Dr. Debashis Chanda
Associate Professor
NanoScience Technology Center, Dept. of Physics, College of Optics and Photonics **(**CREOL), University of Central Florida

---

Dr. Debashis Chanda

E-mail: **debashis.chanda@ucf.com**

EDUCATION

2009-12 **University of Illinois at Urbana-Champaign, USA**
Post-doctoral fellow, Beckman Institute, Material Research Laboratory.

2004-08 **University of Toronto, Canada.**
PhD from Photonics Group, Electrical and Computer Engineering dept.
Distinctions: GPA of 4.0/4.0.

2002-04 **University of Calgary, Canada.**
MS from Electrical and Computer Engineering Dept.
Distinctions: GPA of 3.9/4.0.

1994-98 **Jadavpur University, India.**
BE from Electrical Engineering dept.
Distinctions: GPA of 3.8/4.0. First class honors with distinction.

ACADEMIC/INDUSTRIAL RESEARCH EXPERIENCE

2017- **Associate Professor,** Dept. of Physics, NanoScience Technology Center, CREOL

2012-17 **Assistant Professor**, NanoScience Technology Center, Dept. of Physics, College of Optics and Photonics (CREOL), University of Central Florida

2009-12 Post-Doctoral Research Associate, Beckman Institute, Material Research Laboratory, University of Illinois at Urbana-Champaign, USA
Specialization: Light-Matter interactions in nanoscale, Design and fabrication of high efficiency thin film solar-cells, Plasmonic Sensors, Design and fabrication of 3D Metamaterial Structures, Nanoimprint/Soft lithography
Advisor: **Professor John A. Rogers, Fellow NAS and NAE**

2004-08 Graduate Researcher, Photonics Group, **University of Toronto, Canada.**
Doctoral dissertation: ***Laser Fabrication of 3-Dimensional Nanostructures***
Specialization: Optoelectronics/Photonics, Laser nano-fabrication 3D nanostructures, three-dimensional optofluidic sensors.
Advisor: **Professor Peter R. Herman, Fellow OSA, Fellow SPIE**

2002-04 Graduate Researcher, **University of Calgary, Canada.**
MS thesis: ***Wireless Signal Transmission over Optical Fiber***
Specialization: Radio-over-fiber
Advisor: **Professor Abu Sesay**

2000-02 **Sr. Research Engineer, Philips Semiconductors, Philips Ltd., Bangalore.**
Specialization: Semiconductor devices for speech signal processing

1998-00 **Research Engineer, ABB R&D, ABB Ltd., Bangalore.**
Specialization: Semiconductor power electronic devices and signal processing

Awarded Grants

Research Support: Dr. Debashis Chanda

National Science Foundation (NSF) ECCS/EPMD - 2015722
Debashis Chanda (**Single PI**), Title: *Nonlinear Semiconductor-Metal Phase Transition Induced Frequency Modulation (FM) based Mid-Infrared Detection at Room Temperature*
Duration: **05/01/2020- 04/30/2023**
Amount: **$350, 000** (Role: **PI with 100% share**)

NGA/DoD
Debashis Chanda (**Single PI**), Title: *Adaptive Infrared Thermal Signature Management.*
Duration: **04/01/2020 - 03/31/2025**
Amount: **$2, 500, 000** (Role: **PI with 100% share**)

DARPA – WIRED Program GRANT NO. HR0011-16-1-0003 – PHASE III
Debashis Chanda (**PI**), Title: *Ultrafast, Uncooled Long Wave Infrared Detection based on Mono-layer Graphene.*
Duration: **01/01/2018- 12/31/2019**
Amount: **$339, 082** (Role: **PI with about 80% share**, co-PI: Michael Leuenberger)

National Science Foundation (NSF) ECCS/EPMD-1920840,
Debashis Chanda (**Single PI**), Title: *Self-Assembled Angle Independent Plasmonic Displays*,
Duration: **07/01/2019-06/30/2022**
Amount: **$399,221 (**Role: **PI with 100% Credit)**

UCF Office of Research Seed Grant, Debashis Chanda (**Single PI**), Title: A Possible Way of Making World's First "Color" IR Camera
Duration: **01/01/2020- 12/31/2020**
Amount: **$60, 000 (**Role: **PI with 100% credit, No Overhead)**

Florida Space Grant/NASA, Debashis Chanda (**Single PI**), Title: Infrared "Color" Imaging for Deep Space Imaging
Duration: **09/01/2019- 08/31/2020**
Amount: **$25, 000 (**Role: **PI with 100% credit, No Overhead)**

Hinkley Foundation, Debashis Chanda (**PI**), Title: Detection and Separation of Recyclable Plastics from Municipal Solid Waste
Duration: **09/01/2019- 08/31/2020**
Amount: **$50, 000 (**Role: **PI with 100% credit)**

National Science Foundation (NSF) (ECCS/EPMD – 1808045), Debashis Chanda (**Single PI**), Title: *Superchiral Light Generation on Achiral Substrates for High Sensitive Detection of Chiral Molecules*, Duration: **08/01/2018- 07/31/2021**
Amount: **$359, 869 (**Role: **PI with 100% Credit)**

Northrop Grumman Corporation NG-63018088/63018125, Debashis Chanda (**Single PI**),
Title: *Large Area Mid-IR Detectors and focal plane arrays*
Duration: **11/01/2017 – <u>Continuous Support</u>**
Amount: **<u>$75, 000/ Year</u>** (Role: **PI with 100% credit, <u>No Overhead Continuous Support</u>)**

Hinkley Foundation, Debashis Chanda (**PI**), Title: *Detection and Separation of Recyclable Plastics from Municipal Solid Waste*
Duration: **09/01/2018- 08/31/2019**
Amount: **$46, 000 (**Role: **PI with 100% credit)**

DARPA – WIRED Program GRANT NO. HR0011-16-1-0003 - PHASE II
Debashis Chanda (**PI**), Title: *Ultrafast, Uncooled Long Wave Infrared Detection based on Mono-layer Graphene*
Duration: **01/01/2017- 12/31/2018**
Amount: **$482, 478** (Role: **PI with about 80% share**, co-PI: Michael Leuenberger)

ARO DURIP
Debashis Chanda (**co-PI**) 08/2018
III-V Reactive Ion Etcher.
Amount: **$375, 000** (Role: co-**PI 0% credit, Instrument grant)**

DARPA – WIRED Program GRANT NO. HR0011-16-1-0003 - PHASE I
Debashis Chanda (**PI**), Title: *Ultrafast, Uncooled Long Wave Infrared Detection based on Mono-layer Graphene*
Duration: **06/01/2016 - 12/31/2017**
Amount: **$550, 128** (Role: **PI with about 80% share**, co-PI: Michael Leuenberger)

National Science Foundation (NSF) ECCS/EPMD-1509729**,** Debashis Chanda (**Single PI**), Title: *Flexible Reflective Metasurface Displays*
Duration: **07/01/2015 - 06/30/2019**
Amount: **$300, 012** (Role: **PI with 100% credit**)

National Science Foundation (NSF) CMMI-1450806, Debashis Chanda (**Single PI**), Title: *Unified Photon and Electron Harvesting Scheme for High Efficiency Thin-film Mono-crystalline Silicon Solar Cells*
Duration: **09/01/2014- 04/30/2018**
Amount: **$199,942** (Role: **PI with 100% credit**)

Florida Space Grant/NASA FSI63016092**,** Debashis Chanda (**Single PI**), Title: *Multi Spectral Uncooled Low SWaP Printed Infrared Detectors for Spectroscopic Chemical Analysis during Long Space Missions*
Duration: **01/01/2017 – 12/31/2017**
Amount: **$25,000** (Role: **PI with 100% credit**)

Northrop Grumman NG-63018073 , Debashis Chanda (**Single PI**), Title: *Large Area Mid-IR Detectors and focal plane arrays,* Duration: **3/01/2016 - 10/31/2016**
Amount: **$50, 000** (Role: **PI with 100% credit**)

UCF Major Equipment Grant, Debashis Chanda (**PI**), Title: *Hybrid Magnetron Sputtering, E-beam and Thermal- all in one deposition system.*
Duration: **03/15/2016**
Amount: **$325,000** (Role: **PI with 100% credit**)

Florida Space Institute/NASA FSI63019022, Debashis Chanda (**Single PI**), Title: *Printed Metamaterial based Mid-IR Imaging for Deep Space Exploration*
Duration: **07/15/2013-08/31/2015**
Amount: **$75, 000** (Role: **PI with 100% credit**)

Open Photonics Inc. 63018043, Debashis Chanda (**Single PI**), Title: *Printed Metamaterial based Large Area Mid-IR Detectors and focal plane arrays*
Duration: **6/01/2014 - 08/31/2015**
Amount: **$20, 000** (with FHTCC 1:1 match) (Role: **PI with 100% credit**)

Lockheed Martin Corporation, Debashis Chanda (sub-contracted), Title: *Direct Laser Writing of Optical Nanostructures on Chalcogenide Glasses*
Duration: **6/01/2014 - 12/31/2014**
Amount: **$10, 000 (**Role: sub-contractor)

UCF Seed Funding UCF63019026**,** Debashis Chanda (**Single PI**), Title: *Printed Cavity-Coupled Nanoplasmonic Crystals for Non-Invasive In Vivo Diagnosis*
Duration: **03/01/2014-08/31/2015**
Amount: **$7,500** (Role: **PI with 100% credit**)

UCF Major Research Equipment Grant 63019017, Debashis Chanda (**Single PI**), Title: *High Throughput, Large Area, State of the Art Ultrafast Laser Lithography System for Nanomanufacturing of 3D Nanoparticles*
Duration: **2/14/2013 - 03/31/2014**
Amount: **$225, 000** (with center match, Role: **PI with 100% credit**))

SELECTED AWARDS/ACHIEVEMENTS

Dr. Chanda:

2018 UCF **Reach for the Stars Award** for research excellence, 2018

2017 Dr. Chanda is awarded **2017 International EIPBN Conference MicroGraph 3-Beamers Choice Award**, June 1, 2017

2017 UCF **Research Incentive Award (RIA)** for research excellence, 2016-2017

2016 Dr. Chanda and PhD Student Daniel Franklin was recognized by the **UCF President** and **Board of Trustees** for the Displaying Futures Award 2016 on Nov 17, 2016.

2016 Dr. Chanda is Awarded Winner of **'International Displaying Futures Award 2016'** by **MERCK, Germany** for the 'Skin-like Plasmonic Full-Color Displays'

[**This is an invitation only international competition for novel display innovation. The award came with a plaque, $50,000 fund and long term research support from MERCK, Germany]

2016 Dr. Chanda has been chosen as one of the **Plenary Speaker** of Optical Society of America's Latin American Optics and Photonics (LAOP) conference, Medellin, Colombia, Aug 22-15, 2016.

2016 Dr. Chanda is chosen as the Chair of IEEE Photonics Conference (IEEE IPC 2016) Nanophotonics Symposium, **IEEE Photonics Conference (IEEE IPC 2016)**, Hawaii, October 2016.

2015 Dr. Chanda received the **Northrop Grumman National Innovation Award** 2016.

2015 Dr. Chanda is selected as the Editorial Board Member of Nature Publishing Group's Scientific Reports Journal, January 2015.

2014 Nanotransfer Printing based Visible Negative Index Metamaterials paper is selected for the Best of Advanced Optical Materials - 2014 Edition

2014 The work on imprinted large area metamaterials published in ACS Nano is appeared as Research Highlight in: Nature Asia Materials**,** Nov 2014.

2013 Received NSF Summer Institute Fellowship, April 2013.

2012 Department of Energy (DOE) Energy Frontier Research Center (EFRC) Solar Energy Future Direction Innovation Proposal Award.

2010-11 Natural Science and Engineering Council (NSERC) of Canada post-doctoral award ($80,000).

2008-09 Government of Ontario Graduate Scholarship ($15000/Year for 2 years), Canada.

2007 Conference on Laser Ablation Award (€2000).

2007 Ontario Science and Technology Award ($15,000/Year), Canada.

2007 Ontario Centre of Excellence (OCE) Award ($2000), Canada.

2004-06 Edward S. Rogers Sr. Scholarship ($12,000/Year for 2 years), Canada.

2004 Graduate Student Conference Travel Award ($1000), University of Calgary.

2002-04 Graduate Scholarship University of Calgary ($12,000/Year for 2 years), Canada.

Group:

2020: Alireza Safaei, PhD student from Dr. Chanda's group received UCF **Best PhD Dissertation Award**

2020: Alireza Safaei, PhD student from Dr. Chanda's group received College of Sciences **Best PhD Dissertation Award**

2019: Alireza Safaei, PhD student from Dr. Chanda's group received **Physics "Student of the Year" Award** for research excellence

2018: Daniel Franklin, PhD students in Dr. Chanda's group received **UCF Order of Pegasus Award 2018**

2018: Harshil Lalwani, High School Student in Dr. Chanda's group won 2nd place in **Seminole County Science Fair**, Oviedo High School.

2017: Abraham Vazquez-Guardado, PhD students in Dr. Chanda's group received **UCF Dean's Fellowship**

2017: Beatriz Jimenez from Dr. Chanda's group received **SURF Research Scholarship from University of Florida (UF)** (which covers $5000 stipend, on-campus housing and meal plan, airfare, priority consideration for PhD admission)

2016: Daniel Franklin, PhD students in Dr. Chanda's group received **College of Sciences General Scholarship**

2016: Jonathan LEE, PhD students in Dr. Chanda's group received **Dean's Fellowship Award (2013-2018)**

2016: Russell Frank from Dr. Chanda's group received **First Prize in Showcase of Undergraduate Research Excellence**

2016: Samuel Nunez, Jared Cozart and Beatriz Jimenez from Dr. Chanda's group received **Duke Energy Scholarship**

2015: Wade Wilson, undergraduate student in Dr. Chanda's group received the prestigious **AFRL / DoD Science, Mathematics, And Research for Transformation (SMART) Defense Education Program** Scholarship ($38k / year for 5 years)

2015: Daniel Franklin and Javaneh Borouman, PhD students in Dr. Chanda's group received **UCF Graduate Research Forum Poster Awards**

2015: Jonathan LEE, PhD students in Dr. Chanda's group received **UCF Teaching Excellence Award**

2015: Beatriz Jimenez , Samuel Nunez, Jared Cozart undergraduate students in Dr. Chanda's group received UCF EXCEL Scholarship

2015: Harshil Lalwani, Middle School Student in Dr. Chanda's group won the **Crooms Technology Award**, Indian Trail Middle School.

2014: Alireza Safaei, PhD student in Dr. Chanda's group received **Northrop Grumman** Scholarship ($10k)

2014: Daniel Franklin, PhD student in Dr. Chanda's group received **Northrop Grumman** Scholarship ($3k)

2014: Alysia Waugh, Jones High school student in Dr. Chanda's group received Florida Alliance Health FAHPD-HERI Scholarship

2014: Harry Ahlheim undergraduate student in Dr. Chanda's group received Duke Energy EXCEL Scholarship

2013: Wade Wilson and Dr. Chanda received Burnett Research Scholars Grant for the work on Plasmonic Bio-Sensors

2012: Abraham Vazquez-Guardado received National Council of Science and Technology CONACyT scholarship from Government of Mexico ($12k + tuition for 4 years)

SELECTED PUBLICATIONS

[1] Daniel Franklin, Ziqian He, Pamela Mastranzo Ortega, Alireza Safaei, Shin-Tson Wu and **Debashis Chanda**, "Self-Assembled Plasmonics for Angle-Independent Structural Color Displays with Actively Addressed Black States", ***Proceedings of the National Academy of Sciences* (PNAS)**, doi/10.1073/pnas.2001435117, 2020.

National Science Foundation (NSF): Butterfly-inspired nanotech makes natural-looking pictures on digital screens, June 10, 2020.

Phys.org: Butterfly-inspired nanotech makes natural-looking pictures on digital screens, June 4, 2020.

[2] Alireza Safaei, Sayan Chandra, Muhammad Waqas Shabbir, Michael N. Leuenberger, and **Debashis Chanda**, "Dynamically Tunable Graphene based Uncooled Long Wave Infrared Detection and Imaging", **Nature Communications**, DOI:10:3498, 2019.

- Nature: Dirac plasmon-assisted asymmetric hot carrier generation for room-temperature infrared detection

- Phys.org: Researchers work to create infrared detectors for viper-like night vision

[3] H. Zhao, K. Li, M. Han, F. Zhu, A. Vázquez-Guardado, P. Guo, Z. Xie, Y. Park, L. Chen, X. Wang, H. Luan, Y. Yang, H. Wang, C. Liang, Y. Xue , R. D. Schaller, **Debashis Chanda**, Y. Huang, Y. Zhang, and J. A. Rogers, "Buckling and Twisting of Advanced Materials into Morphable 3D Mesostructures", **Proceedings of the National Academy of Sciences (PNAS)**, vol. 116, pp. 13239-13248, 2019.

[4] H. Zhang, P. Gutruf, K. Meacham, M. C. Montana, X. Zhao, A. M. Chiarelli, A Vázquez-Guardado, A. Norris, L. Lu, Q. Guo, C. Xu, Y. Wu, H. Zhao, X. Ning, W. Bai, I. Kandela, C. R. Haney, **Debashis Chanda**, R. W. Gereau IV, and J. A. Rogers, "Wireless, Battery-Free Optoelectronic Systems as Subdermal Implants for Local Tissue Oximetry", **Science Advances**, 5(3): eaaw0873, 2019. doi:10.1126/sciadv.aaw0873.

[5] ZIQIAN HE, GUANJUN TAN, **DEBASHIS CHANDA***, SHIN-TSON WU*, "Novel liquid crystal photonic devices enabled by two-photon polymerization [**INVITED**]", **Optics Express,** vol.27, pp. 11472-11491, 2019. (*Corresponding Authors)

[6] Abraham Vázquez-Guardado, Swetha Barkam, Madison Peppler, Aritra Biswas, Dennis Wessley, Soumen Das, Sudipta Seal, **Debashis Chanda**, "Enzyme-Free Plasmonic Biosensor for Direct Detection of Neurotransmitter Dopamine from Whole Blood", **Nano Letters,** vol.19, pp. 449-454, 2019.

- MRS Bulletin: Biosensor enables simplified dopamine detection

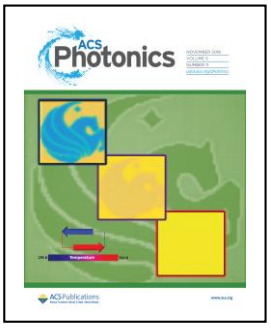
[7] Alireza Safaei, Sayan Chandra, Michael Leuenberger, **Debashis Chanda**, "Wide Angle Dynamically Tunable Enhanced Infrared Absorption on Large Area Nanopatterned Graphene", **ACS Nano**, vol. 13, pp. 421-428, 2019.

[8] Philipp Gutruf, Vaishnavi Krishnamurthi, Abraham Vázquez-Guardado, Zhaoqian Xie, Anthony Banks, Chun-Ju Su, Yeshou Xu, Chad Haney, Emily Waters, Irawati Kandela, Siddharth Krishnan, Tyler Ray, John Leshock, Yonggang Huang, **Debashis Chanda**, and John Rogers, "Fully implantable optoelectronic systems for battery-free, multimodal operation in neuroscience research", **Nature Electronics,** vol. 1, pp. 652-660, 2018.

[9] Alireza Safaei, Sushrut Modak, Abraham Vazquez-Guardado, Daniel Franklin and **Debashis Chanda**, Cavity induced tunable perfect infrared absorption in imprinted coupled complementary hole-disk array, **Optics Letters**, vol. 43, pp. 6001, 2018.

[10] Daniel Franklin, Sushrut Modak, Abraham Vázquez-Guardado, and Alireza Safaei, **Debashis Chanda**, "Covert Infrared Image Encoding through Imprinted Plasmonic Cavities", **Light: Science & Applications,** vol. 7, Article no. 93, 2018.

-Has been selected for Web of Science Special Topic target promotion and press coverage.



[11] Sayan Chandra, Daniel Franklin, Jared Cozart, Alireza Safaei, **Debashis Chanda**, "Adaptive Multispectral Infrared Camouflage", **ACS Photonics, (Cover Article),** vol. 5, pp. 4513, 2018.

- **National Science Foundation (NSF) News**: UCF researchers develop method to hide images and information in plain sight**,** December 17, 2018

[12] Alireza Safaei, Sushrut Modak, Jonathan Lee, Sayan Chandra, Daniel Franklin, Abraham Vasquez-Gaurdado, **Debashis Chanda**, "Multi-spectral frequency selective mid-infrared microbolometers", **Optics Express,** vol. 26, pp. 32931, 2018.

[13] Ziqian He, Ran Chen, Yun-han Lee, **Debashis Chanda***, Shin-Tson Wu*, "Switchable Pancharatnam–Berry microlens array", **Optics Letters,** vol. 43, pp.5062**,** 2018. (*Corresponding Authors)

[14] Daniel Franklin, Matthew George, James Fraser, **Debashis Chanda**, "Atomic Layer Deposition Tuning of Subwavelength Aluminum Grating for Angle-Insensitive Plasmonic Color", **ACS Applied Nano Materials**, 1800216, DOI: 10.1021/acsanm.8b01147,2018.

[15] ZIQIAN HE,YUN-HAN LEE, **DEBASHIS CHANDA***,SHIN-TSON WU*, "Adaptive liquid crystal microlens array enabled by two-photon polymerization", **Optics Express**, vol. 26, pp.21184, 2018. (*Corresponding Author)

[16] Abraham Vázquez-Guardado,Javaneh Boroumand, Daniel Franklin, **Debashis Chanda**, "Broadband Angle Independent Anti-reflection Coatings on Nanostructured Light Trapping Solar Cells", **Physical Review Materials** , vol. 2, pp. 035201, 2018.

[17] Abraham Vazquez-Guardado, **Debashis Chanda**, "Superchiral Light Generation on Degenerate Achiral Surfaces", **Physical Review Letters**, vol. 120, pp.137601, 2018.

[18] Alireza Safaei, Abraham Vázquez-Guardado, Daniel Franklin, Michael N. Leuenberger, **Debashis Chanda**, "High-Efficiency Broadband Mid-Infrared Flat Lens", **Advanced Optical Materials**, 1800216, 2018.

- Selected for the Special issue on "**Applied Plasmonics**" by Advanced Optical Materials

[19] Luyao Lu, Philipp Gutruf, Li Xia, Dionnet L. Bhatti, Xinying Wang, Abraham Vazquez-Guardado, Ning Xin, Xinru Shen, Tian Sang, Rongxue Ma, Grace Pakeltis, Gabriel Sobczak, Hao Zhang, Dong-oh Seo, Mantian Xue, Lan Yin, **Debashis Chanda**, Xing Sheng, Michael R. Bruchas, John A. Rogers, "Wireless, implantable optoelectronic photometers for monitoring neuronal dynamics in the deep brain", **Proceedings of the National Academy of Sciences (PNAS)**, vol. 115 (7) pp. E1374-E1383, 2018.

[20] Luyao Lu, Zijian Yang, Kathleen Meacham, Caroline Cvetkovic, Elise A. Corbin, Abraham Vázquez-Guardado, Mantian Xue, Lan Yin, Javaneh Boroumand, Grace Pakeltis, Tian Sang, Ki Jun Yu, **Debashis Chanda**, Rashid Bashir, Robert W. Gereau IV,Xing Sheng and John A. Rogers, "Biodegradable Monocrystalline Silicon Photovoltaic Microcells as Power Supplies for Transient Biomedical Implants", **Advanced Energy Materials**, pp. 1703035 (DOI: 10.1002/aenm.201703035), January 2018.

[21] Alireza Safaei, Jean Calderon, Daniel Franklin, Abraham Vazquez-Guardado, Laurene Tetard, Lei Zhai, Michael N. Leuenberger, **Debashis Chanda**, "Dynamically tunable extraordinary light absorption in monolayer graphene", **Physical Review B, 96, 165431, 2017**, 2017.

- Breakthrough in DARPA Funded Research on Infrared Detector Technology using one Atomic Layer Thick Graphene

[22] Daniel Franklin, Russell Frank, Shin-Tson Wu and Debashis Chanda, **Debashis Chanda**, "Dynamically Tunable, Single Pixel Full-Color Plasmonic Display", **Nature Communications** Vol. 8, pp. 15209, 2017.

[23] Ziqian He, Yun-Han Lee, Fangwang Gou, Daniel Franklin, **Debashis Chanda***,Shin-tson Wu*, "Polarization-independent phase modulators enabled by two-photon polymerization", **Optics Express** , Vol. 25, pp. 33688, 2017 (*Corresponding Author).

[24] YUN-HAN LEE†, DANIEL FRANKLIN†, FANGWANG GOU,GUIGENG LIU,FENGLIN PENG,**DEBASHIS CHANDA***,SHIN-TSON WU*, "Two-photon polymerization enabled multi-layer liquid crystal phase modulator", **Scientific Reports**, Vol. 7, pp. 16260, 2017 (*Corresponding Author).

[25] **Debashis Chanda et. al.**, "Roadmap on optical metamaterials", **Journal of Optics,** Vol. 18, pp. 093005**,** 2016.

- Air Force Research Laboratory (AFRL) led this review article on future of optical metamaterials which includes all leading experts of nanophotonics.

[26] Abraham Vázquez-Guardado, Alexandra Smith, Wade Wilson, Jeanette Ortega, J. Manuel Perez, **Debashis Chanda**, "Low Concentration Label-Free Selective Biomolecular Detection Using Hybrid Cavity-Coupled Plasmonic Biosensors", **Optics Express**, Vol. 22, pp. 25785, 2016.

[27] Javaneh Boroumand, Sonali Das, Abraham Vazquez-Guardado, Daniel Franklin, **Debashis Chanda**, "Unified Electromagnetic-Electronic Device Design of Light Trapping Silicon Solar Cells", **Scientific Reports,** Vol. 6, pp. 31013**,** 2016.

[28] Daniel Franklin, Yuan Chen, Abraham Vazquez-Guardado, Sushrut Modak, Javaneh Boroumand, Daming Xu, Shin-Tson Wu, **Debashis Chanda**, "Polarization Independent, Actively Tunable Color Generation on Imprinted Plasmonic Surfaces", **(Featured Article) Nature Communications** , Vol. 6, pp. 7337, June 2015.

- **National Science Foundation (NSF):** NSF selected the plasmonic full-color display as one of the "Year of Light" favorites, **National Science Foundation (NSF) News**, Nov 26, 2015.

- **Photonics Spectra Top Stories 2015:** Flexible Film Creates Colors from Reflected Light, **Photonics Spectra**, December 2015.

- **BBC News:** Flexible 'skin-like' colour display developed, **BBC News**, June 25, 2015.

- Start-up company: **e-Skin Displays Inc**, California (www.eskindisplays.com)

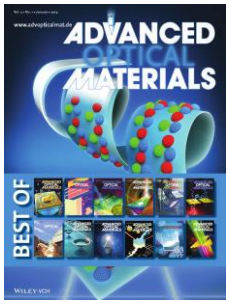
[29] Abraham Vázquez-Guardado, Mason Money, Nathaniel McKinney, **Debashis Chanda**, "Multi-Spectral Infrared Spectroscopy for Robust Plastic Identification", **Applied Optics**, Vol. 54, pp. 7396-7405, August 20 2015.

-Start-up company: **ScanX. Inc**, California (www.scanxtechnologies.com)

[30] Abraham Vázquez-Guardado, Alireza Safaei, Daniel Franklin, Sushrut Modak, **D. Chanda** , " Hybrid Coupling Mechanism in a System Supporting Higher Order Diffraction, Plasmonic and Cavity Resonances", **Physical Review Letters**, Vol. 113, pp.263902, December 31, 2014.

[31] Li Gao, Kazuki Shigetac, Abraham Vazquez-Guardadoa, C.J. Progler, G.R.Bogart, J.A.Rogers, **D.Chanda***, "Nanoimprinting Techniques for Large-Area Three-Dimensional Negative Index Metamaterials with Operation in the Visible and Telecom Bands", **ACS Nano**, Vol. 6, pp. 5535 –5542, June 2014.

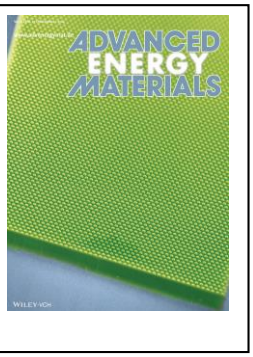
-Highlight Article: "Scale-up of the manufacturing of optical metamaterials", Xiang Zhang (University of California, Berkeley) et. al., **Nature Publishing Group Asia Materials**, doi:10.1038/am.2014.99, Nov 2014.



- **American Scientist Feature Article**: Fabrication at the Nano Scale with Molds and Imprinting – **implemented by companies like Intel, Toshiba etc.,** American Scientist, 103, pp. 212-217, May-June 2015.

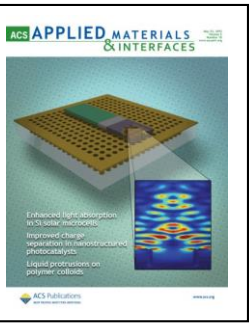
[32] L.Gao, Y.Kim, A.Vazquez-Guardado, K.Shigeta, S.Hartanto, D. Franklin, C.J. Progler, G.R.Bogart, J.A.Rogers, **D. Chanda***, "Materials Selections and Growth Conditions for Large Area Multilayered Visible Negative Index Metamaterials Formed by Nanotransfer Printing", **(Cover Article) Advanced Optical Materials,** Vol. 2, pp. 256–261, March 2014.

-Selected for the Best of Advanced Optical Materials - 2014 Edition



[33] K.J. Yu, L. Gao, J.S.Park, Y.R. Lee, C. J. Cocoran, R. G. Nuzzo, **D. Chanda***, J.A. Rogers*, "Light Trapping in Ultra-thin Monocrystalline Silicon Solar Cells", **(Cover Article) Advanced Energy Materials** , Vol. 3, pp.1528, December 2013. (*Corresponding Author)

- **Science Daily:** Solar Cells Made Thin, Efficient and Flexible, December 09, 2013
- **Photonics Spectra:** Tapping Solar's Full Potential, December 10, 2013

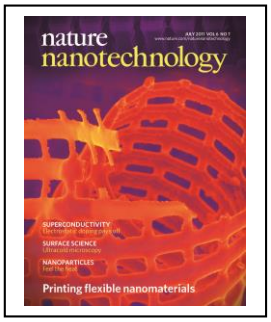


[34] C. Corcoran, S. Kang, L. Li, X. Guo, **D. Chanda***, R. G. Nuzzo*, "Mechanisms of Enhanced Optical Absorption for Ultrathin Silicon Solar Micro-Cells with an Integrated Nanostructured Backside Reflector", **(Cover Article) Applied Materials and Interfaces**, (dx.doi.org/10.1021/am400408g), June 2013. (*Corresponding Author)

[35] M.L.Ng, **D. Chanda**, Peter R. Herman, "Coherent stitching of light in multilayered diffractive optical elements", **Optics Express**, Vol. 20, pp. 23960, Oct 2012.

[36] K. Balasundaram, J. S Sadhu, J. C. Shin, B. Azeredo, **D. Chanda**, M. Malik, K. Hsu, J. A Rogers, P. Ferreira, S. Sinha, X. Li, "Porosity control in metal-assisted chemical etching of degenerately doped silicon nanowires", **Nanotechnology**, Vol. 23, pp. 305304, July 2012.

[37] **D. Chanda**, K. Shigeta, S. Gupta, T. Cain, A. Mihi, A. J. Baca, G. R. Bogart, P. V. Braun, J. A. Rogers, "Large-Area, Flexible 3-Dimensional Negative Index Metamaterials Formed by Nanotransfer Printing", (**Cover Article**) **Nature Nanotechnology,** Vol. 6, 402-407, July 2011.



-Appeared as **featured article** of **Nature Nanotechnology July 2011.**

-News & Views: *A stamp of quality -by Dr.* Richard D. Averitt, was written in **Nature Nanotechnology, June-July 2011.**

-Printed 3D Metamaterials, Selected as **"What is Hot in Optics"** by Optical Society of America (OSA)

-Printed Metamaterial work selected for cover article of ***Laser Focus World***, Vol 47, Issue 8, Aug 2011

-A Practical Way to Make Metamaterials, ***MIT Technology Review***, June 2011

[38] **D. Chanda**, K. Shigeta, T. Troung, M. Schulmerich, E. Lui, A. Mihi, P. V. Braun, R. Bhargave, John A. Rogers, "Coupling of plasmonic and optical cavity modes in quasi-three-dimensional plasmonic crystals", **Nature Communications,** Vol. 2, pp. 479, Sept 2011**.**

[39] **D. Chanda**, K. Shigeta, S. Gupta, T. Cain, A. Mihi, A. J. Baca, G. R. Bogart, P. V. Braun, J. A. Rogers, "A stamp of quality", **Nature Nanotechnology,** Vol. 6, pp. 396-397, July 2011.

[40] J. Cheol Shin, **D. Chanda**, W. Chern, K. J. Yu, J. A. Rogers, X. Li, "Experimental Study of Design Parameters in Silicon Micropillar Array Solar Cells Produced by Soft Lithography and Metal Assisted Chemical Etching", **IEEE Journal of Photovoltaics**, DOI: 10.1109/JPHOTOV.2011.2180894, (2011).

[41] M. T. Dejarld, J. C. Shin, W. Chern, **D. Chanda**, K. Balasundaram, J. A. Rogers, and X. Li, "Formation of High Aspect Ratio GaAs Nanostructures with Metal Assisted Chemical Etching", **Nano Letters**, DOI: 10.1021/nl202708d (2011).

[42] D. J. Shir, Yoon, **D. Chanda**, J.-H. Ryu and J.A. Rogers, "Performance of Ultrathin Silicon Solar Microcells with Nanostructures of Relief Formed by Soft Imprint Lithography for Broad Band Absorption Enhancement," **Nano Letters,** 10, 3041–3046 (2010).

[43] D. J. Shir, E.C. Nelson, **D. Chanda**, A. Brzezinski, P.V. Braun, J.A. Rogers and P. Wiltzius, "Dual Exposure, Two-Photon, Conformal Phase Mask Lithography for Three Dimensional

Silicon Inverse Woodpile Photonic Crystals," **Journal of Vacuum Science and Technology B** 28(4), 783-788 (2010).

[44] K. Balasundaram, J. S Sadhu, J. C. Shin, B. Azeredo, **D. Chanda**, M. Malik, K. Hsu, J. A Rogers, P. Ferreira, S. Sinha, X. Li, "Porosity control in metal-assisted chemical etching of degenerately doped silicon nanowires", **Nanotechnology**, 23, 305304 (2012).

[45] **D. Chanda**, N. Zacharia, M. Haque, M. L. Ng, P. R. Herman, "Flexible fabrication of three-dimensional optical-domain photonic crystals using a combination of single-laser-exposure diffractive-optics lithography and template inversion", **Optics Letters,** Vol. 34, pp. 3920-3922, Dec 2009.

[46] **D. Chanda**, L. E. Abolghasemi, M. Haque, M. L. Ng, P. R. Herman, "Multi-level Diffractive Optics for Single Laser Exposure Fabrication of Telecom-Band Diamond-like 3-Dimensional Photonic Crystals", **Optics Express,** Vol. 16, Issue 20, pp. 15402-15414, Sept 2008.

[47] **D. Chanda**, L. Abolghasemi, P. R. Herman, "Single Laser Exposure Fabrication of Diamond-Like 3-Dimensional Photonic Crystal Microstructures using Circularly Polarized Light", **Applied Physics A,** 93, 33-37 (2008).

[48] **D. Chanda**, P. R. Herman, "Phase tunable multilevel diffractive optical element based single laser exposure fabrication of three-dimensional photonic crystal templates", **Applied Physics Letters,** 91, 061122, Aug 2007.

[49] **D. Chanda**, L. Abolghasemi, P. R. Herman, "One-dimensional diffractive optical element based fabrication and spectral characterization of three-dimensional photonic crystal templates", **Optics Express,** Vol. 14, Issue 19, pp. 8568-8577, Sept 2006.

[50] **D. Chanda**, A. Sesay, "Wireless signal-preamble assisted Mach-Zehnder modulator bias stabilization in wireless signal transmission over optical fibre", **Journal of European Transactions of Telecommunications**, Vol. 19, No. 6, pp.**669-679**, October 2008.

[B] SELECTED Press/News Coverage on my Research

- **Florida Minds Shine Brighter:** University of Central Florida researchers use butterflies as inspiration for new screen technology, June 25, 2020.
- **Phys.org:** Butterfly-inspired nanotech makes natural-looking pictures on digital screens, June 4, 2020.
- **C&EN News**: Plasmonic Color Makes a Comeback, **https://dx.doi.org/10.1021/acscentsci.0c00259**, 2020.
- **TV Fox 35 News:** Complex Light-Field to Detect Neurotransmitters Directly from Blood: Blood test for Brain, Feb 4 2020.
- **Nature:** Dirac Plassmon-assisted asymmetric hot carrier generation for room-temperature infrared detection, Sept 6, 2019.
- **Phys.org:** Researchers work to create infrared detectors for viper-like night vision, Oct 23, 2019.

- **TV Fox 35 News:** UCF lab cutting through the dark of night with color night vision, Nov 6 2019.
- **TV ABC Channel 9 News:** "Color" IR Imaging, Nov 01, 2019.
- **MRS Bulletin:** Biosensor enables simplified dopamine detection, May 9, 2019.
- **Science Daily:** Sensor created to detect dopamine, brain disorders, in seconds, March 19, 2019
- **National Science Foundation News:** UCF researchers develop method to hide images and
- information in plain sight, December 17, 2018.
- **TV Fox 35 News:** Covert Imaging, January 05, 2019.
- **TV ABC Channel 9 News:** Covert Imaging, January 09, 2019.
- **Phys.org:** New optical sensor can determine if molecules are left or right 'handed', June 12, 2018.
- UCF Today: A Breakthrough in Graphene Research May lead to Next-Generation Tech**,** January 12, 2018.
- Tech Transfer: Professor Striving to Turn Nanoscale Inventions into Real-Life Products**,** September, 2017.
- **Phys.org:** Research could bring 'drastically' higher resolution to your TV and smartphone, May 25, 2017.
- 'Skin-like Plasmonic Full-Color Displays' selected as **Winner of Displaying Futures Award 2016 by MERCK, Germany,** October 2016**.**
- Dr. Chanda and PhD Student Daniel Franklin was recognized by the UCF President and Board of Trustees for the **Displaying Futures Award 2016 on Nov 17, 2016.**
- Dr. Chanda gave **Plenary Talk** at OSA Latin America Optics and Photonics Conference - LAOP 2016, Medellin, Colombia, Aug 22-26, 2016.
- Dr. Chanda gave Invited Talk at Tech Transfer Symposium, CLEO - Conference on Lasers and Electro-Optics, San Jose, CA, June 2016.
- **Photonics Spectra:** DARPA Grants $1.3M for IR Detection, June 10, 2016.
- **UCF Today:** Next-Gen Infrared Detector Research at UCF Attracts $1.3 Million DARPA Grant, June 02, 2016.
- **SciTech TV Show**: Flexible thin screens, which could lead to wearable displays, color-changing phone cases, and much more, 8.30 pm, February 11 2016.
- **National Science Foundation (NSF):** NSF selected the plasmonic full-color display as one of the "Year of Light" favorites, National Science Foundation (NSF) News, November 26, 2015.
- **National Science Foundation (NSF):** Researchers funded by the National Science Foundation have figured out how to change the color of a surface and play video by altering the voltage applied to it, National Science Foundation (NSF) News, November 26, 2015.
- **BBC News:** Flexible 'skin-like' colour display developed, **BBC News**, June 25, 2015.
- **American Scientist Feature Article**: Fabrication at the Nano Scale with Molds and Imprinting, **American Scientist**, 103, pp. 212-217, May-June 2015.
- **Photonics Spectra Top Stories 2015:** Flexible Film Creates Colors from Reflected Light, **Photonics Spectra**, December 2015.
- **ABC WFTV Channel 9 News:** UCF professor's high-tech camouflage innovation gets government's attention, **Channel 9 News**, October 27, 2015.
- **Daily Mail:** The full colour 'skin screen' you can wear as clothing: Radical technology could let you alter your outfit instantly, **Daily Mail**, June 24, 2015.

- **NBC News:** Flexible, Ultra-Thin Display Changes Color Like a Chameleon, **NBC News**, June 24, 2015.
- **Science Daily**: Chameleon-like clothing: World's first full-color, flexible, skin-like display, **Science Daily**, June 24, 2015.
- World's first full-color, flexible, skin-like display developed, **Phys.org**, June 24, 2015.
- Super-Thin Electronic Textile Could Dress You in Video, **Popular Science (PopSci)**, June 24, 2015.
- World's first full-color, flexible, skin-like display developed at UCF, **EurekAlert- The Global Source for Science News**, June 24, 2015.
- UCF professor on quest to mimic how nature makes color, **Orlando Sentinel- Front Page**, July 20, 2015.
- **Fox 35 TV Show**: UCF researchers make breakthrough into "invisibility" technology, 10 pm, March 31 2014
- Breakthrough in creating invisibility cloaks, stealth technology, **Science Daily**, March 31, 2014
- The U.S. Military Is One Step Closer to Having Invisibility Cloaks, **Defense One**, April 2, 2014
- Solar Cells Made Thin, Efficient and Flexible, **Science Daily**, December 09, 2013
- Research team finds way to make solar cells thin, efficient and flexible, **Eurek Alert**, December 09, 2013
- Team finds way to make solar cells thin, efficient and flexible, **Phys.org** , December 9, 2013
- Tapping Solar's Full Potential, **Photonics.com** , December 10, 2013
- *Printed 3D Metamaterials, Selected as "**What is Hot in Optics**"* by **Optical Society of America (OSA)** in Frontier of Optics/Laser Science Conference, San Jose, CA, October 2011.
- *A Practical Way to Make Invisibility Cloaks,* **MIT Technology Review (on-line), June 2011**.
- *Large-area printed 3D negative-index metamaterial is flexible,* **Featured Article *Laser Focus World,* vol 47, Issue 8, Aug 2011.**
- Selected for **Cover Image of *Laser Focus World,* Vol 47, Issue 8, Aug 2011.**
- *Research team develops method to produce large sheets of metamaterials,* **Physics Today, June 2011.**
- *Nanotransfer makes large-area NIMs***, Nanotechweb, June 2011.**
- *Research team develops method to produce large sheets of metamaterials,* **Physics.org, June 2011.**
- *Practical Invisibility Cloaks,* **MIT Technology Review (print edition), Sep-Oct 2011.**
- *Large Area Nanomanufacturing of Negative Index of Refraction Metamaterials,* **National Nanomanufacturing Network, Aug 2011**.

PATENT

- **D. Chanda**, D. Franklin, Liquid Crystal Tunable Plasmonic Color Generation Device, Method and Applications, Published Patent App. No.: 2017/0322457 Published: Nov. 9, 2017
- **D. Chanda**, S. Modak, A. Safaei, J. Lee, Optical antenna-based infrared detector, Methods, and Applications, Provisional US Patent: 62/095876, Dec. 2014.

- **D. Chanda**, A. Vazquez-Guardado, Optoelectronic Device For Multi-Spectral Spectroscopic Identification of the Polymer Composition of an Unknown Plastic Object and Related Methods, Published Patent App. No.: 2017/0336264 Published: Nov. 23, 2017
- **D. Chanda**, A. Safaei, Optical Detector Device with Patterned Graphene Layer and Related Methods **US Patent: US 10,312,389 B2, Issued: June 4, 2019**.
- **D. Chanda**, D. Franklin, Dynamically Tunable, Single Pixel Full-Color Plasmonic Display, Method and Applications, **US Patent: US 10,175,547 B2, Issued: Jan. 8, 2019**.
- **D. Chanda**, M. Leuenberger, A. Safaei, S. Chandra, Plasmon-assisted photothermoelectric effect based detection of infrared radiation on asymmetrically patterned graphene, Non-provisional US Patent App.: 16/555,449, Filed: Aug. 29, 2019.
- **D. Chanda**, A. Vazquez-Guardado, Moloecular Chirlatiy Detection Technique Using Hybrid Plasmonic Substrates, Published Patent App. No.: 2020/0080937, Published: Mar. 12, 2020.
- **D. Chanda**, D. Franklin, Plasmonic Aluminum Particle based Display Device and Related Methods, Published Patent App. No.: 2020/0183249, Published: June 11, 2020.
- **D. Chanda**, D. Franklin, Inorganic Paint Pigment with Plasmonic Aluminum Reflector Layers and Related Methods, Published Patent App. No.: 2020/0181421, Published: June 11, 2020.
- **D. Chanda**, S. Chandra, Active IR Camouflage Device, Plasmonic System, and Related Methods, Non-provisional US Patent App.: 16/811,250, Filed: March 6, 2020.

Start-ups

1. **E-Skin Displays Inc. (http://www.eskindisplays.com):** The key goal of this company is to develop a novel class of thin-film flexible reflective displays for various applications ranging from e-readers, advertisement billboards, camouflage etc.

2. **ScanX Inc. (http://www.ScanX.com):** The key goal of this start-up is to develop spectroscopic techniques for plastic, pesticides, microbes etc identification.

SELECTED CONFERENCE INVITED TALKS and SESSION CHAIR

- **(INVITED) Talk** OSA-Harvard Flat Optics Conference, Washington DC, Feb 25, 2020.
- **(INVITED) Talk** at II-VI Conference, Chicago, Nov 20, 2019.
- **(INVITED) Talk** at IEEE IPC Conference, San Antonio, Tx, Oct 01, 2019.
- **(INVITED) Talk** at IEEE RAPID Conference, Pensacola, FL, Aug 30, 2019.
- **(INVITED) Talk and Session Chair** at ICMAT Conference, Singapore, June 26, 2019.
- **(INVITED) Talk** at SPIE Photonics West, San Francisco, Feb 3, 2019.
- **(INVITED) Talk** at Conference on Electronic Materials and Nanotechnology for Green Environment (ENGE 2018), Jeju Island, South Korea, Nov 11-14, 2018.
- **(INVITED) Symposium Chair** of META Conference - 2018, Marseille, France, June, 2018.
- **(INVITED) Talk** at META Conference - 2018, Marseille, France, June, 2018.
- **(INVITED) Talk** at NASA Jet Propulsion Laboratory, Pasadena, CA, May 21, 2018.
- **(INVITED) Talk** at SPIE DCS Conference, Orlando, April 2018.
- **(INVITED) Talk** at SPIE Photonics West, San Francisco, January 29, 2018.
- **(INVITED) Talk** at International Display Workshop (IDW-2017), Sendai, Japan, December 7, 2017.
- **(INVITED) Talk** at National University of Singapore (NUS), Singapore, December 12, 2017.

- **(INVITED) Talk** at Conference on Lasers and Electro-Optics Conference (CLEO - Pacific Rim) - 2017, Singapore, August 2, 2017.
- **(INVITED) Talk** at META Conference - 2017, Incheon, South Korea, July 27, 2017.
- **(INVITED) Talk** Electron, Ion, Photon Technology and Nanofabrication Conference - EIPBN 2017, Orlando, Florida, June 2, 2017.
- **(INVITED) Talk** at Optical Society of America's Latin American Optics and Photonics (LAOP) workshop, Guadajara, Mexico, Feb 19-24, 2017.
- **(INVITED) Symposium and Session Chair** of IEEE Photonics Conference, Hawaii, October 2016.
- **(INVITED) Plenary Speaker** of Optical Society of America's Latin American Optics and Photonics (LAOP) conference, Medellin, Colombia, Aug 22-15, 2016.
- **(INVITED)** Optical Society of America (OSA) Advanced Photonics Congress, Vancouver, Canada, July 20, 2016.
- **(INVITED)** Tech Transfer Symposium, CLEO - Conference on Lasers and Electro-Optics, San Jose, CA, June 2016.
- **(INVITED)** Harvard Nanoscribe Laser Lithography Symposium, **Harvard University**, MA, June 22-23, 2016.
- **(INVITED)** OSA Frontier in Optics FiO-2015 Conference, San Jose, CA, October 2015.
- **(INVITED)** Session Chair OSA Frontier in Optics FiO-2015 Conference, San Jose, CA, October 2015.
- **(INVITED)** META-2015 Conference, New York, NY, August 2015
- **(INVITED)** SPIE Photonics West Conference, San Francisco, Feb 12, 2015.
- **(INVITED)** Session Chair SPIE Photonics West Conference, San Francisco, Feb 2015.
- **(INVITED)** OSA Latin America Optics and Photonics Conference (LAOP), Cancun, Mexico, November, 2014.
- **(INVITED)** SPIE Photonics North Conference, Montreal, Canada, May, 2014.
- **(INVITED) Plasmonic Nanostructures for Enhanced Light-Matter Interactions,** NanoFlorida Conference, Gainesville, Florida, September 2013.
- **(INVITED) Fabrication of Metamaterials,** CREOL Industrial Affiliates Day, March 2013.
- **(INVITED) Optical Nanostructures for Enhanced Light-Matter Interactions and Energy Harvesting,** AVS Symposium, Orlando, March 2013.
- **(INVITED) Three-Dimensional Structure Design, Fabrication and Nanopatterning I,** Conference Session Chair**, Frontier of Optics/Laser Science Conference**, San Jose, CA, October 2011.
- **(INVITED) Printing and Molding Approaches for 3D Metamaterials and Plasmonic Crystals,** Invited Talk, **Frontier of Optics/Laser Science Conference**, San Jose, CA, October 2011.
- **(INVITED) Large Area Printed Metamaterials**, Invited Talk**, MRS Spring Meeting**, San Francisco, April 2011.
- **(INVITED) Light Trapping in Thin Silicon Solar Cells**, Invited Talk, iOptics Seminar Series, **University of Illinois, Urbana-Champaign**, Illinois, USA, Feb 2011.
- **(INVITED) Three-Dimensional Nanostructures**, Invited Talk, **DOE Energy Frontier Research Centers** (EFRC) symposium. March 2010.
- **(INVITED) Diffractive Optics Laser Lithography**, Invited Talk, **California Institute of Technology**, Pasadena, California, USA, June 2009.

- **(INVITED) Fabrication of 3D Photonic Crystals**, Invited Talk, **University of Illinois, Urbana-Champaign**, Illinois, USA, June 2009.

EDITORIAL/REFEREEING ACTIVITIES

- Associate Editor of **Nature** Publishing Group's Scientific Reports Journal
- Guest Editor **Proceedings of the National Academy of Sciences (PNAS)**
- Feature Editor Applied Optics Journal
- **External Reviewer**: National Science Foundation (USA), US Army, European Commission, National Science Foundation of Poland, Université de Bordeaux-France, ROMANIAN - U.S. FULBRIGHT COMMISSION
- Reviewer of
    - Nature Nanotechnology, Nature Electronics, PNAS, Science Advances, Scientific Reports, Nature Publishing Group Light Science & Application, Advanced Optical Materials, ACS Photonics, ACS Nano, Nano Letters, Optics Express (OSA journal), Optics Letters, Applied Physics Letters, Journal of Applied Physics (JAP), Journal of Optical Society America–B (JOSA-B), Applied Optics, IEEE Transaction on Nanotechnology, IEEE Transaction on Quantum Electronics, IEEE Journal of Photonics

Instructional Activities

- OSE6938Z: Special Topic: Photonic Crystals (*Graduate Course*)
- OSE6615: Optoelectronic Device Fabrication (*Graduate Course*)
- IDS 6254: Nanofabrication and Characterization (*Graduate Course*)
- PHY 3323: Electricity & Magnetism –I (*Upper Level Undergraduate Course*)
- PHY 4324: Electricity & Magnetism –II (*Upper Level Undergraduate Course*)

Dissertation/Theses Directed and Student Graduation

Graduated:

1. Sushrut Modak, Master of Science (**MS**), CREOL, Fall 2014.
   [Present location: PhD at UCF]
2. Abraham Vazquez-Guardado, Master of Science (**MS**), CREOL, Spring 2016.
3. Javaneh Borouman, Physics, **PhD**, graduated Spring 2017.
   [Present location: Intel Corp.]
4. Abraham Vazquez-Guardado, CREOL, **PhD**, graduate Spring 2018.
   [Present location: Post-Doctoral Fellow Northwestern University]
5. Daniel Franklin, Physics, **PhD**, graduated Spring 2018.
   [Present location: Post-Doctoral Fellow Northwestern University]
6. Alireza Safaei, Physics, **PhD**, Graduated Spring 2019.
   [Present location: Post-Doctoral Fellow UIUC]

Professional Service Activities

- **Chair and Organizer** of "Structural Color Symposium" of META Conference (International Conference on Metamaterials and Plasmonics) – 2017 – till date.
- **Symposium Chair** SPIE Photonics West Conference, San Francisco, 2019 – till date.
- **Chair** of IEEE Photonics Conference (IPC-2016-17) Nanophotonics Symposium.
- Organizing Committee Member of OSA Novel Optical Materials and Applications (2014-2018).
- Organizing Committee Member of Latin America Optics and Photonics Conference (LOAP) (2104-2018).
- Executive committee member of the Optical Society of America (OSA)'s Optical Fabrication and Testing Technical Group (2015-2018).
- Member of the UCF **University level Conflict of Interest (COI)** committee (2017-till date).