Application 20150040978 (Filed: August 7, 2014; Publication date: February 12, 2015)
- V. M. Shalaev, A. V. Kildishev, A. Boltasseva, G. V. Naik, U. Guler, D. Stocks, Near Field Transducer for Heat Assisted Magnetic Recording, **US Patent** 9343088 (Filed: May 19, 2014; Date of Patent: May 17, 2016)
- U. Guler, A. Kildishev, V. M. Shalaev, A. Boltasseva, G. Naik, Refractory Plasmonic Metamaterials Absorber and Emitter for Energy Harvesting, US Patent Application 20150288318, number 14/402343 (Filed: June 6, 2014; Publication date: October 8, 2015)
- S. T. Wereley, A. A. Nnanna, A. Boltasseva, J. C. Ndukaife, A. Mishra, Hybrid Device for On-Chip Concentration, Manipulation, Sorting and Sensing of Particles on A Plasmonic Substrate, **US Patent** 9443632 (Filed: June 6, 2015; Date of Patent: September 13, 2016)
- J. C. Ndukaife, A. Boltasseva, A. A. Nnanna, S. T. Wereley, A. Kildishev, V. M. Shalaev, System and method for manipulation of particles, **US Patent** 9778400 (Filed: June 15, 2016; Date of Patent: October 3, 2017)
- G. V. Naik, B. Saha, T. D. Sands, V. Shalaev, A. Boltasseva, Titanium nitride based metamaterial, **US patent** 9784888 (Filed: October 9, 2013; Date of Patent: October 10, 2017)
- U. Guler, A. Naldoni, A. Kildishev, A. Boltasseva, V. M. Shalaev, Plasmonic metal nitride and transparent conductive oxide nanostructures for plasmon assisted catalysis, US Patent Application 15/639,923, 2018/ 20180003865 (Filed: June 30, 2017; Publication date: January 4, 2018), US Patent 11,808,955 (Publication date 2023/11/7)
- A. Shaltout, S. Choudhury, A. V. Kildishev, A. Boltasseva, V. M. Shalaev, System for producing ultra-thin color phase hologram with metasurfaces, **US Patent** 9952557 (Filed: May 11, 2016; Date of Patent: April 24, 2018)
- J. C. Ndukaife, A. V. Kildishev, A. Nnanna, A. Boltasseva, Multi-site particle sensing system 15/174,990, **US Patent** 10436780 (Filed: June 6, 2016; Date of Patent: October 8, 2019)
- J. C. Ndukaife, A. Boltasseva, A. G. Agwu Nnanna "System and method for sensing and trapping nanoparticles with plasmonic nanopores" **US Patent** 10508981 (Filed: January 15, 2019; Date of Patent: December 17, 2019)
- A. V. Kilidshev, D. Wang, Z. A. Kudyshev, M. Song, A. Boltasseva, V. M. Shalaev, Tunable plasmonic color device and method of making the same, US Patent 20190353830A1, publication date: Nov 21, 2019
- Urcan Guler, Alexander Kildishev, Gururaj Naik, Alexandra Boltasseva, Vladimir M. Shalaev, TITANIUM NITRIDE PLASMONIC NANOPARTICLES FOR CLINICAL THERAPEUTIC APPLICATIONS, Publication number: 20200054752; Type: Application; Filed: October 28, 2019; Publication date: February 20, 2020
- U. Guler, A. V. Kildishev, K. Chaudhury, S. Azzam, E. E. Marinero-Caceres, H. Reddy, A. Boltasseva, V.M Shalaev, Metamaterial device and method of making the same, Patent number: 10670772; Type: Granted; Filed: May 14, 2018; Date of Patent: June 2, 2020

- Aveek Dutta, Vladimir M. Shalaev, Alexandra Boltasseva, Esteban E. Marinero-Caceres, Surface-plasmon opto-magnetic field enhancement for all-optical magnetization switching, Patent number: 10739261; Type: Granted; Filed: April 30, 2019; Date of Patent: August 11, 2020
- Amr Shaltout, Sajid Choudhury, Alexander V. Kildishev, Alexandra Boltasseva, Vladimir M. Shalaev, Ultra-thin color phase hologram with metasurfaces, Patent number: 10754295, Type: Granted; Filed: April 19, 2018; Date of Patent: August 25, 2020
- P. Nyga, A. V. Kildishev, S. N. Chowdhury, A. Boltasseva, Z. Kudyshev, V. M. Shalaev, Optical device, method of using the same, and method of making the same, Publication number: 20200285043; Filed: February 19, 2020; Publication date: September 10, 2020
- A. Naldoni, Z. A. Kudyshev, L. Mascaretti, S. P. Sarmah, S. Rej, J. P. Froning, O. Tomanec, j. Eun Yoo, D. Wang, S. Kment, T. Montini, P. Fornasiero, V. M. Shalaev, P. Schmuki, A. Boltasseva, R. Zbořil, Solar Thermoplasmonic Nanofurnaces and Method for Making and Using Same, Publication number: 20200347508; Filed: May 3, 2020; Publication date: November 5, 2020, US Patent 11,807,950 (issued 2023/11/7)
- A. Dutta, V. M. Shalaev, A. Boltasseva, E. E. Marinero-Caceres, All-optical write/read scheme for magnetic nanostructures; Publication number: 20200371026, Patent Number: 11,119,042, Filed: August 11, 2020; Published: November 26, 2020
- A. V. Kilidshev, D. Wang, Z. A. Kudyshev, M. Song, A. Boltasseva, V. M. Shalaev, Tunable plasmonic color device and method of making the same, US Patent 11656386, publication date: May 23, 2023
- P. Nyga, A. V. Kildishev, S. N. Chowdhury, A. Boltasseva, Z. Kudyshev, V. M. Shalaev, Optical device, method of using the same, and method of making the same, Patent Number 11733507, Published: August 22, 2023
- Z. A. Kudyshev, D. Sychev, Z. O. Martin, S. I. Bogdanov, X. Xu, A. Kildishev, A. Boltasseva, V. Shalaev, Machine learning assisted super resolution microscopy, Patent number: 12159369, Filed: July 6, 2022, Date of Patent: December 3, 2024
- V. M. Shalaev, A. Boltasseva, C. B. Fruhling, M. G. Ozlu, All-Optical Epsilon-Near-Zero Enabled Streak Camera, Type: Application, Filed: April 30, 2024, Publication date: November 7, 2024
- D. V. Sychev, V. M. Shalaev, A. Boltasseva, P. Chen, M. M. Yang, C. B. Fruhling, A. Lagoutchev, A. V. Kildishev, All-optical single-photon detector, Type: Application, Filed: April 24, 2024, Publication date: October 24, 2024

Publication Summary:

Summary: **Citations** (here and below according to *Google Scholar*): over **40,000** total citations, six papers with over 1000 citations, h-index **95**. According to Web of Science (WoS), 14 papers are **"Highly Cited in the Field"**, of which 10 are in the field of *physics* and 4 are in *materials science*. ***NOTE:*** *Papers marked as Highly Cited in the Field by (WoS) "are the top one percent in each of the 22 subject areas per year. Highly Cited Papers are considered to be indicators of scientific excellence and top performance and can be used to benchmark research performance against field baselines worldwide" (from http://ipscience-help.thomsonreuters.com/inCites2Live/indicatorsGroup/aboutHandbook/usingCitationIndicatorsWisely/highlyCitedPapers.html) To be selected as highly cited, the paper should receive enough citations to place it in the* ***top 1%*** *of the related broader academic field (ex. Physics/Material Science)*

Book Chapters:

[8] K. Chaudhuri, Z. Wang, M. Alhabeb, K. Maleski, Y. Gogotsi, V. Shalaev, A. Boltasseva, "Optical Properties of MXenes, Cahpter 17 in Eds: B. Anasori, Y. Gogotsi, "2D Metal Carbides and Nitrides (MXenes)," Springer Nature Switzerland AG 2019, 327-346, https://doi.org/10.1007/978-3-030-19026-2_17

[7] M. Y. Shalaginov, R. Chandrasekar, S. Bogdanov, Z. Wang, X. Meng, O. A. Makarova, A. Lagutchev, A. V. Kildishev, A. Boltasseva, V. M. Shalaev, "Hyperbolic Metamaterials for Single-Photon Sources and Nanolasers", chapter in the book "Quantum Plasmonics"; Eds: S. I. Bozhevolnyi, L. Martin-Moreno, F. J. Garcia-Vidal, Springer International Publishing, pp. 97-120 (2017)

[6] M. Y. Shalaginov, S. Bogdanov, V. V. Vorobyov, A. Lagutchev, A. V. Kildishev, A. V. Akimov, A. Boltasseva, V. M. Shalaev, "Enhancement of Single-Photon Sources with Metamaterials," chapter 6, *From Atomic to Mesoscale: The Role of Quantum Coherence in Systems of Various Complexities,* eds. S. A. Malinovskaya and I. Novikova, World Scientific Publishing Co. PTE. LTD, ISBN-13: 978-9814678698, ISBN-10: 9814678694 pp. 123-148 (June 29 2015)

[5] J. Kim, G. V. Naik, N. Kinsey, A. Boltasseva, Alternative Plasmonic Materials, "Modern Plasmonics," eds. A. A. Maradudin, J. R. Sambles, W. L. Barnes, Elsevier, Volume 4, Pages 189–221, doi:10.1016/B978-0-444-59526-3.00006-9, ISBN: 9780444595263 (2014)

[4] K. Leosson, M. C. Gather, P. G. Hermannsson, A. Boltasseva, Long-range surface plasmon polariton waveguides and devices, chapter in "Plasmonics and Plasmonic Metamaterials: Analysis and Applications," Eds: G. Shvets and I. Tsukerman, World Scientific Publishing, Singapore, Hackensack, NJ, pp. 197-230 (2012)

[3] A. Boltasseva, Fabrication of optical metamaterials, chapter in "Tutorials in metamaterials," Eds: M. A. Noginov and V. A. Podolskiy, Taylor & Francis Group, ISBN: (978)1420092189, pp. 29-58 (2011)

[2] A. Boltasseva, R. B. Nielsen, C. Jeppesen, A. Kristensen, R. Bakker, Z. Liu, H.-K. Yuan, A. V. Kildishev, and V. M. Shalaev, Fabricating plasmonic components for nano- and meta-photonics, chapter in "Metamaterials and Plasmonics: Fundamentals, Modelling, Applications," NATO Science for Peace and Security Series – B: Physics and Biophysics; Eds: S. Zouhdi, A. Sihvola, A. P. Vinogradov, Springer, ISBN 978-1-4020-9406-4, pp. 209-222 (2009)

[1] A. Boltasseva and M. van der Poel, Brydninger, chapter in "Optiske Horisonter: en rejse på kommunikations-teknologiens vinger," Eds: A. Bjarklev, J. Scheel, C. V. Smith, Technical University of Denmark, one2one A/S, ISBN 87-92062-01-6, pp. 11-25 (2007)

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[] M. G. Ozlu, V. Mkhitaryan, C. B. Fruhling, A. Boltasseva, V. M. Shalaev, " Floquet engineering of polaritonic amplification in dispersive photonic time crystals", Physical Review Research, accepted (2025)

[] Z. O. Martin, A. Senichev, P. Maan, M. G. Ozlu, M. Marinova, Z. Shang, A. Lagutchev, A. Boltasseva, V. M. Shalaev, "Single-Photon Emitters in PECVD-Grown Silicon Nitride Films: From Material Growth to Photophysical Properties," accepted to Nanophotonics (2025)

[247] K. Barua, S. Peana, A. Deepak Keni, V. Mkhitaryan, V. M. Shalaev, Y. P. Chen, A. Boltasseva, H. Alaeian, "Bottom-Up Fabrication of 2D Rydberg Excitons in Cuprous Oxide," Communications Materials 6 (1), 21 (2025)

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[244] P. Das, S. Rudra, D. Rao, S. Banerjee, A. I. K. Pillai, M. Garbrecht, A. Boltasseva, I. V. Bondarev, V. M. Shalaev, B. Saha, "Electron Confinement-Induced Plasmonic Breakdown in Metals," Science Advances 10 (47), eadr2596 (November 20, 2024)

[243] M. A. Sakib, B. Triplett, W. Harris, N. Hussain, A. Senichev, M. Momenzadeh, J. Bocanegra, R. Wu, A. Boltasseva, V. M. Shalaev, M. R. Shcherbakov, "Site-Controlled Purcell-Induced Bright Single Photon Emitters in Hexagonal Boron Nitride," Nano Letters 24 (40), 12390-12397 (September 23, 2024)

[242] K. Wang, Z.-Y. Lin, A. De, C. A. Kocoj, W. Shao, H. Yang, Z. He, A. H. Coffey, C. B. Fruhling, Y. Tang, D. Varadharajan, C. Zhu, Y. S. Zhao, A. Boltasseva, V. M. Shalaev, P. Guo, B. M. Savoie, L. Dou, "Two-dimensional-lattice-confined single-molecule-like aggregates," Nature 633 (8030), 567-574 (September 19, 2024)

[241] E. M. Baeva, A. I. Kolbatova, N. A. Titova, S. Saha, A. Boltasseva, S. Bogdanov, V. Shalaev, A. V. Semenov, G. N. Goltsman, V. S. Khrapai, "Natural width of the superconducting transition in epitaxial TiN films," Superconductor Science and Technology 37 (10) 105017 (September 12, 2024)

[240] A. Senichev, Z. O. Martin, Y. Wang, O. M. Matthiessen, A. Lagutchev, H. Htoon, A. Boltasseva, V, M. Shalaev, "Quantum emitters in aluminum nitride induced by heavy ion irradiation," APL Quantum 1 (3), 036103 (September 2024)

[239] B. Wilson, Y. Chen, D. Kumar Singh, R. Ojha, J. Pottle, M. Bezick, A. Boltasseva, V. M. Shalaev, A. V. Kildishev, "Authentication through residual attention-based processing of tampered optical responses", Advanced Photonics 6 (5), 056002 (September 1, 2024)

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[233] Arseniy I Kuznetsov, Mark L Brongersma, Jin Yao, Mu Ku Chen, Uriel Levy, Din Ping Tsai, Nikolay I Zheludev, Andrei Faraon, Amir Arbabi, Nanfang Yu, Debashis Chanda, Kenneth B Crozier, Alexander V Kildishev, Hao Wang, Joel KW Yang, Jason G Valentine, Patrice Genevet, Jonathan A Fan, Owen D Miller, Arka Majumdar, Johannes E Fröch, David Brady, Felix Heide, Ashok Veeraraghavan, Nader Engheta, Andrea Alù, Albert Polman, Harry A Atwater, Prachi Thureja, Ramon Paniagua-Dominguez, Son Tung Ha, Angela I Barreda, Jon A Schuller, Isabelle Staude, Gustavo Grinblat, Yuri Kivshar, Samuel Peana, Susanne F Yelin, Alexander Senichev, Vladimir M Shalaev, Soham Saha, Alexandra Boltasseva, Junsuk Rho, Dong Kyo Oh, Joohoon Kim, Junghyun Park, Robert Devlin, Ragip A Pala, “Roadmap for optical metasurfaces,” ACS photonics 11 (3) 816-865 (February 2024)

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Conference Presentations, Abstracts and Other Contributions:

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[577] (*) A. Boltasseva, “Photonics with Emerging Tailorable Materials,” SPIE Photonics West, San Francisco, California, 17-22 January 2026

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[575] (*) A. Boltasseva, “Quasi-2D Transition Metal Nitrides and MXenes for Tailorable Photonics,” 2025 MRS Fall Meeting, “Emerging Dynamic Materials in Integrated Optics and Photonics” symposium, Boston, Massachusetts, USA, November 30 - December 5, 2025

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[573] **(K)** A. Boltasseva, “Machine-learning-assisted photonics: from inverse design to quantum characterization and imaging,” 2025 SPIE Optics & Photonics, San Diego, USA, August 5-9, 2025

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[570] **(K)** A. Boltasseva, “Quasi-2D Materials: From Tailorable Photonics to New Physics,” META 2025, Malaga, Spain, July 22-25, 2025

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[566] **(T)** A. Boltasseva, TBA, 2025 Conference on Lasers and Electro-Optics (CLEO), May 4-9, 2025, Long Beach, California, USA

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[562] (*) A. Boltasseva, “Advancing Quantum Imaging and Device Testing with Machine Learning,” SPIE Photonics West, San Francisco, CA, USA, January 25-30, 2025

[561] (*) A. Boltasseva, “Transdimensional Materials: From Tailorable Plasmonics to New Physics,” SPIE Photonics West, San Francisco, CA, USA, January 25-30, 2025

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[527] K. Ssennyimba, S. Liao, Y. Zhu, D. Lowder, T. Legvold, K. Pagadala, A. Boltasseva, M. D. Henry, D. Natelson, “Refractory nanoscale plasmonic junctions of Titanium Nitride and Niobium,” Y05.00011, APS March Meeting 2024, Minneapolis & Virtual, March 4–8, 2024

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[524] (P) A. Boltasseva, “Transdimensional Materials: From Tailorable Photonics to Wigner Crystallization,” the 53rd Winter Colloquium on the Physics of Quantum Electronics (PQE), Snowbird, Utah, USA, January 7-12, 2024

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[522] (*) A. Boltasseva, “MXenes for Photonics.”, EL17: Synthesis, Properties and Applications of 2D MXenes, 2023 MRS Fall Meeting, Boston, MA, USA, November 27-December 1, 2023

[521] (*) A. Boltasseva, “Tunable and dynamic photonics with tailorable conducting oxides and metal nitrdies,” Emerging Material Platforms and Fundamental Approaches for Plasmonics, Nanophotonics, and Metasurfaces, 2023 MRS Fall Meeting, Boston, MA, USA, November 27-December 1, 2023

[520] (*) A. Boltasseva, “Advancing Photonics with Machine Learning,” Photonics Media (200,000+ subscribers) webinar/tutorial (targeted audience of engineers, researchers, VPs, CTOs, business owners, educators, students) November 1, 2023

[519] (*) A. Boltasseva, “Dynamic nanophotonics with conducting oxides and metal nitrides: from all-optical switching to photonic time crystals,” the 17th International Congress on Artificial Materials for Novel Wave Phenomena, 2023 Metamaterials Congress, Crete, Greece, September 11-16, 2023

[518] (*) A. Boltasseva, “Crossroads of Nano, Quantum and Machine Learning,” US-Ukraine Quantum Forum 2023, online workshop, August 28-31, 2023 – Invited talk

[517] **(K)** A. Boltasseva, “Temporal dynamics of all-optically switched materials,” Active Photonic Platforms (APP) 2023 conference, 2023 SPIE Optics & Photonics conference, San Diego, USA, August 20-24, 2023

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[508] A. Kildishev et al, “Statistical Characterization of Coherent Random Lasing from Subwavelength Quasi-2D Perovskite Films,” The 44th PIERS (Photonics and Electromagnetics Research Symposium) Prague, Czech Republic, July 3 - 6, 2023

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[486] (*) A. Boltasseva, "Tailorable Materials for Refractory Plasmonics, Extreme Optics, and Dynamic Photonics," 2023 MRS Fall meeting, Boston, MA, USA, November 27-December 1, 2022

[485] (*) A. Boltasseva, "Advancing Photonics with Machine Learning," 2023 MRS Fall meeting, Boston, MA, USA, November 27-December 1, 2022

[484] (*) A. Boltasseva, "Modulating optical response of oxides and nitrides in time and space for dynamic photonics," the 14th International Congress on Artificial Materials for Novel Wave Phenomena (Metamaterials), Siena, Italy, September 12-17, 2022

[483] (*) A. Boltasseva, "Machine-Learning Assisted Photonics," Lake Como School on Advanced Studies on Machine Learning Photonics, Como, Italy, August 28 to September 2, 2022

[482] (*) S. Saha, M. Özlü, V. M. Shalaev, A. Boltasseva, "Temporal modulation of dielectric permittivity in transparent conducting oxides: from tunable photonics to new phenomena," SPIE Optics and Photonics, Plasmonics: Design, Materials, Fabrication, Characterization, and Applications XX 2022, San Diego, California, USA, August 21-25, 2022

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[473] (*) A. Boltasseva, V. Shalaev, "Advancing Photonics with Machine Learning," 295th IUVSTA Workshop on Plasmonic Thin Films: Theory, Synthesis and Applications, City of Guimarães, Portugal, June 20-23, 2022

[472] **(P)** A. Boltasseva, "Advancing Photonic Design and Quantum Measurement with Machine Learning," NanoPlasm conference, Cetraro, Italy, June 13-17, 2022 (postponed from 2020)

[471] (*) A. Boltasseva, "Refractory Plasmonics for Energy and Extreme Optics," 15th Mediterranean Workshop and Topical Meeting "Novel Optical Materials and Applications" NOMA 2022, May 24-28, 2022

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[451] (*) A. Boltasseva, "Controlling the Optical Properties of Conducting Oxides for Time-Varying Metasurface Applications," 2021 MRS Fall meeting, Boston, MA, USA, November 29 – December 2, 2021

[450] (*) A. Boltasseva, "Advancing photonic design and quantum measurements with machine learning," OSA Frontiers in Optics & Laser Science, Washington DC, 26-30 September 2021 (online)

[449] (*) A. Boltasseva, "Machine-Learning-Assisted Photonics," The 67th Annual AVS International Symposium and Exhibition (AVS 67), Denver, CO, October 25-30, 2020 – moved to 2021 (online)

[448] **(K)** A. Boltasseva, "Advancing photonic thermophotovoltaic metasurface design with machine learning," METANANO 2021, 13-17 September 2021, Tbilisi, Republic of Georgia (online)

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[2] P. Bogatov, A. E. Boltaseva, A. E. Drakin, V. P. Konyaev, "Gain Spectrum and Amplitude-Phase Coefficient in InGaAs/AlGaAs/GaAs Strained Quantum-Well Semiconductor Lasers in 0.94-0.98 μm Wavelength Range," 3rd Belarussian-Russian Workshop "Semiconductor Lasers and Systems" Proceedings, p. 22, Minsk, Belarussia, June 1999 (in Russian)

[1] A.E. Drakin, A.P. Bogatov, A.E. Boltaseva, M.A. Belkin "Optical Gain and alpha-Factor in InGaAs/GaAs Semiconductor Laser," XLI scientific conference of Moscow Institute of Physics and Technology Proceedings, Dolgoprudny, Russia, November 1998 (in Russian)

Teaching and Supervising Experience:

Bachelor, Master's and PhD Students:

[1] Rasmus B. Nielsen	MS	Technical University of Denmark (2007)	co-advisor
[2] Kasper B. Joergensen	BS	University of Southern Denmark (2008)	co-advisor
[3] Maksim Zalkovskij	MS	DTU (2009)	co-advisor
[4] Claus Jeppesen	PhD	DTU (2011, now at DTU)	co-advisor
[5] Rasmus B. Nielsen	PhD	DTU (2010, now at ASML, Netherlands)	advisor
[6] Tiberiu Rosenzveig	PhD	University of Iceland (2010)	co-advisor
[7] Paul R. West	PhD	Purdue (2008-2014, now at Intel)	supervisor
[8] Gururaj V. Naik	PhD	Purdue (2009-2013, now Assist Prof at Rice)	advisor
[9] Naresh K. Emani	PhD	Purdue (2009-2014, now at DSI, Singapore)	advisor
[10] Jongbum Kim	PhD	Purdue (2009-2016, now at UMaryland)	advisor
[11] Nathaniel Kinsey	PhD	Purdue (2010-2016, now Assist Prof at VCU)	advisor
[12] Justus C. Ndukaife	PhD	Purdue (2011-2017, now Assist Prof at Vanderbilt)	advisor
[13] Zuoxian Wang	PhD	Purdue (2011-2018, now at ASML)	advisor
[14] Aveek Dutta	PhD	Purdue (2015-2020, IBM)	advisor
[15] Sajid M. Choudhury	PhD	Purdue (2014-2019, Assist Prof in BUET)	co-advisor
[16] Krishnakali Choudhury	PhD	Purdue (2014-2019, Intel)	advisor
[17] Soham Saha	PhD	Purdue (2018-2022, Argonne)	co-advisor
[18] Sarah Chowdhury	PhD	Purdue (2019-2022, IBM)	advisor
[19] Xiaohui Xu	PhD	Purdue (2019-2023, Princeton)	advisor
[20] Zach Martin	PhD	Purdue (2020-2024, TSMC)	advisor
[21] Blake Wilson	PhD	Purdue (2020-2024, Quantinuum)	advisor
[22] Yuheng Chen	PhD	Purdue (in progress)	advisor
[23] Morris Yang	PhD	Purdue (in progress)	advisor
[24] Miroslava Marinova	PhD	Purdue (in progress)	advisor

[25] Owen Matthiassen	PhD	Purdue (in progress)	advisor
[26] Jake Choi	PhD		

Undergraduate research projects at Purdue:
- Ogaga Odele (Fall 2012, Spring 2013)
- Ikuko Kitamura (Spring 2013, Spring 2014)
- Renju Liu (Fall 2013)
- Yugang Jing (Spring 2014, SURF program, summer 2014)
- Elizabeth Grubbs (Summer, Fall 2014)
- Carolina Aguilar (Summer 2017)
- Erin Shelton (Fall/Spring 2017)
- Fidel Galano (Fall 2017)
- Jihan Salsabila (Fall 2017)
- Scott Criswell (Fall/Spring 2017)
- Oksana Makarova (Fall 2015 – Spring 2019, DURI research grant)
- Jack Havey (Spring 2019)
- Advay Welling - F23 - S24
- Sarthak Tandon - F23 - S24
- Trang Do - F23 - S24
- Geetika Chitturi - F23 - S24
- Lee Dongeun - Su23 - F23
- Rohan Malavathu - S23 - S24
- Rohan Ojha - S23 - S24
- Jaxon Pottle - S23 - S24
- Daksh Kumar Singh - F22 - S24
- Michael Bezick - F22 - S24
- Vaishnavi Iyer - F21 - S24
- Seoyoung Cho - Su23

Teaching at Purdue:
Person in charge:

ECE 30414	Elements of Electro- and Fiber Optics, Purdue	(2009-present)
ECE 30416	Introduction to Engineering Optics, Purdue	(2010-2019)
ECE 395	Introduction to Nanotechnology	(Spring 2019, 2020. 2021)
ECE 30653	Introduction to Nano- and Quantum Technology	(Spring 2022-present)

Teaching outside Purdue:
- Three-week undergraduate research courses on Plasmonics and Nanofabrication, Technical University of Denmark (2003, 2004)
- Course on Nanophotonics for graduate students, Technical University of Denmark (¼ course, Spring 2007, 2008)
- Women in Photonics (WiP) School on Photonic Metamaterials, Paris, France, April 13-17, 2008 - Invited lecturer, 2-hours tutorial
- Metamorphose PhD school on "Fabrication and optical properties of nanostructured metamaterials," Rethymnon, Crete, Greece, June 12-13, 2009 - Invited lecturer, 1.5-hour lecture
- Development and teaching of 1-week course on "Nanophotonics," ECTS 2.5, Erlangen Master Program in advanced optical technologies (MAOT), Friedrich-Alexander-Universität Erlangen-Nürnberg (Fall 2009)
- 1-week course on "Nanophotonics," ECTS 2.5, Erlangen Master Program in advanced optical technologies (MAOT), Friedrich-Alexander-Universität Erlangen-Nürnberg (Fall 2010)
- International School of Quantum Electronics, 52nd Course on Advances in Nanophotonics, Erice, Sicily, Italy, July 17-29, 2012 - Invited lecturer, 2-hours tutorial
- Summer School on Plasmonics, University of Toronto, Toronto, Canada, August 26-30, 2013 – Invited lecturer, 1.5-hour lecture
- Short course on nanophotonics in Kazan Federal University, Russia, June 2014 – invited lecturer, 6-hours of lectures
- School on Complex Photonics, International School of Physics "Enrico Fermi", Como lake, Italy, July 12-18, 2015 – invited lecturer, 3 hours of lectures

- International Summer School on Nonlinear Optics, August 25-27, 2020, Novosibirsk State University, Novosibirsk – 1-hour lecture (online)
- The VIII International School and Conference on Photonics (Photonica2021), Belgrade, Serbia, 24-27 August 2021 – Invited lecture (online)
- 2021 MRS Fall meeting, Boston, MA, USA, November 29 – December 2, 2021 – Tutorial
- Lake Como School on Advanced Studies on Machine Learning Photonics, Como, Italy, August 28 to September 2, 2022 – Invited lecturer

Other:
Workforce Development Lead, the U.S. Department of Energy (DOE) Office of Science National Quantum Information Science Research Center, the Quantum Science Center (QSC) (10/01/2020 - present)
Effective College Teaching Workshop, Purdue University, October 2012
Graduate Faculty Mentoring Workshop, Purdue University, February 2009
Education in University Teaching (UDtU), Technical University of Denmark, diploma, 2007
''Mentoring of Experts'' courses for young faculty on supervising graduate students, Technical University of Denmark, 2006

Diversity:

- Member of KIF, Network for Women in Physics in Denmark, NorWiP, Nordic Network for Women in Physics (since 2005)
- Participant in gender activity programs associated with The European FP6 Network of Excellence ePIXnet (2005-2006)
- Member of the organizing committee: 3rd Workshop of Nordic Network for Women in Physics (NorWiP), Lyngby, Denmark, August 16-17, 2007
- Member of Women in Engineering Program, Purdue (since 2008)
- Purdue Women in Engineering undergraduate mentoring program (Mentees & Mentors, M&M) panelist, Purdue, November 2012
- WISE - Women's Innovations in Science and Engineering panelist, Department of State's International Visitor Leadership Program, Purdue, March 31, 2014

Outreach:

- Participation in Nanophotonics Days, Open House arrangements and "Meet a Researcher" initiatives, Technical University of Denmark, 2006–2010
- Co-authored a book chapter for high-school teachers on Nanophotonics: A. Boltasseva and M. van der Poel, "Brydninger," chapter in Optiske Horisonter: en rejse på kommunikationsteknologiens vinger, eds. A. Bjarklev, J. Scheel, and C.V. Smith, Technical University of Denmark, one2one A/S, pp. 11–25, ISBN 87–92062–01–6, 2007
- Presentation of "Nanomaterials" subarea of "Microelectronics and Nanotechnology" area, ECE Open House, Purdue, March 2009
- NanoDays arrangements with demos on optics ("optics" table with demos on polarization, liquid crystals, diffraction patterns), Birck Nanotechnology Center Purdue University, 2009-2016
- Presentation of "Nanomaterials for Nanophotonics," ECE Open House, Purdue, April 2011
- YouTube video for lay audience explaining some of Prof. Boltasseva's research topics (metamaterials, super-resolution microscopes, invisibility cloaks, optical black holes)
(http://www.youtube.com/watch?v=Fr7PdJN5A8g)
- Organization of "Nano for Energy" day with lectures and demos, Inaugural Purdue Energy Camp (PEC), Purdue, June 2012
- Participating in the organization of the Gifted Education Resource Institute (GERI) Summer Residential Camp: 1-day on nanophotonics with lessons and demos, Purdue, July 2012
- Organization of "Nanotechnology for Energy" lecture and demos, Purdue Energy Academi, Purdue, June 2013
- Research Goes to School, Discovery Learning Research Center program, lecturer, Purdue, June 2014
- "Catching and controlling light rays," Fireside chat, Discovery Park Open House and Convergence Conference, September, 2016
- Purdue-in-the-know TED talk, Purdue Homecoming, September 2017
- "Ask Me Anything" New York Academy of Science NYAS, October 2018
- Purdue Galleries Advisory council member, strengthening Engineering-Science-Art connections (2019-present)

- A. Boltasseva, “From Basic Research to a Quantum-Smart Society: Merging AI and Quantum Science,” Quantum for the People: Connecting Quantum Information Science and Society session, 2022 American Association for the Advancement of Science (AAAS) Annual meeting, February 2022, panelist

Other Activities

- Volonteer, computer lab, Kindergarten class, Cumberland elementary school, West Lafayette IN (2016 – present)
- Member of the board of the Russian Society in Denmark (2005-2007)
- Member of the Russian Literature Seminar in Copenhagen 'Novyj Bereg' (literature magazine) (2005-2006)
- Member of the Russian National Physics Olympiad jury (1997)
- Member of the organizing committee of the Russian National Physics Olympiads (1997-2000). Experience in managing a team of 50-70 people and financial accounting
- Member of the undergraduate admissions committee, Department of General and Applied Physics, Moscow Institute of Physics and Technology (1997-2000)
- Member of the student theatre (Department of General and Applied Physics) STEM FOFP, actress (1996-2000)