



## AWARDS, HONORS, AND MEMBERSHIP

2015-23	National Institutes of Health Award (NIGMS)
2018-19	Charles E. Helmstetter Award for Excellence in Research
2017	Rising Stars Certificate for outstanding contributions in Scholarly Research
2016-17	Kerry Bruce Clark Award for Excellence in Teaching
2016-17	Nominated for ISSO Award of Excellence for Service to International Students
2016	Selected by the Dean as a <i>Stellar Professor</i> of Florida Institute of Technology
2007	Student Affiliate section of ACS Faculty of the Year award
2001-present	American Chemical Society Member
1994-99	Faculty Fellowship for research, Chemistry Dept., Columbia University, NY
1995	<i>Phi Lambda Upsilon</i> : honorary chemical society, initiated as a member
1994	<i>Epsilon Sigma Pi</i> (highest academic honor society), Manhattan College, NY
1994	<i>Sigma Xi</i> scientific research society member
1994	John Vincent Mahony Medal in Chemistry, Manhattan College, NY

## GRANT HISTORY

2015-2023	<b>Agency:</b> NIH (total of nearly \$692,000) <b>Title:</b> "Development of Light Triggered Molecular Tools for Understanding the Brain's Network" <b>Role:</b> PI ( <u>Sole Investigator</u> )
2018-2019	<b>Agency:</b> Medical Research Grant, Community Foundation for Brevard <b>Title:</b> "Development of a cell-based assay to screen for small molecule inhibitors of HSF1 expression" <b>Role:</b> Co-PI (with Karen Kim and Eric Guisbert)
2014-2015	<b>Agency:</b> ACITC, Florida Tech <b>Title:</b> "Computational and Experimental Evaluation of Drug Interactions with Hosts" <b>Role:</b> PI (Sole)
2012-2017	<b>Agency:</b> NIH (collaborative with U. Arizona) <b>Title:</b> "Synthesis of Deuterated Retinoids" <b>Role:</b> Collaborator (PI: Michael F. Brown)
2011-2012	<b>Agency:</b> NASA <b>Title:</b> "Development of Microcapsules for Space Applications" <b>Role:</b> PI (Sole)
2011-2012	<b>Agency:</b> PARABEL <b>Title:</b> "Development of Efficient Protein Isolation techniques" <b>Role:</b> PI (Sole)
2011-2012	<b>Agency:</b> PetroAlgae

- Title** "Biodiesel from Renewable Feedstock"  
**Role:** PI (Sole)
- 2012** **Agency:** Thor Renewable Energy,  
**Title** "Developing Analytical Techniques"  
**Role:** PI (Sole)
- 2006-2008** **Agency:** Florida Solar Energy Center  
**Title:** "Developing Direct Techniques to Synthesize Light Absorbing Molecules"  
**Role:** PI (Sole)
- 2007-2008** **Agency:** Intel Corporation  
**Title:** "Residue Analysis on Silicon Wafers"  
**Role:** PI
- 2007** Materials, Science and Nanotech Institute, FL Tech, "DART Mass Spectrometer Proposal for Infrastructure Enhancement"  
**Role:** PI
- 2004-2006** NSF-NER (with J. A. Olson) "A Novel Biomimetic Molecular Photosensor: Fabrication of a Functional Nanodevice"  
**Role:** co-PI
- 2004-2005** Florida Solar Energy Center (with J. A. Olson), "A Novel Biomimetic Molecular Photosensor"  
**Role:** co-PI

## RESEARCH PUBLICATIONS

Total Citations ~ 1500

[https://scholar.google.com/citations?user=E\\_jVTUcAAAAJ&hl=en](https://scholar.google.com/citations?user=E_jVTUcAAAAJ&hl=en)For Graphical Abstracts and Links: <https://research.fit.edu/nesnas/publications/>Names highlighted in **yellow** are FIT undergraduate students

1. Morgante, Pierpaolo; Guruge, Charitha; Ouedraogo, Yannick P.; Nesnas, Nasri; Peverati, Roberto "Competition Between Cyclization and Unusual Norrish Type I and Type II Nitro-Acyl Migration Pathways in the Photouncaging of 1-Acyl-7-nitroindoline Revealed by Computations" *Scientific Reports* **2021**, *11*, 1396. *ChemRxiv*. **2020**, 19.08.2020.
2. Zhang, Xianbing; Feng, Mingbao; Luo, Cong; Nesnas, Nasri; Huang, Ching-Hua; Sharma, Virender K. "Effect of Metal Ions on Oxidation of Micropollutants by Ferrate(VI): Enhancing Role of Fe<sup>IV</sup> Species" *Environ. Sci. Technol.* **2021**, *55* (1), 623-633.
3. Zeigler, Eric W.; Brown, Alan B.; Nesnas, Nasri; Chouinard, Chris; Mehta, Anil K.; Palmer, Andrew G. "β-Cyclodextrin encapsulation of synthetic AHLs: drug delivery implications and quorum-quenching exploits" *ChemBioChem* **2020**, *ASAP*.
4. Zhu, Ming-Hui; Yu, Chen-Long; Feng, Ya-Lan; Usman, Muhammad; Zhong, Dayou; Wang, Xin; **Nesnas, Nasri**; Liu, Wen-Bo "Detosylative (Deutero)alkylation of Indoles and Phenols with (Deutero)alkoxides" *Org. Lett.* **2019**, *21*, 7073-7077.
5. Sun, Xuhui; Feng, Mingbao; Dong, Shuyu; Qi, Yuan; Sun, Lin; **Nesnas, Nasri**; Sharma, Virender K. "Removal of sulfachloropyridazine by ferrate(VI): Kinetics, reaction pathways, biodegradation, and toxicity evaluation" *Chem. Eng. J.* **2019**, *372*, 742-751.
6. Ziegler, Eric W.; Brown, Alan B.; **Nesnas, Nasri**; Palmer, Andrew G. "Modeling the abiotic hydrolysis of *N*-acyl-L-homoserine lactones: Natural silencing of bacterial quorum sensing signals" *Eur. J. Org. Chem.* **2019**, *2019*, 2850-2856.
7. Guruge, Charitha; Rfaish, Saad Y.; **Byrd, Chanel**, **Yang, Shukun**, Starrett, Anthony K.; Guisbert, Eric; **Nesnas, Nasri** "Caged Proline in Photoinitiated Organocatalysis" *J. Org. Chem.* **2019**, *84*, 5236-5244.
8. Feng, Minbao; Baum, Clayton; **Nesnas, Nasri**; Lee, Yunho; Huang, Ching-Hua; Sharma, V. K. "Oxidation of sulfonamide antibiotics of six-membered heterocyclic moiety by ferrate(VI): Kinetics and mechanistic insight into SO<sub>2</sub> extrusion" *Environ. Sci. Technol.* **2019**, *53*, 2695-2704.
9. Navidi, Mozghan; **Yadav, Shreya**; Struts, Andrey V.; Brown, Michael F.; **Nesnas, Nasri** "Synthesis of 9-CD<sub>3</sub>-9-*cis*-Retinal Cofactor of Isorhodopsin" *Tetrahedron Lett.* **2018**, *58*, 4521-4524.
10. Chen, Jing; Xu, Xinxin; Zeng, Xiaolan; Feng, Mingbao; Qu, Ruijuan; Wang, Zunyao; **Nesnas, Nasri**; Sharma, Virender K. "Ferrate(VI) oxidation of polychlorinated diphenyl sulfides: Kinetics, degradation, and oxidized products" *Waters Res.* **2018**, *143*, 1-9.
11. Guruge, Charitha; Ouedraogo, Yannick P.; Comitz, Richard L.; Ma, Jingxuan; Losonczy, Attila; **Nesnas, Nasri** "Improved Synthesis of Caged Glutamate and Caging Each Functional Group" *ACS Chem. Neurosci.* **2018**, *9*, 2713-2721.

12. Proni, Gloria; Cohen, Peter; Huggins, Lesley-Ann; **Nesnas, Nasri** "Comparative analysis of condom lubricants on pre & post-coital vaginal swabs using AccuTOF-DART" *Forensic Sci. Intl.* **2017**, *280*, 87-94.
13. Liu, Wen-Bo; Schuman, David P.; Toutov, Anton A.; Yang, Yun-Fang; Liang, Yong; Klare, Hendrik F. T.; **Nesnas, Nasri**; Oestreich, Martin; Virgil, Scott C.; Banerjee, Shibdas; Zare, Richard N.; Houk, K. N.; Grubbs, Robert H.; Stoltz, Brian M. "KOt-Bu-Catalyzed Dehydrogenative C–H Silylation of Heteroaromatics: A Combined Experimental and Computational Mechanistic Study" *J. Am. Chem. Soc.* **2017**, *139* (20), 6867-6879.
14. Comitz, Richard L.; Ouedraogo, Yannick P.; **Nesnas, Nasri** "Unambiguous evaluation of the relative photolysis rates of nitro indoliny protecting groups critical for brain network studies" *Anal. Chem. Res.* **2015**, *3*, 20-25.
15. Ouedraogo, Yannick P.; Huang, Longchuan; **Torrente, Mariana P.**; Proni, Gloria; Chadwick, Ekaterina; Wehmschulte, Rudolf; **Nesnas, Nasri** "A direct Stereoselective Preparation of a Fish Pheromone and Application of the Zinc Porphyrin Tweezer Chiroptical Protocol in Its Stereochemical Assignment" *Chirality* **2013**, *25*, 575-581.
16. Sharma, Virender K.; Sohn, Mary; Anquandah, George A. K.; **Nesnas, Nasri** "Kinetics of the oxidation of sucralose and related carbohydrates by ferrate(VI)" *Chemosphere* **2012**, *87*(6), 644-648.
17. Kpegba, Kafui; Agbonon, Amegnona; Petrovic, Ana G.; Amouzou, Etchri; Gbeassor, Messanvi; Proni, Gloria; **Nesnas, Nasri** "Epiatzelechin from the root bark of *Cassia sieberiana*: detection by DART mass spectrometry, spectroscopic characterization, and antioxidant properties" *J. Nat. Prod.* **2011**, *74*(3), 455-459.
18. Sharma, Virender K.; Anquandah, George; **Nesnas, Nasri** "Kinetics of the Oxidation of Endocrine Disruptor Nonylphenol by Ferrate(VI)" *Environ. Chem. Lett.* **2009**, *7* (2), 115-119.
19. Sharma, Virender K.; Noorhasan, Nadine N.; Mishra, Santosh K.; **Nesnas, Nasri** "Ferrate(VI) oxidation of reclaritrant compounds: removal of biological resistant organic molecules by ferrate(VI)" *ACS Symposium Series* **2008**, *985*, 339-349.
20. Kpegba, Kafui; **Spadaro, Tycho**; Cody, Robert B.; **Nesnas, Nasri**; Olson, Joel A. "Analysis of Self-Assembled Monolayers on Gold Surfaces Using Direct Analysis in Real Time Mass Spectrometry" *Anal. Chem.* **2007**, *79*(14), 5479-5483.
21. Matsuda, Hiroko; Zhang, Shenglong; Holmes, Andrea E.; Krane, Sonja; Itagaki, Yasuhiro; Nakanishi, Koji; **Nesnas, Nasri** "Synthesis of 11-cis-locked-biotinylated retinoid for sequestering 11-cis retinoid binding proteins" *Can. J. Chem.* **2006**, *84*(10), 1363-1370.
22. Sharma, Virender K.; Mishra, Santosh K.; **Nesnas, Nasri** "Oxidation of Sulfonamide Antimicrobials by Ferrate(VI) [Fe<sup>VI</sup>O<sub>4</sub><sup>2-</sup>]" *Environ. Sci. Technol.* **2006**, *40* (23), 7222-7227.
23. Tewari, Brij B.; **Shekar, Sukesh**; Huang, Longchuan; Gorrell, Carolyn E.; Murphy, Timothy P.; Warren, Kevin; **Nesnas, Nasri**; Wehmschulte, Rudolf J. "Aluminumoxyhydride: Improved Synthesis and Application as a Selective Reducing Agent" *Inorg. Chem.* **2006**, *45*(21), 8807-8811.

24. Kpegba, Kafui; **Murtha, Matthew**; **Nesnas, Nasri** "Cyclodextrin retinylidene: A biomimetic kinetic trap model for rhodopsin" *Bioorg. Med. Chem. Lett.* **2006**, *16* (6), 1523-1526.
25. Jahng, Wan J.; David, Charles; **Nesnas, Nasri**; Nakanishi, Koji; Rando, Robert R. "A Cleavable Affinity Biotinylating Agent Reveals a Retinoid Binding Role for RPE65" *Biochemistry* **2003**, *42*(20), 6159-6168.
26. Zemelman, Boris V.; **Nesnas, Nasri**; Lee, Georgia A.; Miesenböck, Gero "Photochemical Gating of Heterologous Ion Channels: Remote Control over Genetically Designated Populations of Neurons" *Proc. Nat. Acad. Sci. USA* **2003**, *100* (3), 1352-1357.
27. **Nesnas, Nasri**; Rando, Robert R.; Nakanishi, Koji "Synthesis of Biotinylated Retinoids for Cross-Linking and Isolation of Retinol Binding Proteins" *Tetrahedron*, **2002**, *58*, 6577-6584.

#### *Publications Prior to Employment at FIT*

28. Kurtán, Tibor; **Nesnas, Nasri**; Li, Yuan-Q.; Huang, Xuefei; Nakanishi, Koji; Berova, Nina "Chiral Recognition by CD-Sensitive Dimeric Zinc Porphyrin Host. 1. Chiroptical Protocol for Absolute Configurational Assignments of Monoalcohols and Primary Monoamines" *J. Am. Chem. Soc.* **2001**, *123*, 5962-5973.
29. Kurtán, Tibor; **Nesnas, Nasri**; Koehn, Frank E.; Li, Yuan-Q.; Nakanishi, Koji; Berova, Nina "Chiral Recognition by CD-Sensitive Dimeric Zinc Porphyrin Host. 2. Structural Studies of Host-Guest Complexes with Chiral Alcohol and Monoamine Conjugates" *J. Am. Chem. Soc.* **2001**, *123*, 5974-5982.
30. **Nesnas, Nasri**; Lou, Jihong; Breslow, Ronald "The Binding of Cocaine to Cyclodextrins" *Bioorg. Med. Chem. Lett.* **2000**, *10*, 1931-1933.
31. Breslow, Ronald; **Nesnas, Nasri** "Burst Kinetics and Turnover in an Esterase Mimic" *Tetrahedron Lett.* **1999**, *40*, 3335-3338.

#### **PATENTS AND LICENSES**

**2010-2020** Tocris Biosciences (UK): License agreement for improved process to synthesize CDNI-Glu.

#### **PUBLISHED CONFERENCE ABSTRACTS**

1. **Nesnas, Nasri** "Light Receptive Molecules and their Precise Control of the Brain, Infections, and More" Abstracts of Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, **2019**, BIOL-0197
2. Ziegler, Eric W.; **Nesnas, Nasri**; Brown, Alan B.; Palmer, Andrew G. "Quantitative determination of abiotic AHL hydrolysis by <sup>1</sup>H NMR" Abstracts of Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, **2019**, BIOL-0065
3. Navidi, Mozghan; **Yadav, Shreya**; Struts, Andrey; Brown, Michael F.; **Nesnas, Nasri** "Total synthesis of 9-CD<sub>3</sub>-9-cis-retinal for studying vision" Abstracts of

- Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 3, 2019, ORGN-0211
4. Guruge, Charitha; Ouedraogo, Yannick P.; Comitz, Richard L.; Ma, Jingxuan, **Pabarue, Alec B.**; Losonczy, Attila; **Nesnas, Nasri** "Improved synthesis of the dinitroindolyl cage (CDNI) and its application in neuroscience and beyond" Abstracts of Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 3, 2019, BIOL-0217
  5. Struts, Andrey V; Ryazantsev, Mikhail N; Xu, Xiaolin ; Molugu, Trivikram R.; Perera, Suchithranga M.D.C.; Guruge, Charitha; Faylough, Samira; **Nascimento, Carolina**; Nesnas, Nasri; Brown, Michael F. "Retinal Flipping During Rhodopsin Activation Revealed by Solid State 2H NMR and QM/MM Simulations" *Biophys. J.* **2019**, *116* (3), 204a.
  6. Xu, Xiaolin; Struts, Andrey V.; Giri, Aswini K.; Molugu, Trivikram R.; Guruge, Charitha; Faylough, Samira; **Nascimento, Carolina L.**; **Nesnas, Nasri**; Hruby, Victor J.; Brown, Michael F. "Dynamics of Membrane Proteins Studied by Solid State 2H NMR Relaxation" *Biophys. J.* **2018**, *114* (3), 242a.
  7. Struts, Andrey V.; Xu, Xiaolin; Giri, Aswini K.; Molugu, Trivikram R.; Pitman, Michael; Faylough, Samira; Guruge, Charitha; **Nascimento, Carolina L.**; **Nesnas, Nasri**; Brown, Michael F. "Activation of GPCR Rhodopsin Investigated by Solid-State NMR Spectroscopy" *Biophys. J.* **2017**, *112* (3), 508a.
  8. **Nesnas, Nasri**; Guruge, Charitha; Rfaish, Saad Y.; **Yang, Shukun**; **Byrd, Chanel**; Starrett, Anthony K.; Guisbert, Eric "Caged Proline as a Light Triggered Organocatalyst" *18<sup>th</sup> Tetrahedron Symposium: New Developments in Organic Chemistry – Budapest* June 29, **2017**.
  9. Xu, Xiaolin; Struts, Andrey V.; Giri, Aswini K.; Molugu, Trivikram R.; Guruge, Charitha; Faylough, Samira; **Nascimento, Carolina L.**; **Nesnas, Nasri**; Hruby, Victor J.; Brown, Michael F. "Dynamics of Methyl Groups in Membrane Proteins Studied by Deuterium Solid State NMR relaxation" *Biophys. J.* **2016**, *110* (3), s1, 73a.
  10. Struts, Andrey V.; Xu, Xiaolin; Giri, Aswini K.; Molugu, Trivikram R.; Pitman, Michael; Faylough, Samira; Guruge, Charitha; **Nascimento, Carolina L.**; **Nesnas, Nasri**; Brown, Michael F. "Retinal Chromophore Structure in Meta-II Rhodopsin Revealed by Solid-State 2H NMR and Molecular Modeling" *Biophys. J.* **2016**, *110* (3), 229a.
  11. Xu, Xiaolin; Struts, Andrey V.; Giri, Aswini K.; Molugu, Trivikram R.; Guruge, Charitha; Faylough, Samira; **Nascimento, Carolina L.**; **Nesnas, Nasri**; Hruby, Victor J.; Brown, Michael F. "Solid-State 2H NMR Investigation of Transducin Activation by Rhodopsin" *Biophys. J.* **2015**, *108* (2), Suppl. 1, 411a.
  12. **Nesnas, Nasri**; Comitz, Richard L.; Youedraogo, Yannick P. "Evaluation of photoactive cleavable neurotransmitters in the elucidation of neural networks" Abstracts of Papers, 248th ACS National Meeting & Exposition, San Francisco, CA, United States, August 10-14, **2014**, MEDI-127.
  13. Cohen, Peter J.; **Nesnas, Nasri** "Rapid algal biofuel quality prediction using Direct Analysis in Real Time mass spectrometry" Abstracts, 63rd Southeast Regional Meeting of the American Chemical Society, Richmond, VA, United States, October 26-29, **2011**, SERM-316.

14. Proni, Gloria; Huang, Longchuan; Ouedraogo, Yannick; **Plazas-Mayorca, Mariana D.**; **Albin, Karissa**; Petrovic, Ana G.; Chadwick, Ekaterina; Berova, Nina D.; Wehmschulte, Rudolf J.; **Nesnas, Nasri** "Synthesis and chiral recognition of a fish pheromone by CD-sensitive dimeric zinc porphyrin host" Abstracts of Papers, 236th ACS National Meeting, Philadelphia, PA, United States, August 17-21, **2008**, ORGN-631.
15. Chadwick, Ekaterina; Proni, Gloria; Petrovic, Ana G.; Berova, Nina; Huang, Longchuan; Ouedraogo, Yannick; **Plazas-Mayorca, Mariana D.**; **Albin, Karissa**; Wehmschulte, Rudolf J.; **Nesnas, Nasri** "Absolute Configuration Determination of a Biologically Active Diol" Abstracts, 40th Middle Atlantic Regional Meeting of the American Chemical Society, Queens, NY, United States, May 17-21, **2008**, MRM-128.
16. Sharma, Virender K.; Noorhasan-Smith, Nadine; Mishra, Santosh K.; **Nesnas, Nasri** "Ferrate(VI) oxidation of recalcitrant organic compounds" Abstracts of Papers, 232nd ACS National Meeting, San Francisco, CA, United States, Sept. 10-14, **2006**, ENVR-059.
17. Franck, Diana R.; **Nesnas, Nasri**; Nakanishi, Koji "Synthesis of (+/-)-11-cis-3-hydroxyretinal and studies directed toward enantiomeric resolution" Abstracts of Papers, 221st ACS National Meeting, San Diego, CA, United States, April 1-5, **2001**, CHED-296.



## LETTERS

1. Olson, Joel A. and **Nesnas, Nasri** "Mass Spectrometry Application" *Chem. Eng. News* **2007**, December 3<sup>rd</sup> issue page 6.

## BOOK CHAPTERS

1. Schuman, David; Liu, Wen-Bo; **Nesnas, Nasri**; Stoltz, Brian M. "Transition-Metal-Free Catalytic C–H Bond Silylation" in *Organosilicon Chemistry: Novel Approaches and Reactions* **2019**, 213–240, WILEY-VCH.
2. Sharma, Virender K.; Noorhasan-Smith, Nadine; Mishra, Santosh K.; **Nesnas, Nasri** "Ferrate(VI) oxidation of recalcitrant organic compounds." *Preprints of Extended Abstracts presented at the ACS National Meeting, American Chemical Society, Division of Environmental Chemistry* **2006**, 46(2), 611–615.
3. **Nasri Nesnas** "Catalysis of Organic Reactions in Water: Nature's Choice of Solvent" Chapter 14 in *How Science Can Support Environmental Protection?* Florida Tech-BME Partnership Programme Yearbook **2003** Edited by Gordon L. Nelson and Imre Hronszky, Budapest, Hungary.

## MEDIA COVERAGE

- 2018** Appeared on Channel News 13 describing tools that enable Brain Mapping  
<https://www.facebook.com/nesnas/videos/10160612953985304/>  
<https://www.mynews13.com/fl/orlando/news/2018/08/07/florida-tech-study-shines-light-on-alzheimer-s-disease>
- 2018** Appeared in Brevard Hometown News for the development of Brain Mapping Tools  
[http://www.hometownnewsbrevard.com/news/florida-tech-provides-new-brain-mapping-techniques/article\\_08977d72-89f2-11e8-898e-abdc5a52ff5d.html](http://www.hometownnewsbrevard.com/news/florida-tech-provides-new-brain-mapping-techniques/article_08977d72-89f2-11e8-898e-abdc5a52ff5d.html)  
<http://ufdcimages.uflib.ufl.edu/UF/00/08/12/29/00605/07-20-2018.pdf>
- 2018** Research highlighted in Medical Xpress  
<https://medicalxpress.com/news/2018-07-tools-brain-boost-depression-dementia.html>
- 2006** Appeared in Florida Today paper for the latest in Mass Spec making Florida Tech 1<sup>st</sup> of the research institutions in US to acquire this technology
- 2005** Appeared in Florida Today for a "magical" dedication of the FW Olin Physical Science Building

## OTHER PUBLISHED WORK

- 2017** "Sharing Chemistry Across Continents" by **Nasri Nesnas**, edited by Shelley Preston  
[https://adastra.fit.edu/blog/research/nasri\\_nesnas/](https://adastra.fit.edu/blog/research/nasri_nesnas/)

## INVITED LECTURES

- 2020** Southeastern University, Lakeland, FL (Feb 27)
- 2019** LifeLong Scholar Society, FIT "Shining a Light on the Brain" (November 14)
- 2019** ACS National Awards: Breslow and Nakanishi (Orlando, FL, April 2)
- 2018** Lifelong Scholar FIT, "What Lies Behind the Eyes: from Perception to Cognition"

- 2017** Institute of Chemistry, Chinese Academy of Sciences, Beijing, China (Sept. 20)  
**2017** Zhejiang University, Hangzhou, China (Sept. 17) – top 20<sup>th</sup> world ranking US NWR  
**2017** Wuhan University, Wuhan, China (Sept. 15)  
**2017** Nanjing University, Nanjing, China (Sept. 12)  
**2017** Alquds University, Abu Dis, Palestine (Aug. 1)  
**2017** Weizmann Institute of Science, Rehovot, Israel (July 11) – top 100 world ranking  
**2017** University of Pisa, Italy, *Plenary Lecture Chemistry for the Future Conf.* (July 6)  
**2017** 18th Tetrahedron Symposium Budapest, Hungary (June 29)  
**Opening Lecture for Keynote Speaker 2016 Chemistry Nobel Laureate Feringa**  
**2017** University of Arizona, Tucson, AZ (May 15)  
**2017** John Jay College of Criminal Justice, NY (May 10)  
**2016** City University of NY, Brooklyn College, NY  
**2013** Columbia University Nakanishi 88<sup>th</sup> Birthday Symposium, NY  
**2013** University of Palacky in Olomouc, Czech Republic  
**2012** California Institute of Technology IPS conference, Pasadena, CA  
**2012** University of Bologna, ITALY – *The oldest university in the world.*  
**2011** Sanford-Burnham Medical Research Institute, Orlando, FL  
**2011** OFF conference, Scripps, Jupiter, FL  
**2010** University of Florida, Gainesville, FL  
**2009** Florida International University, Miami, FL  
**2009** Brigham Young University, Provo, UT  
**2008** Seton Hall University, NJ  
**2006** University at Tampa, FL  
**2006** Biology Department, Florida Tech, Melbourne, FL Tech  
**2006** Council for Chemical Research (CCR) Meeting in Orlando, FL  
**2005** OFF conference (Organic Faculty of Florida), UCF, Orlando, FL  
**2004** Daytona Beach Community College, Daytona Beach, FL  
**2004** Nova Southeastern University, Ft. Lauderdale-Davie, FL  
**2004** Florida International University, Miami, FL  
**2004** Barry University, Miami, FL  
**2002** Manhattan College, Riverdale, NY  
**2002** University of North Carolina, Wilmington, NC  
**2002** Dartmouth College, Hanover, NH  
**2002** Florida Institute of Technology, Melbourne, FL  
**2002** City University of New York, Queens College, NY  
**2002** California State University, Los Angeles, CA  
**2002** University of Miami, Coral Gables, FL  
**2001** Columbia University, NY, Wyeth Symposium  
**1999** Columbia University, NY, Industrial Associates Program Symposium  
**1999** University of Pennsylvania, Philadelphia, PA

## PANEL INVITATION

- 2010** Florida Solar Energy Center: Renewable Energy and Biofuels

## RESEARCH EXPERIENCE

### Current Areas of Research

1. **Neuroscience:** Design of neurological tools for the study of brain circuitry
2. **Vision:** Synthesis of visual pigments and their study in the native protein opsin
3. **Light Absorbing Molecules:** Design of molecular photosensors
4. **Natural Products:** Isolation and characterization of bioactive natural products
5. **Mass Spec:** Pheromones studies, Frog skin Analyses, Forensic analyses
6. **Synthetic Methodologies:** direct silylations (w. Stoltz and Grubbs, Caltech)

### Mass Spectrometry

Responsible for securing internal funding that brought in state-of-the-art Mass Spectrometric technologies, namely, **DART** (Direct Analysis in Real Time), to Florida Institute of Technology, making the university the first research and Ph.D.-granting institution to acquire such Award winning (Pittcon Gold Award in 2005) technology. Establishing this capability spun off new research areas that resulted in several published ACS manuscripts and submitted proposals.

## TEACHING EXPERIENCE

### Undergraduate Classes:

- 2003-present** CHM 2001 Organic Chemistry I (enrollment: 30-52 students)  
**2002-present** CHM 2002 Organic Chemistry II (enrollment: 29-38 students)  
**2004-2010** CHM 2011 Organic Chemistry Lab I (5 sections of 18 students/year)  
**2004-present** CHM 2012 Organic Chemistry Lab II (5 sections of 18 students/year)  
**2010-present** CHM 4700 Physical Biochemistry (Developed by Nesnas)

### Graduate Classes:

- 2005-present** CHM 5507 Natural Products Chemistry (enrollment: 4-9 students)  
**2006-present** CHM 5508 Bioorganic Chemistry (enrollment: 8-14 students)  
**2009-2015** CHM 5201 Green Chemistry (enrollment: 8-15 students)  
**2018-present** CHM 5503 Organic Synthesis (enrollment: 10 students)

### Curriculum Development:

- 2011** Introduced the non-thesis Masters option in 2011  
**2010** Introduced the Masters in Biochemistry program

<http://www.ratemyprofessors.com/ShowRatings.jsp?tid=612698>

## SERVICE EXPERIENCE

- **President of the Faculty Senate** (April 2020-April 2021)
- **President-Elect** of the Faculty Senate (April 2019-April 2020)
- Served on the Faculty Senate 2017-2018
- **Chair** of the **AFTC** (Academic Freedom and Tenure Committee) April 2019-present
- Serving on the **Red Team** as an internal reviewer of NSF MRI proposals
- **Chair** of the Research Council 2017-2020
- **Tenure Exploration Committee** (April 2017-October 2018)
- On the Advisory Board for CCM (Catholic Campus Ministry)
- Serving as the faculty advisor for the Shik Shak Belly Dance Club
- Serving on Research Council 2016-present (appointed by the Dean and President)
- Served on doctoral and masters committees for over 50 students
- Served as academic advisor for all biochemistry undergraduates and graduates
- Served on the graduate council
- Served on various Faculty Search Committees
- Served on the university library committee
- Seminar coordinator
- Coordinator of the Distinguished A. H. Blatt Lecture Series hosting leaders in organic chemistry including Nobel Laureates
- Served as a Judge for the Northrup Grumman COE COS Showcase
- Participated in fundraising activities for Relay for Life including music and magic acts
- Curriculum and program plan revision for graduate biochemistry
- Prepared graduate student guidelines and flowcharts
- Maintained the ACS Directory of Graduate Research (2003-2015)
- Department photographer for new incoming students (2006-2014)
- Performed Magic and French guitar music at the Physics Talent Show
- Demonstrated chemistry and magic at Mole Days (6:02 pm on October 23)
- Volunteered with **Magical Demonstration**: Olin Physical Building dedication, Ortega Telescope dedication, Fundraising event, and Florida Tech Casino night 2017
- **2005** F.W. Olin Physical Sciences dedication: <https://youtu.be/bbLm-okoaMg>
- **2008** Ortega Telescope dedication: <https://youtu.be/5nkSzqLMjMg>
- Served as a reviewer for several journals including: Chirality, Bioorg. Med. Chem., Nature Publishing Group, and ACS journals
- Served as a reviewer on ACS proposals

## OUTREACH

- ACS Orlando section: co-organized outreach events for a broader dissemination of green chemistry and alternative energy
- Communicated Science through Mass Spec and/or Magic demos to local High Schools at an annual event at Florida Tech: LASER (Liberal Arts, Science, and Engineering Resource) Day
- Actively involved High School students in research and science fair projects – One placed 2<sup>nd</sup> in the Intel ISEF competition
- Informed the local community about the current research in understanding the brain at a Science Café and presented a lecture at a local middle school (Stone Middle School)

## COLLABORATORS AND COAUTHORS

- |                                     |  |
|-------------------------------------|--|
| • Attila Losonczy, M.D., Ph.D.      | Columbia University, NY                    |
| • Brian M. Stoltz, Ph.D.            | California Institute of Technology         |
| • Robert H. Grubbs, Ph.D.           | California Institute of Technology         |
| • Michael F. Brown, Ph.D.           | University of Arizona, AZ                  |
| • Jason Christie, Ph.D.             | Max Planck Florida Institute, FL           |
| • James Schummers, Ph.D.            | Florida International University, FL       |
| • Brian Paegel, Ph.D.               | Scripps Research, Jupiter, FL              |
| • Gloria Proni, Ph.D.               | John Jay School of Criminal Justice, NY    |
| • Shimon Ben-Shabat, Ph.D.          | Ben Gurion University of the Negev, Israel |
| • Karolína Šišková Machalova, Ph.D. | U. of Palacky in Olomouc, Czech Republic   |
| • Gennaro Pescitelli, Ph.D.         | Univerisità di Pisa, Italy                 |
| • Virender K. Sharma, Ph.D.         | Texas A&M, College Station, TX             |
| • Joel A. Olson, Ph.D.              | Florida Institute of Technology, FL        |
| • Rudolf J. Wehmschulte, Ph.D.      | Florida Institute of Technology, FL        |
| • Roberto Peverati, Ph.D.           | Florida Institute of Technology, FL        |
| • Alan B. Brown, Ph.D.              | Florida Institute of Technology, FL        |
| • Andrew Palmer, Ph.D.              | Florida Institute of Technology, FL        |
| • Eric Guisbert, Ph.D.              | Florida Institute of Technology, FL        |
| • Karen Kim Guisbert, Ph.D.         | Florida Institute of Technology, FL        |

## CURRENT AND FORMER LAB PERSONNEL

### Research Professors and Visiting Scholars

Ms. Kafui Kpegba, Ph.D., Visiting Research Professor (Togo, Africa)

Ms. Pilar Hernández Sánchez, Universidad Católica de Murcia, Spain

Ms. Magdaléna Bryksová, Palacky University, Olomouc, Czech Republic

## Graduate Students

Name	Degr.	Year	Subsequent Education	Currently	Note(s)
Nishal M. E A Don	Ph.D.	2025			Current student
Alexandriea Van Hoekelen	Ph.D.	2023			Current student
Mr. Jingxuan Ma	Ph.D.	2020			Current student
Ms. Mozghan Navidi	Ph.D.	2019		Intel Corp.	Taught at Keiser
Mr. Charitha Guruge	Ph.D.	2019		Organix	
Ms. Samira Faylough	Ph.D.	2017		Education	co-adv. w Knight
Ms. Hui Xie	Ph.D.	2014		Patent Law	MS in 2005 (below)
Mr. Peter J. Cohen	Ph.D.	2013	NYU, Stony Brook	Consulting	Cohen Consulting
LTC. Richard L. Comitz	Ph.D.	2013		Professor	West Point, NY
Mr. Yannick Ouedraogo	Ph.D.	2012	Postdoc (J. Rokach)	Intel Corp.	Portland, OR
Ms. Rui Guo	Ph.D.	2010		Novartis	China
Ms. Jennifer Saba	M.S.	2019	UCF		
Ms. Nicole Roberson	M.S.	2019		Employed at FIT	
Ms. Amaal Altalhi	M.S.	2017			
Ms. Temitope Sokefun	M.S.	2017			
Mr. Cen Tao	M.S.	2017			
Ms. Surintra Lahwong	M.S.	2017			
Mr. Anthony K. Starrett	M.S.	2016			
Mr. Saad Rfaish	M.S.	2016	Ph.D. Australia	<b>Thesis</b>	
Ms. Shuqi Xiao	M.S.	2016			
Ms. Mohrah Albalawi	M.S.	2014			
Ms. Tammy Bilak Bron	M.S.	2013			
Ms. Rabab Alahrish	M.S.	2012			
Mr. Peter J. Cohen	M.S.	2012	Ph.D. (Nesnas)		
Mr. Yannick Ouedraogo	M.S.	2011	Ph.D. (Nesnas)		
Mr. Shih-Chang Wu	M.S.	2009	Industry	<b>Thesis</b>	Canada
Ms. Longchuan Huang	M.S.	2006	Ph.D. (Katritzky, UF)	<b>Thesis</b>	Postdoc (Amos Smith)
Ms. Hui Xie	M.S.	2005	Ph.D. (Nesnas)	<b>Thesis</b>	

## Undergrad. Students

Emily Harris	B.S.	2025			Current
Olivia Baldino	B.S.	2024			Current
Nathaniel Allen	B.S.	2024			Current
Caylin Lepak	B.S.	2023			Current
Oriana Valladarez Marquez	B.S.	2020			
Mohammed Ahmed	B.S.	2020			
Molly Likes	B.S.	2021		Summers only	Enrolled at Wellesley
Comfort Mboge	BS	2019			MS Student FIT
Alec Pabarue	B.S.	2019	PhD Prg. GA Tech		
Kilsia Merced Gonzaley	B.S.	2019	University of Colorado	Gates Biomanuf.	Associate research
Ms. Shreya Yadav	B.S.	2017	Scripps Research		Research Assoc.
Mr. Zihan Xu	B.S.	2017			

Ms. Chanel Byrd	B.S.	2017			Brevard Eye Instit.
Samantha Estabrooks	B.S.	2017			
Ms. Shukun Yang	B.S.	2016	PhD in UIUC		Grad student
Carolina Nascimento	B.S.	2015		Temple U.	Medical Student
Flavia Zisi-Tegou	B.S.	2015		MS in Biomed.	
Mr. Dan Delellis	B.S.	2015			
Mr. Zhouxiang Chen	B.S.	2014	Ph.D.		
Ms. Brian Silver	B.S.	2014	Ph.D. Princeton in 2020	Max Planck, Ger	Caltech/Princeton
Ms. Norah Ashoura	B.S.	2014	Ph.D. (UT Austin)		Princeton REU
Mr. Adrian Blust	B.S.	2013			
Brandon Clutterham	B.S.	2013			
Mr. John Robertson	B.S.	2013	Ph.D. (Tulane U, LA)		
Ms. Yichao Yu	B.S.	2013	Ph.D.		
Ms. Nicole Clarke	B.S.	2013	Patent Agent	Arent Fox	Intern at Scripps, FL
Ms. Raquel Mensch	B.S.	2013	Medical School, Ireland		
Ms. Tammy Bilak Bron	B.S.	2012	M.S. (Nesnas)		
Ms. Ali Ronk	B.S.	2012	Pharmacy School	U. Minnesota	
Andrew Schmudlach	B.S.	2012	Ph.D. (Notre Dame, IN)		
Mr. Samuel Breit	B.S.	2012	M.S. (Xu, FIT)		
Ms. Stephanie Monaco	B.S.	2012	Pharmacy (U. Utah)	Onc. Pharmacist	Mass Gen. Hospital
Ms. Karissa Albin	B.S.	2012	Chemist	Lancaster labs	
Ms. Ziyuan Xia	B.S.	2012	Ph.D. UMass Amherst		
Mr. Kurt Pessa	B.S.	2010	Pharmacy intern	Walgreens	
Mr. Nicole Miller	B.S.	2009			
Mr. Mark Goldbach	B.S.	2008			
Mr. Antoine Zufferey	B.S.	2008	M.S. (Sohn)		
Mr. Peter J. Cohen	B.S.	2008	M.S., Ph.D. (Nesnas)		
Mr. Yannick Ouedraogo	B.S.	2007	M.S., Ph.D. (Nesnas)	Intel Corp.	
Ms. Nia Maruszak	B.S.	2007		Novartis	
Ms. Nicole Simpson	B.S.	2006		Director	L'Oreal USA
Ms. Melissa LeMay	B.S.	2007	M.S. (M. Sohn, FIT)	Environmental	
Mr. Steven Hitt	B.S.	2005			
Mr. Matthew Cargill	B.S.				
Mr. Jimbo Stokes	B.S.	2005			
Mr. Matthew Murtha	B.S.	2005	Ph.D. at Ohio State U.	Postdoc at NYU	Undergrad pub.
Mariana P. Torrente	B.S.	2005	Ph.D. at Princeton	Prof. Brooklyn C.	Postdoc at Penn
Ms. Cécile Morvan	B.S.	2004	Ph.D. Biopsychology		Boston College
Mr. Alvaro Mercado	B.S.	2004			

## High School Students

Sumayya Mujeeb, Gillroy Benet, Denis Koksal-Rivet, Aamir Rashid, Christina Darwish, Margarita Cruz-Sanchez, Nikita Davda, Alex Gabrielski, Zakaria Mujeeb, Zahra Mujeeb.

Margarita Cruz-Sanchez received admission to 5/8 Ivy League Schools. Brown U. was her selection with full scholarship support and guaranteed admission to Medical School

Denis Koksal-Rivet pursued his College degree at University of Oxford, United Kingdom  
Aamir Rashid is in College at Stanford University

**LANGUAGE SKILLS**

Fluent in English, Arabic (multiple dialects), French, and basic reading and writing in Hebrew and German

**HOBBIES**

Magic demos, Guitar, Piano, Drums, Soccer, and Culinary Arts