LAURA FABRIS

Professor
Department of Applied Science and Technology (DISAT)
Politecnico di Torino

EDUCATION

University of Padova
Padova, Italy
Doctorate Degree in Chemical Sciences (April 2006)
Thesis Title: “Peptide Monolayers on Gold Nanoparticles and Surfaces”
Advisor: *Prof. Flavio Maran*

University of Padova
Padova, Italy
B.S./M.S. in Chemistry, *Summa cum Laude* (July 2001)
Thesis Title: “Artificial Photosynthetic Reaction Centers: Paramagnetic Intermediates Detected by EPR Spectroscopy”
Advisor: *Prof. Donatella Carbonera*

CURRENT APPOINTMENT

05/2021 – To Date
Professor – Department of Applied Science and Technology
Politecnico di Torino Torino, Italy

ADDITIONAL APPOINTMENTS

07/2016 – 05/2021
Associate Professor - Department of Materials Science and Engineering
Graduate Faculty Member in the Departments of Chemistry and Chemical Biology and Biomedical Engineering
Rutgers University – School of Engineering Piscataway, NJ

05/2021 – To Date
Associate Editor
Frontiers in Photonics, Frontiers

01/2021 – 05/2021
Faculty Member

Diversity, Equity, and Inclusive Excellence Committee
School of Engineering
Rutgers University

10/2020 – To Date
Editorial Advisory Board Member
Analytical Chemistry, American Chemical Society

04/2020 – To Date
Advisory Board Member
Nanoscale Horizons, Royal Society of Chemistry

07/2019 – To Date
Editorial Board Member
Cell Reports Physical Science, CellPress

11-12/2018
Visiting Professor – Department of Chemistry
Ludwig Maximilians University Munich, Germany
Host: Prof. Achim Hartschuh

09-10/2018
Visiting Professor – Viral Populations and Pathogenesis Unit
Institut Pasteur Paris, France
Host: Dr. Marco Vignuzzi

06-08/2011
Visiting Professor
Air Force Research Lab Wright Patterson Air Force Base, Dayton, OH

07/2009-06/2016
Assistant Professor - Department of Materials Science and Engineering
Graduate Faculty Member in the Departments of Chemistry and Chemical Biology and Biomedical Engineering
Rutgers University – School of Engineering Piscataway, NJ

03/2009
Visiting Researcher - Department of Chemical and Biomolecular Engineering
National University of Singapore Singapore

01/2006-05/2009
Postdoctoral Scholar - Department of Chemistry and Biochemistry
University of California at Santa Barbara Santa Barbara, CA
Postdoctoral Sponsor: Prof. Guillermo Bazan

Additional Professional Experience

Hamamatsu Corporation Bridgewater, NJ
2020- to date
Scientific Consultant

Vesta Nanotechnologies San Diego, CA
2011-2012
Scientific Consultant

Spei-Orion S.p.A. San Lorenzo Isontino, Italy
02-12/2002
Chemical Laboratory Manager and Quality Assurance Assistant Manager Established a new method for process control in the chemical laboratory and lead the company to the compliance with the ISO 9001:2000 certification.

Intertek Testing Services Campoformido, Italy
09-10/2001
Translator (English to Italian)

AWARDS and HONORS

2020: Included in the list of Women at the Forefront of Chemistry by the journal ACS Omega
2019: ERC Consolidator Grant
2018: Included in the list of Women in Bioconjugate Chemistry by the ACS journal Bioconjugate Chemistry
2017: Rutgers Outstanding Engineering Faculty Award
2014: Rutgers Institute for Research on Women Seminar Fellowship
2012: Rutgers Faculty Research Award
2011: Air Force Summer Faculty Fellowship

Journal Publications (h-index 28 on Google Scholar)

***** Indicates where Prof. Fabris was the main corresponding author.

2021
1. Fournier, S. B.; Lam, V.; Goedken, M. J.; Fabirs, L.; Stapleton, P. A. Development of Coronary Dysfunction in Adult Progeny after Maternal Engineered Nanomaterial Inhalation during Gestation. *Sci. Reports* **2021**, *11*, 19374.

2. Wang, H.; Xue, Z.; Wu, J.; Gilmore, J.; Wang, L.; **Fabris, L.** Rapid SERS Quantification of Trace Fentanyl Laced in Recreational Drugs with a Portable Raman Module. *Anal. Chem.* **2021**, *93*, 9373.

2020
3. Fournier, S. B.; D'Errico, J. N.; Adler, D. S.; Kallontzi, S.; Goedken, M. J.; **Fabris, L.**; Yurkow, E. J.; Stapleton, P. A. Nanoplystyrene Translocation and Fetal Deposition after Acute Lung Exposure during Late Stage Pregnancy. *Part. Fibre Toxicol.* **2020**, *17*, 55.

4. **Fabris, L.*** Gold Nanostars in Biology and Medicine: Understanding Physicochemical Properties to Broaden Applicability. *J. Phys. Chem. C* **2020**, *124*, 26540.

5. Tsoulos, T. V.; Batson, P. E.; **Fabris, L.*** Multipolar and Bulk Modes: Fundamentals of Single Particle Plasmonics through the Advances in Electron and Photon Techniques. *Nanophotonics* **2020**, DOI: 10.1515/nanoph-2020-0326, *In press.*

6. Dardir, K.; Wang, H.; Martin, B.; Atzampou, M.; Brooke, C. B.; **Fabris, L.*** A SERS Nanoprobe for Intracellular Monitoring of Viral Mutations. *J. Phys. Chem. C* **2020**, *124*, 3211.

7. Cristiano, M. N.; Tsoulos, T.V.; **Fabris, L.*** Quantifying and Optimizing Photocurrent via Optical Modeling of Gold Nanostar-, Nanorod-, and Dimer-decorated MoS_2 and $MoTe_2$. *J. Chem. Phys.* **2020**, *152*, 014705.

8. Atta, S.; Rangan, S., **Fabris, L.*** Highly Tunable Growth and Etching of Silica Shells on Surfactant Free Gold Nanostars. *ChemNanoMat* **2020**, *6*, 53 (Featured on the Cover).

2019

9. Tsoulos, T. V.; Atta, S.; Lagos, M. J.; Batson, P. E.; Tsilomelekis, G.; **Fabris, L.*** Colloidal Plasmonic Nanostar Antennas with Wide Range Resonance Tunability. *Nanoscale* **2019**, *11*, 18662.

10. Langer, J.; Jemenez De Aberasturi, D.; Aizpurua, J.; **Fabris, L.**; Liz-Marzan, L. et al. Present and Future of Surface Enhanced Raman Scattering. *ACS Nano* **2019**, *14*, 28.

11. Wang, H; Dardir, K.; Lee, K.-B.; **Fabris, L.*** The Impact of Protein Corona in Nanoflare-based Biomolecular Detection and Quantification. *Bioconj. Chem.* **2019**, *30*, 2555.

12. Aizpurua, J.; Baletto, F.; Baumberg, J.; Christopher, P.; de Nijs, B.; Deshpande, P.; Diaz Fernandez, Y.; **Fabris, L.**; et al. Theory of Hot Electrons: General Discussion. *Faraday Discuss.* **2019**, *214*, 245.

13. Aizpurua, J.; Baumberg, J.; Caps, V.; Cortes, E.; de Nijs, B.; Diaz Fernandez, Y.; **Fabris, L.**; et al. Applications in Catalysis, Photochemistry, and Photodetection: General Discussion. *Faraday Discuss.* **2019**, *214*, 475.

14. Aizpurua, J.; Baumberg, J.; Boltasseva, A.; Christopher, P.; Cortes, E.; Cronin, S. B.; Dadhich, B. K.; de Nijs, B.; Deshpande, P.; Diaz Fernandez, Y.; **Fabris, L.**; et al. *Faraday Discuss.* **2019**, *214*, 365.

15. D'Errico, J. N.; Doherty, C.; Fournier, S. B.; Renkel, N.; Kallontzi, S.; Goedken, M.; **Fabris, L.**; Buckley, B.; Stapleton, P. A. Identification and quantification of gold engineered nanomaterials and impaired fluid transfer across the rat placenta *via ex vivo* perfusion. *Biomed. Pharmacother.* **2019**, *117*, 109148.

16. Kallontzi, S.; **Fabris, L.**; Jitianu, M.; Hernandez, A.; Jitianu, A.; Klein, L. Gold Nanoparticles in Melting Gels. *J. Sol-Gel. Sci. Technol.* **2019**, *89*, 66.

17. Pilot, R.; Signorini, R.; Durante, C.; Orian, L.; Bhamidipati, M.; **Fabris, L.** A Review on Surface Enhanced Raman Scattering. *Biosensors* **2019**, *9*, 57.

18. Atta, S.; Celik, F. E.; **Fabris, L.*** Enhancing Hot Electron Generation and Injection in the NIR via Rational Design and Controlled Synthesis of TiO_2-gold Nanostructures. *Faraday Discuss.* **2019**, *214*, 341.

19. Fourniera, S. B.; Kallontzi, S.; **Fabris, L.**; Love, C.; Stapleton, P. A. Effect of Gestational Age on Maternofetal Vascular Function Following Single Maternal Engineered Nanoparticle Exposure. *Cardiovasc. Toxicol*. **2019**, *19*, 321.

20. Atta, S.; Beetz, M.; **Fabris, L.*** Understanding the Role of $AgNO_3$ Concentration and Seed Morphology to Achieve Tunable Shape Control in Gold Nanostars. *Nanoscale* **2019**, *11*, 2946.

21. Klein, L. C.; Kallontzi, S.; **Fabris, L.**; Jitianu, A.; Ryan, C.; Aparicio, M.; Lei, L.; Singer, J. P. Applications of Melting Gels. *J. Sol-Gel. Sci. Technol.* **2019**, *89*, 66.

22. Sardar, S.; **Fabris, L.***; Javanmard, M. Improved Precision in Surface Enhanced Raman Scattering Quantification of Analyte through Dual-modality Multi-site Sensing. *Anal. Chem.* **2019**, *91*, 4323 (Featured on the Cover).

2018

23. Tsoulos, T. V.; **Fabris, L.*** Interface and Bulk Standing Waves Drive the Coupling of Plasmonic Nanostar Antennas. J. Phys. Chem. C **2018**, *122*, 28949.

24. Bhamidipati, M.; Lee, G.; Kim, I.; **Fabris, L.*** SERS-based Quantification of PSMA in Tissue Microarrays Allows Effective Stratification of Prostate Cancer Patients. *ACS Omega* **2018**, *3*, 16784.

25. Bhamidipati, M.; Cho, H. Y.; Lee, K.-B.; **Fabris, L.*** SERS-based Quantification of Biomarker Expression at the Single Cell Level Enabled by Gold Nanostars and Truncated Aptamers. *Bioconj. Chem.* **2018**, *29*, 2970.

26. Atta, S.; Pennington A. M.; Celik, F.; **Fabris, L.*** TiO_2 on Gold Nanostars Enhances Photocatalytic Water Reduction in the Near Infrared Regime. *Chem* **2018**, *4*, 2140.

2017

27. Tsoulos, T. V.; Han, L.; Weir, J.; Xin, H. L.; **Fabris, L.*** A Closer Look at the Physical and Optical Properties of Gold Nanostars: An Experimental and Computational Study. *Nanoscale* **2017**, *9*, 3766 (chosen as DOE Office of Science Highlight).

28. Bhamidipati, M.; **Fabris, L.*** Multiparametric Assessment of Gold Nanoparticle Cytotoxicity in Cancerous and Healthy Cells: The Role of Size, Shape, and Surface Chemistry. *Bioconj. Chem.* **2017**, *28*, 449.

2016

29. Atta, S.; Tsoulos, T. V.; **Fabris, L.*** Shaping Gold Nanostar Electric Fields for Surface-Enhanced Raman Spectroscopy Enhancement via Silica Coating and Selective Etching. *J. Phys. Chem. C* **2016**, *120*, 20749.

30. **Fabris, L.*** SERS Tags: The Next Promising Tool for Personalized CancerDetection? *ChemNanoMat.* **2016**, *2*, 249.

31. Smith, P. F.; Deibert, B. J.; Kaushik, S.; Gardner, G.; Hwang, S.; Wang, H.;Al-Sharab, J. F.; Garfunkel, E.; **Fabris, L.**; Li, J.; Dismukes, G. C. Correlating Water Oxidation Activity to Corner Sharing $Mn^{3+}O_6$ Octahedra *via* the Manganite (γ-MnOOH) Polymorph. *ACS Catalysis* **2016**, *6*, 2089.

32. Butcher Jr., D. P.; Wadams, R. C.; Drummy, L.; Koerner, H.; Bailey, C.; Scheltens, F.; McComb, D.; **Fabris, L.**; Durstock, M. F.; Tabor, C. Controlled Dispersion of Polystyrene-Capped Au Nanospheres in P3HT:PC61BM and Consequences upon Active Layer Nanostructure. *J. Pol. Sci.* **2016**, *54*, 709.

2015

33. **Fabris, L.*** Gold-based SERS Tags for Biomedical Imaging. *J. Opt.* **2015**, *17*, 114002 (Invited, 2015 Editor's Choice Award).

34. Perets, E. A.; Indrasekara, A. S. D. S.; Kurmis, A.; Atlasevich, N.; **Fabris, L**.; Arslanoglu, J. Carboxy-Terminated Immuno-SERS Tags Overcome Non-Specific Aggregation for the Robust Detection and Localization of Organic Media in Artworks. *Analyst* **2015**, *140*, 5971.

35. Indrasekara, A. S. D. S.; **Fabris, L.*** SERS-based Approaches toward Genetic Profiling. *Bioanalysis* **2015**, *7*, 263 (Invited).

36. Indrasekara, A. S. D. S.; Thomas, R.; **Fabris, L.*** Plasmonic Properties of Regiospecific Core–satellite Assemblies of Gold Nanostars and Nanospheres. *Phys. Chem. Chem. Phys.* **2015**, *17*, 21133. (Invited).

2014

37. Thomas, R.; **Fabris, L.*;** O'Carroll, D. M. Gold Nanowire and Nanorod Plasmonic Mechanisms for Increasing Ultra-Thin Organic Photovoltaic Active Layer Absorption. *Plasmonics* **2014**, *9*, 1283.

38. Indrasekara, A. S. D.S.; Meyers, S.; Shubeita, S.; Feldman, L. C.; Gustafsson, T.; **Fabris, L.*** Gold Nanostar Substrates for SERS Sensing in the Femtomolar Regime. *Nanoscale* **2014**, *6*, 8891.

39. Wadams, R. C.; Yen, C.; Butcher Jr., D. P.; Koerner, H.; Durstock, M. F.; **Fabris, L.**; Tabor, C. E. Gold Nanorod Enhanced Organic Photovoltaics: The Importance of Morphology Effects. *Org. Electron.* **2014**, *15*, 1448.

40. Indrasekara, A. S. D. S.; Wadams, R. C.; **Fabris, L.*** Ligand Exchange on Gold Nanorods: Going Back to the Future. *Part. Part. Syst. Char.* **2014**, *31*, 819.

2013

41. Wadams, R. C.; **Fabris, L.**; Vaia, R. A.; Park, K. Time-dependent Susceptibility of the Growth of Gold Nanorods to the Addition of a Cosurfactant. *Chem. Mater.* **2013**, *25*, 4772.

42. Indrasekara, A. S. D. S.; Paladini, B. J.; Naczynski, D. J.; Starovoytov, V.; Moghe, P. V.; **Fabris, L.*** Dimeric Gold Nanoparticle Assemblies as Tags for SERS- Based Cancer Detection. *Adv. Healthcare Mater.* **2013**, *2*, 1370.

43. Park, K.; Drummy, L. F.; Wadams, R.; Koerner, H.; Nepal, D.; **Fabris, L.**; Vaia, R. A. Growth Mechanism of Gold Nanorods. *Chem. Mater.* **2013**, *25*, 555.

44. Jiang, Y.; Huan, Q.; **Fabris, L.**; Bazan, G. C.; Ho, W. Submolecular Control, Spectroscopy, and Imaging of Bond-selective Chemistry in Single Functionalized Molecules. *Nature Chem.* **2013**, *5*, 36.

2012

45. Rodriguez-Lorenzo, L.; **Fabris, L.*;** Alvarez-Puebla, R. Multiplex optical Sensing with Surface Enhanced Raman Scattering: A Critical Review. *Anal. Chim. Acta* **2012**, *745*, 10 (Invited).

46. **Fabris, L.*** Bottom-up Optimization of SERS Hot-spots. *Chem. Commun.* **2012**, *48*, 9321 (Featured on the Cover).

47. Mark, P. R.; **Fabris, L.*** Understanding Nanoparticle Assembly: A Simulation Approach to SERS Active Dimers. *J. Colloid Interf. Sci.* **2012**, *369*, 134.

2011

48. Silva, R.; Biradar, A.; **Fabris, L.***; Asefa, T. Au/SBA-15 Based Robust and Convenient- to-Use Nanopowder Material for Surface Enhanced Raman Scattering (SERS) with High SERS Enhancement Factor. *J. Phys. Chem. C* **2011**, *115*, 22810.

49. Whitmore, D.; El-Khoury, P.; **Fabris, L.**; Chu, P.; Bazan, G.; Potma, E.; Apkarian,

V. A. High Sensitivity Surface-Enhanced Raman Scattering in Solution using Engineered Silver Nanosphere Dimers. *J. Phys. Chem. C* **2011**, *115*, 15900.

2010

50. Guarrotxena, N.; Liu, B.; **Fabris, L.*;** Bazan, G.C. Antitags: Nanostructured Tools for Developing SERS-Based ELISA Analogs. *Adv. Mater.* **2010**, *22*, 4954.

51. **Fabris, L.**; Schierhorn, M.; Moskovits, M.; Bazan, G.C. Aptatag-Based Multiplexed Assay for Protein Detection by Surface Enhanced Raman Spectroscopy. *Small*, **2010**, *6*, 1550.

2009

52. Braun, G.; Lee, S.J.; Laurence, T.; Fera, N.; **Fabris, L.**; Bazan, G.C.; Moskovits, M.; Reich, N.O. Generalized Approach to SERS-Active Nanomaterials via Controlled Nanoparticle Linking, Polymer Encapsulation and Small Molecule Infusion. *J. Phys. Chem. C* **2009**, *113*, 13622.

2008

53. **Fabris, L.**; Dante, M.; Nguyen, T.Q.; Tok, J. B.-H.; Bazan, G.C. SERS Aptatags: New Responsive Metallic Nanostructures for Heterogeneous Protein Detection by Surface Enhanced Raman Spectroscopy. *Adv. Funct. Mater*. **2008**, *18*, 2518 (Featured on the Cover).

2007

54. **Fabris, L.**; Dante, M.; Braun, G.; Lee, S.J.; Reich, N.O.; Moskovits, M.; Nguyen, T.Q.; Bazan, G.C. A Heterogeneous PNA-Based SERS Method for DNA Detection. *J. Am. Chem. Soc.* **2007**, *129*, 6086.

2006

55. Holm, A.; Ceccato, M.; Donkers R. L.; **Fabris, L.**; Pace, G.; Maran, F. Effect of Peptide Ligand Dipole Moments on the Redox Potentials of Au38 and Au140 Nanoparticles. *Langmuir* **2006**, *22*, 10584.

56. **Fabris, L.**; Antonello, S.; Armelao, L.; Donkers, R.L.; Polo, F.; Toniolo, C.; Maran, F. Gold Nanoclusters Protected by Conformationally Constrained Peptides. *J. Am. Chem. Soc.* **2006**, *128*, 326.

Published Conference Proceedings

1. **Fabris, L.** Controlling Synthesis and Functionalization of Anisotropic Gold Nanoparticles for Applications in Biology. *ECS Meeting Abstracts*, **2021**, *23*, 913.
2. **Fabris, L.** Understanding and Detecting Viruses with Surface Enhanced Raman Spectroscopy. *SPEI Meeting Abstracts, Optical Tomography and Spectroscopy of Tissue XIV,* **2021**, 1163904.
3. Wang, H.; Xue, Z.; Dardir, K.; **Fabris, L.** Bioconjugation Strategies toward Efficient Intracellular Nanoparticle Probes. *SPEI Meeting Abstracts, Colloidal Nanoparticles for Biomedical Applications XVI,* **2021**, 116590O.
4. Wang, H.; Lee, K.-B.; **Fabris, L.** Understanding the Role of Protein Corona on Oligonucleotide Recognition Efficiency in Fluorescent Flares. *ECS Meeting Abstracts*, **2020**, *16*, 1094.
5. Sardar, S.; **Fabris, L.**; Javanmard, M. Improved accuracy in quantification of analyte through dual modality multisite sensing. In *21st International Conference on Miniaturized Systems for Chemistry and Life Sciences, MicroTAS 2017*, **2020**, 443.

6. Dardir, K.; Wang, H.; **Fabris, L.** SERS Tags for Intracellular Monitoring of Viral Evolution in Individual Intact Cells. *Abs. Pap. Am. Chem. Soc.* **2019***,* 258.

7. Bhamidipati, M.; Tsoulos, T. V.; Atta, S.; Indrasekara, A. S. D. S.; **Fabris, L.** Biomedical Imaging using SERS Tags: The Future beyond Fluorescent Dyes. *Abstr. Pap. Amer. Chem. S*. **2016**, 252.

8. Bhamidipati, M.; **Fabris, L.** Effect of Morphology and Surface Chemistry of Gold Nanoparticles on Cellular Uptake and Cytotoxicity. *Abstr. Pap. Amer. Chem. S*. **2016**, 251.

9. Butcher, D. P.; Drummy, L.; Koerner, H.; Scheltens, F.; McComb, D.; Wadams, R. C.; **Fabris, L.**; Bailey, C.; Tabor, C.; Durstock, M. F. Control of Plasmonic Nanoparticle Dispersion in Bulk Heterojunction Organic Solar Cells and Consequences on Active Layer Nanostructure. *Abstr. Pap. Amer. Chem. S*. **2014**, 248.

10. Bhamidipati, M.; Dardir, K.; Wang, H.; **Fabris, L.** Gold Nanostar Assays for Oncology and Virology. Journal of Self-Assembly and Molecular Electronics (SAME) **2018**, *6*, 1.

11. Butcher, D. P.; Yen, C.; Durstock, M.; Tabor, C. E.; Wadams, R. C.; **Fabris, L.** Improved Light Harvesting in Organic Solar Cells with Plasmonic Nanoparticles in the Active Layer. *Abstr. Pap. Amer. Chem. S*. **2013**, *245.*

12. Fabris, L.; Paladini, B. J; Wadams, R. C; Gold Nanoparticle Dimers as Tags for SERS- based Cancer Detection. *Abstr. Pap. Amer. Chem. S*. **2011**, *242*.

13. Wadams, R. C; Fabris, L.; Seed-mediated Synthesis and Characterization of Gold Nanoparticles of Various Morphologies. *Abstr. Pap. Amer. Chem. S*. **2011**, *242*.

14. Guarrotxena, N.; Fabris, L.; Liu, B.; Bazan, G. C.; Ag-Nanoparticle-based Bioassays for Protein Detection by Surface Enhanced Raman Spectroscopy. *Abstr. Pap. Amer. Chem. S*. **2010**, *239*.

15. Maran, F.; Antonello, S.; **Fabris, L.**; Polo, F.; Electron Transfer Through Conformationally Constrained Oligopeptides. 207th ECS Meeting, MA2005-01*,* 1410, **2005**.

16. Donkers, R. L.; Antonello, A.; **Fabris, L.**; Maran, F. Effect of the Peptide Ligands on the Quantized Charging Behavior of Monolayer Protected Au38 Clusters. In: Charge Transfer Processes in Semiconductor and Metal Nanostructures, T. Lian, K. Murakoshi, and G. Rumbles, Editors. The Electrochemical Society: Pennington, NJ, PV 2004-22, **2005**.

17. **Fabris, L.**; Antonello, S.; Zuliani, C.; Maran, F.; Distance and Orientation Dependence of Dissociative Electron Transfers. 204th ECS Meeting, Abs. 1392, **2003**.

Book Chapters

1. **Fabris, L.** Noble Metal Nanoparticles as SERS Tags. In: *The World Scientific Encyclopedia of Nanomedicine and Bioengineering.* Yu Cheng, Donglu Shi Eds. World Scientific Publishing, Singapore, **2016**.

2. Pilot, R.; Signorini, R.; **Fabris, L.** Surface Enhanced Raman Spectroscopy: Principles, Substrates, and Applications. In: *Metal Nanoparticles and Clusters*. Francis Leonard Deepak Ed. Springer, **2017**.

Patents

1. US Patent No. US 10,024,800 B2 titled “Gold Nanostar Substrates for SERS Sensing in the Femtomolar Regime” published July 17, 2018.

2. US Provisional Patent Application No. 62/836,805 titled “Near Infrared Catalyst Based on TiO_2 Coated Gold Nanoparticles” filed on April 22, 2019.

Invited Talks

A. Keynote or plenary addresses

1. "Understanding and Detecting Viruses with Surface Enhanced Raman Spectroscopy" SPIE Photonics West BiOS Hot Topics, March 6, 2021.

2. "Metal-Ceramic Nanostructures for Advanced Applications in Optics, Catalysis, and Medical Diagnostics". 12th International Conference on Ceramic Materials and Components for Energy and Environmental Applications, Singapore, July 22-27, 2018.

3. "Engineering Gold Nanostars for Quantitative SERS". 2nd International Conference on Enhanced Spectroscopies, Messina (Italy), October 12-15, 2015 (Keynote Address).

4. "Gold Nanoparticle Dimers for SERS-based Cell Detection" International Conference of Young Researchers on Advanced Materials, Singapore, July 1-6, 2012 (Keynote address).

B. Other invited addresses

1. "Applied Nanotechnology and Nanoscience International Conference – ANNIC 2021, March 24-26, 2021.

2. "Bioconjugation Strategies toward Efficient Intracellular Nanoparticle Probes", 2021 Photonics West, March 6-11, 2021.

3. "Hybrid Colloidal Nanoparticles for Monitoring Communicable and Non-communicable Diseases" 45th International Conference and Exposition on Advanced Ceramics, February 8-12, 2021.

4. "Integrating Single Particle and Ensemble Approaches for the Characterisation of Plasmonic Nanoparticles: Are we there Yet?" International Online Workshop on Multidimensional Particle Characterization, January 27-29, 2021.

5. "Closing the Gap between the Research Lab and Real-Life Applications: Strategies and Examples in SERS Sensing", 2020 Pacifichem Meeting, December 14-20, 2020, Honolulu, HI (postponed due to COVID-19).

6. "Addressing Viral Outbreaks with SERS: An Opportunity to Increase Sensitivity and Throughput", 2020 Fall ACS Meeting, August 16-20, 2020, San Francisco, CA (held virtually).

7. "Bringing SERS to the Clinic: A Nanomaterials Chemistry Approach to Plasmonics", 2020 ICORS Conference, August 2-7, 2020, Rome, Italy (postponed due to COVID-19).

8. "Monitoring Viral Evolution with Gold Nanostars and SERS", 2020 IEEE Nano2020, Nanomedicine Symposium, July 29-31, Montreal, Canada (postponed due to COVID-19).

9. META 2020, the 11th Conference on Metamaterials, Photonic Crystals and Plasmonics. July 20-23, 2020, Warsaw, Poland (postponed due to COVID-19).

10. "Nanostructured Biosensors: Reducing Costs and Increasing Applicability while Retaining Selectivity and Sensitivity", Opportunities in Biosensing using New Approaches in Nanotechnology. Virtual Workshop at Brookhaven National Laboratory, May 20, 2020.

11. “Understanding the Role of Protein Corona on Oligonucleotide Recognition Efficiency in Fluorescent Flares” 237th ECS Meeting, May 10-15, 2020, Montreal, Canada (postponed due to COVID-19).

12. “A Holistic Computational-Experimental Approach toward Tridimensional Gold Nanostar Antennas”, 2020 Workshop on Theoretical and Numerical Methods for Nanophotonics. February 12-14, 2020, Zuse Institute, Berlin, Germany.

13. “Gold Nanostars for the Detection of Viral Pathogens”, 2019 African MRS Meeting, Arusha, Tanzania, December 10-13, 2019.

14. “Nanoparticles Make Materials Bright” Lineapelle Innovation Square, Milan, Italy, October 3, 2019.

15. “Tailoring Plasmons and Interfaces toward Optimized Hot Electron Generation and Injection”. 2019 SciX Meeting, Palm Springs, CA, October 13-18, 2019.

16. “SERS Probes to Monitor Communicable and Non-communicable Diseases”. 2019 SciX Meeting, Palm Springs, CA, October 13-18, 2019.

17. “SERS Tags for Intracellular Monitoring of Viral Evolution in Individual Intact Cells”. 2019 Fall ACS Meeting, San Diego, CA, August 25-29, 2019.

18. ESP-IUPB World Congress on Light and Life, Barcelona, Spain, August 25-30, 2019 (invited but could not attend).

19. “Improving the Applicability of Hybrid Plasmonic Nanoparticles by Studying and Tailoring Interfaces.” META 2019, Symposium I (Hybrid Photonic and Plasmonic Materials for Sensing, Energy Conversion, and Imaging Applications), Lisbon, Portugal, July 23-26, 2019.

20. “Nanoparticles to Monitor Intracellular Events” 2019 New Jersey Center for Biomaterials Symposium, Piscataway NJ, March 20, 2019.

21. “Tuning Plasmons in Colloidal Nanostructures” Physics and Astronomy Colloquium, University of St. Andrews, February 22, 2019.

22. “The Plasmonic Response of Colloidal Gold Nanostars” Physical Chemistry Colloquium, Ludwig Maximilians University, Munich, November 28, 2018.

23. “Gold Nanostar Assays for Oncology and Virology”. 4th International Conference on Self Assembly and Molecular Electronics (SAME). Aalborg (Denmark), November 13-16, 2018.

24. “Addressing Oncology Questions with Gold Nanostars and SERS”. CICbiomaGUNE, San Sebastian (Spain), November 8, 2018.

25. “Colloidal Plasmonics by Design”. 26th International Conference on Raman Spectroscopy (ICORS 2018), Jeju Island (Korea), August 26-31, 2018.

26. “Tuning Metal-Semiconductor Interfaces to Improve Rate Enhancement in Hot Electron-Driven Photocatalytic Reactions”. 2018 IMRC Meeting, MATECCS Symposium, Cancun (Mexico), August 19-24, 2018.

27. “Rational Design of Plasmonic Nanostructures to Improve the Understanding of Biological Events”. 2018 Fitzpatrick Institute for Plasmonics Symposium, Duke University, March 12-13, 2018.

28. "A New Paradigm for Gold Nanostars: Synthesis, characterization, modeling, and biomedical applications". 2018 Photonics West, San Francisco CA, January 27- February 1, 2018.

29. “Gold Nanostars: Can Cinderella Become a Princess?”. 2017 SciX Conference, Reno NV, October 8-13, 2017.

30. “Engineering Plasmonic Nanostructures for Ultrasensitive SERS Applications”. 2017 Eastern Analytical Symposium and Exposition, Princeton NJ, November 13-15, 2017.

31. “Gold Nanostars in SERS: Teaching an Old Dog New Tricks”. 2017 IMRC Meeting, Biomedical Applications of Nanoparticles Symposium, Cancun (Mexico), August 20-25, 2017.

32. “Single Cell Imaging with Surface Enhanced Raman Scattering”. NanoWorld Conference, Boston MA, April 3-5, 2017.

33. “Biomedical Imaging using SERS Tags: The Future beyond Fluorescent Dyes”. 2016 Fall ACS Meeting, Philadelphia PA, August 21-25, 2016.

34. “Biomedical Imaging using SERS Tags: A Bright Future Beyond Fluorescence Imaging”. Centro di Riferimento Oncologico, National Cancer Institute, Aviano (Italy), July 19, 2016.

35. “Understanding Gold Nanostars for Improving SERS”. State Key Laboratory of Supramolecular Structure and Materials, Jilin University, Changchun (China), May 18, 2016.

36. “Gold Nanostars: A Tunable Plasmonic Tool for Highly Sensitive SERS-based Detection”. Rice University, Department of Chemistry, Houston TX, October 21, 2015.

37. “Tuning Surface Plasmon Resonances on Gold Nanostars”. 2015 SCIX Conference (The Great SCIentific EXchange), Providence RI, September 27-October 2, 2015.

38. “Tuning Morphology and Assembly of Gold Nanoparticles toward Optimized Near Field Enhancement”. Drexel University, Department of Materials Science and Engineering, Philadelphia PA, April 21, 2015.

39.“Tuning Morphology and Assembly of Gold Nanoparticles toward Optimized Near Field Enhancement”. Juniata College, Department of Chemistry, Huntingdon PA, March 17, 2015.

40.“Tuning Near Field Enhancement for Quantitative SERS”. 2015 SERS Round Table, Duisburg (Germany), March 4-6, 2015 (could not attend due to illness).

41.“Tuning Morphology and Assembly of Gold Nanoparticles toward Optimized Near Field Enhancement”. Columbia University, Department of Chemistry, New York NY, January 23, 2015.

42.“Optimization of Gold Nanostructures for Applications in SERS”. University of Padova, Department of Organic Chemistry, Padova (Italy), January 8, 2015.

43.“SERS Substrates and Tags for Biological Imaging and Sensing”. University of Texas at Dallas, Department of Materials Science and Engineering, Dallas, TX, November 7, 2014.

44.“SERS Substrates and Tags for Biological Imaging and Sensing”. SES (Surface Enhanced Spectroscopies) 2014, Chemnitz, Germany, August 7-10, 2014.

45.“Plasmonic Nanoparticles for Near Field Enhancement”. 2014 International Collaboration in Chemistry Workshop, Tokyo Institute of Technology, Yokohama, Japan, March 9, 2014.

46. “The Efficiency-Enhancing Effect of Gold Nanorods in organic Solar Cells: Myth or Reality?”. 13th Erker-University of California Santa Barbara Symposium, Santa Barbara CA, March 3-4, 2014.

47.“Gold Nanoparticles for Imaging and Sensing”. Lehman College, City University of New York, Department of Chemistry, Bronx NY, February 19, 2014.

48.“Gold Nanoparticles for Imaging and Sensing”. Rutgers University, Department of Electrical and Computer Engineering, Piscataway NJ, February 12, 2014.

49.“Gold Nanoparticle Dimers as Tags for SERS-based Disease Screening”. Universidade de São Paulo, Department of Chemistry, São Paulo (Brazil), June 11, 2013.

50.“(Non) Plasmonic Enhancement Effects of Gold Nanorods in Organic Photovoltaics”.

International Materials Institute for Solar Energy and Environment (IMI-SEE) US-China Workshop, US National Academy of Sciences, Washington DC, May 20-21, 2013.

51.“Gold Nanoparticle Dimers as Tags for Rapid Cancer Screening”. Nano 2012: XI International Conference on Nanostructured Materials, Rhodes (Greece), August 21-26, 2012.

52.“Dithiolated Linkers for Gold Nanoparticle Assembly: Modeling and Experiment”. 2012 Energy Materials Nanotechnology (EMN) Villa Conference, Orlando FL, April 16-20, 2012.

53.“Gold Nanoparticle Dimers: Synthesis, Characterization, and Applications”. University of Connecticut, Department of Chemical, Materials, and Biomolecular Engineering, Storrs CT, November 15, 2011.

54.“Gold Nanoparticle Dimers: Synthesis, Characterization, and Applications”. Coordinamento Interuniversitario Veneto per le Nanotecnologie (CIVEN) Institute, Venice (Italy), November 23, 2011.

55.“Surface Functionalized Metal Nanoparticles”. 25th Laboratory for Surface Modification (LSM) Symposium. Rutgers University, New Brunswick NJ, March 29, 2011.

56.“Study of Metal Nanoparticle Assembly: Optimization of the SERS Enhancement and Bioapplications”. William Paterson University, Department of Chemistry, Wayne NJ, November 4, 2010.

57.“Multifunctional Metal Nanoparticle Dimers for SERS-based Imaging and Sensing, Cell Targeting, and Drug Delivery”. Nanotechnology for Art Conservation Symposium, Northwestern University, Chicago IL, October 28, 2010.

58.“Hybrid Nanomaterials for Optics, Electronics, and Bionanotechnology”. 10th Erker- University of California Santa Barbara Symposium, Santa Barbara CA, February 8, 2010.

59.“Alla Ricerca della Ricerca”. 2009 Academia-Industry Meeting “Education for Innovation, Innovation for Competitiveness”, Padova (Italy), November 26, 2009.

Press Coverage

1. NJ TV- PBS, Interview with Michael Hill on Intracellular Probes to Monitor Viral Evolution (02/11/2020; https://www.njtvonline.org/news/video/rutgers-scientist-leads-research-looking-into-how-viruses-like-the-flu-mutate/). Additional articles on EurekaAlert, Phys.org, Science Daily, The Medical News, etc.
2. Smartcity, Radio24 (Italy), Interview with Maurizio Melis on activities in the Fabris Group (11/20/2019).
3. Smartcity, Radio24 (Italy), Interview with Maurizio Melis on Gold Nanostars for Photocatalysis (10/26/2018).
4. OSA, The Optical Society (USA): “Gold Nanoparticles Speed Up Photocatalysis” (07/27/2018).

5. UmweltDialog (Germany): “Goldene Sterne Statt Solarbatterien” (07/25/2018).

6. E-gazette.it (Italy): “Ricercatrice Italiana Aumenta l’Efficienza Solare con delle Microstelle d’Oro” (07/18/2018).

7. Materials Today (USA): “Gold Star for Novel Hydrogen Producing Photocatalyst” (07/13/2018).

8. ANSA (Italy): “Polvere d’Oro per un Fotovoltaico piu’ Efficiente” (07/13/2018).

9. Science Daily (USA): “How Gold Nanoparticles Could Improve Solar Energy Storage” (07/12/2018).

10. Phys.org (USA): “How Gold Nanoparticles Could Improve Solar Energy Storage” (07/12/2018).

11. Inverse.com (USA): “Solar Energy Harvesting May Get More Efficient Thanks to Moist Gold Nanostars” (07/12/2018).

12. Brookhaven National Lab, Center for Functional Nanomaterials, User Spotlight (USA): “Laura Fabris Develops Nanoparticle-Based Tags to Detect Cancer and Viruses at the Single-Cell Level” (04/24/2018).

Memberships

a. Materials Research Society (MRS, member)
b. American Chemical Society (ACS, member)
c. The American Ceramic Society (ACerS, member)
d. Sigma Xi, The Scientific Research Society (Member)
e. SPIE (The International Society for Optics and Photonics)

TEACHING

Coursework Instruction - Rutgers University

1. As Primary Instructor

Fall 2010-ongoing: Introduction to Materials Science and Engineering. Undergraduate Course (3 credits, 14:635:203). Sole instructor.
Highest Student Rating Received: Teaching Effectiveness: 4.54/5.00; Course Quality: 4.77/5.00 (5.00 indicates excellent).

Spring 2010-ongoing: Biological Applications of Nanomaterials and Nanostructures. Crosslisted senior undergraduate/graduate course (3 credits, 14:635:410/16:125:582). Sole instructor.
Highest Student Rating Received: Teaching Effectiveness: 4.90/5.00; Course Quality: 4.80/5.00 (5.00 indicates excellent).

2. As Guest Instructor

Spring 2017: Biointerfacial Characterization (125:583). Primary instructor: Prof. Adam Gormley. Guest lectures on Spectroscopy and Surface Enhanced Techniques.
Laboratory Experience on Surface Enhanced Raman Spectroscopy.

Fall 2016: Principles of Drug Delivery (14:125:445). Primary Instructor: Prof. Stavroula Sofou. Guest Lecture on Metal Nanoparticles as Drug Carriers.

Spring 2016: Senior Seminar (14:635:404). Primary Instructor: Prof. Jack Wenzel. Guest Lecture on Studying Abroad.

Fall 2013: Photonic, Electronic, and Magnetic Applications of Nanomaterials and Nanostructures (14:635:322). Primary Instructor: Prof. Manish Chhowalla. Guest Lecture on Gold Nanoparticles for Imaging and Sensing.

Fall 2012: Fall 2012. Introduction to Biomedical Engineering (125:201). Primary Instructor: Prof. Francois Berthiaume. Guest Lecture on Spectroscopies and Cell Imaging.

Spring 2011 and Spring 2012: Spring 2012. Biointerfacial Characterization (125:583). Primary instructor: Prof. Prabhas Moghe. Guest lectures on Spectroscopy and Surface Enhanced Techniques. Laboratory Experience on Surface Enhanced Raman Spectroscopy.

Fall 2010: Introduction to Nanoscience and Nanotechnology (16:635:604 Special Problems Materials). Guest Lecturer for the Nanotechnology for Clean Energy IGERT. Lecture on Nanobiology.

Fall 2010: Science on the Nanoscale (090:268:01). Primary Instructor: Prof. Fred Cosandey. Guest Lecture on Nanobiology.

Fall 2009. Biointerfacial Characterization (125:583). Primary Instructor: Prof. Prabhas Moghe. Guest Lecture on Surface Enhanced Techniques.

Coursework Instruction - University of Padova

2005: Teaching Assistant for the Spectroscopy course, Biotechnology Curriculum.

2003-2004: Teaching Assistant for the Physical Chemistry course, Electrochemistry emphasis, Biotechnology Curriculum.

Mentoring and Student Supervision

Post Docs Supervised

2021-To Date: Dr. Chiara Deriu. Department of Applied Science and Technology, Politecnico di Torino.

2020-2021: Dr. Sasanka Ulapane. MSE Department, Rutgers University. Now at Boehringer Ingelheim.

2017-2020: Dr. Hao Wang. MSE Department, Rutgers University. Now at Duke University.

2013: Dr. Roney Thomas. MSE Department, Rutgers University. Co-supervised with Prof. Deirdre O'Carroll.

Doctoral Theses Supervised

1. Jinisha Chheda. Materials Science and Engineering Department, Rutgers University, Primary Advisor. Currently Supervised.

2. Kaleigh Ryan. Materials Science and Engineering Department, Rutgers University. Primary Advisor. Currently Supervised.

3. Maria Atzampou. Biomedical Engineering Department, Rutgers University. Transferred to the Zahn Group, Rutgers BME.

4. Sakshi Sardar. Electrical and Computer Engineering Department, Rutgers University. Co-Advisor (Defended July 2019, now Scientific Director of Digital Measures and Analytics, Critical Path Institute).

5. Stamatia Kallontzi. Materials Science and Engineering Department, Rutgers University. Co-Advisor (Primary advisor L. Klein, defended June 2019, now at Lonza).

6. Kholud Dardir. Chemistry and Chemical Biology Department, Rutgers University. Primary Advisor (defended March 2019, now at Axinn, Veltrop & Harkrider LLP).

7. Supriya Atta. Chemistry and Chemical Biology Department, Rutgers University. Primary Advisor (defended December 2018, now PostDoc at Duke University with Prof. T. Vo-Dinh).

8. Theodoros Tsoulos. Materials Science and Engineering Department, Rutgers University. Primary Advisor (defended December 2018, now PostDoc at EPFL with Prof. G. Tagliabue).

9. Manjari Bhamidipati. Biomedical Engineering Department, Rutgers University. Primary Advisor (defended July 2018, now at Wunderman Thompson Health)

10. Riyanka Pai. Materials Science and Engineering Department, Rutgers University. Primary Advisor (defended 2016, now at Corning Inc.).

11. Swarnapali Indrasekara. Materials Science and Engineering Department, Rutgers University. Primary Advisor (defended 2014, now Assistant Professor, Department of Chemistry, University of North Carolina, Charlotte).

12. Robert C. Wadams. Doctoral Student. Materials Science and Engineering Department, Rutgers University. IGERT Fellow. Primary Advisor (defended 2014, now at Bristol Myers Squibb).

13. Paul R. Mark. Materials Science and Engineering Department, Rutgers University. IGERT Fellow. Primary Advisor (defended 2013, now at Coherent Inc.).

Master's Theses Supervised

1. Lisandra Macedo. Master's Student. Biomedical Engineering, Rutgers University. Primary Advisor (currently supervised).

2. Jinsha Chheda. Master's Student. Materials Science and Engineering, Rutgers University. Primary Advisor (now in the Fabris group as PhD student).

3. Zhaolin Xue. Master's Student. Materials Science and Engineering, Rutgers University. Primary Advisor (now PhD student at the University of Massachusetts Amherst).

4. Weinien Chen. Master's Student. Materials Science and Engineering, Rutgers University. Primary Advisor (now at Frontida Biopharm, Inc.).

5. Sakshi Sardar. Master's Student. Biomedical Engineering Department, Rutgers University. Primary Advisor (now Scientific Director of Digital Measures and Analytics, Critical Path Institute).

6. Dr. David Schachter. Master's Student. Biomedical Engineering Department, Rutgers University. Primary Advisor (now at Fenwick and West).

7. Bryan Paladini. Master's Student. Materials Science and Engineering Department, Rutgers University. Primary Advisor (now at Thermo Fisher Scientific).

SERVICE

Symposium Organizer

12/2020: 2020 Pacifichem. Symposium Organizer. Plasmonic Materials for Chemical Analysis.

07/2020: IEEE NANO2020 Conference, Nanoplasmonics Symposium.

04/2013: Spring MRS Meeting. Symposium Organizer. Nanomaterials in the Subnanometer Size Range.

10/2010: MRS Workshop. Workshop Chair. Nanomaterials for Biological Applications.

Peer Reviewer: Publications

Peer-reviewed professional journals: PNAS, The Journal of Physical Chemistry C, Advanced Materials, Advanced Functional Materials, Chemical Reviews, Journal of the American Chemical Society, ACS Nano, Scientific Reports, ACS Photonics, Molecular Pharmaceutics, Journal of Materials Chemistry, Nature Communications, Nano Letters, Nanoscale Advances, Chemical Science, Accounts of Chemical Research, Journal of Bioconjugate Chemistry, Langmuir, ACS Catalysis, Angewandte Chemie, Nano Today, The Journal of Nanoscience and Nanotechnology, Nanoscale, Small, Physical Chemistry Chemical Physics, Chemistry-A European Journal, Chemical Communications, Analyst, Journal of Colloids and Interface Science, Dalton Transactions, IEEE Transactions on Nanotechnology, Chem. Phys. Chem., European Journal of Inorganic Chemistry, Journal of Nanoscience and Nanotechnology, Gold Bulletin, Energy and Environmental Science, Journal of Nanoparticle Research, Particle and Particle Systems Characterization, New Journal of Chemistry, RSC Advances, Journal of Materials Chemistry B, CrystEngComm, NPG Asia, Analytical Chemistry, PLOS One, Applied Materials Today, Journal of Raman Spectroscopy,

Peer Reviewer: Proposals

US-Israel Binational Science Foundation.
National Science Centre (Poland).
Instituto Serrapilheira (Brazil).
European Research Council (ERC).
Swiss National Science Foundation.
Canada NSERC.
Indo-US Science and Technology Forum.
Panel Reviewer for US Department of Energy, Advanced Scientific Computing Research.
Reviewer for the American Chemical Society Petroleum Research Fund.
Reviewer for the Italian Ministry of Health.
Review for ISSNAF (Italian Scientists and Scholars of North America Foundation).
Reviewer for Brookhaven National Laboratory, Center for Functional Nanomaterials.
Mail Reviewer for US Department of Energy, BES.
Panel Reviewer for US National Science Foundation, various Directorates and Programs.

Other Contributions to the Advancement of the Academic Profession

07/2020: Gordon Research Conference on Plasmonics and Nanophotonics: Session Chair (postponed due to COVID-19).

09/2017: Third International Conference on Enhanced Spectroscopy (ICES 2017), Munich (Germany): Scientific Committee Member. Currently on the steering committee for upcoming meetings.

08/2014: 2104 SES meeting, Chemnitz (Germany): Session Chair.

06/2014: Gordon Research Conference on Noble Metal Nanoparticles: Session Chair.

06/2014: Gordon Research Seminar on Noble Metal Nanoparticles: Session Chair and Career Panelist.

06/2012: Gordon Research conference on Noble Metal Nanoparticles: Session Chair. 08/2012:

Nano 2012 conference, Rhodes, Greece August 21-26, 2012: Session Chair.

05/2013: IMI-SEE US-China Workshop. *Ad-hoc* panelist on the future of scientific collaborations between US and China. The National Academy of Sciences, Washington DC, 05/20-21/2013.

2011: Evaluation of Applications for Sigma Xi New Jersey Teacher's Awards (Rutgers Chapter).

10/2011: 2011 SWE Conference, Chicago IL. Invited Panelist (Panels Titles: "To Postdoc or Not to Postdoc" and "Tips on Teaching Engineering").

2010: Rutgers-UMDNJ Postdoc Association Day. Panelist.

11/2010: Society for Women in Engineering (SWE): 2010 Conference, Orlando FL. Invited Panelist (Panel Title: "To Postdoc or Not to Postdoc").

Contributions to society at large.

- 05/2019: Science at Edgar. Science experiments with pre-school, pre-K, and Kindergarten children of the Edgar Early Learning Center, Metuchen, NJ.
- 03/2018: Circle of Women Ambassadors' Luncheon. Protecting the Most Vulnerable: Addressing Violence Against Rural Women, Modern Day Slavery and Human Trafficking. Hosted by the Permanent Mission of Hungary to the UN, New York City, NY (invitation only event).
- 03/2018: Montgomery High School. Panelist on Women in STEM event.
- 01/2017: Science at Edgar. Science experiments with pre-school, pre-K, and Kindergarten children of the Edgar Early Learning Center, Metuchen, NJ.
- 11/2016: Judge at the Union City High School Science Fair.
- 09/2014: United Nations Leader's Forum on Women Leading the Way (invitation only event), New York City, NY. Roundtable participant to support women's leadership on climate action.
- 2010: Science Projects Evaluator. NYC East Side High School, New York City NY.