

DEBORA FRIGI RODRIGUES

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EDUCATION

- 2007- 2010 Post-doctoral in Environmental and Chemical Engineering, Yale University
- 2002-2007 Ph.D., Microbiology and Molecular Genetics, Michigan State University.
Received the Marvis A. Richardson Fellowship (2006) awarded for quality of research and contributions to the department.
- 2000- 2002 M.S. in Sciences, Microbiology, University of São Paulo, Brazil.
- 1995- 1999 B.S. in Biology and Biology Education, University of São Paulo, Brazil.

PROFESSIONAL EXPERIENCE

- 2016 - Present **University of Houston**, Civil and Environmental Department, Associate Professor
 - Texas Hazardous Waste Research Center award recipient 2015: "Multifunctional graphene-oxide nanocomposite beads for removal of water contaminants in packed bed columns". Award amount: \$ 31,000.
 - Research Partnership to Secure Energy for America award recipient 2014: "Subsea Produced Water Sensor Development". Award amount: \$ 4,580,513 (UH sub-award: \$325,884)
 - NSF workshop: "Career development: from senior undergraduates to navigating assistant professorship". 2014. Award amount: \$ 28,936.00.
 - QNRF award recipient 2016: "Development of a novel polymer-modified graphene oxide nanocomposites for controlling CaSO₄ scaling and biofouling on reverse osmosis membrane: Mechanistic study." Award amount: \$223,805.
 - Department of Interior 2016. "Microfiltration system for indirect potable reuse water treatment". Award Amount: \$200,159.
 - NSF Workshop: Collaborative Research: Pan American Nanotechnology Conference: Shaping the Future from November 27th to 30th, 2017 at Guaruja, Sao Paulo, Brazil. 2017. Award Amount: \$47,999
 - NSF project "Effects of Surface-Adsorbed Biomolecules and Geomolecules on the Photoreactivity of Metal Oxide Nanomaterials". 2017. Award Amount: \$299,676
 - NSF Project: "Collaborative Research: Professional Preparation of Underrepresented Minority PhD's and Post-Docs for a Career in Engineering Academia" 2017. Award Amount: \$190,652
 - NASA Project: "Students Improving Ultralight Balloon Technology for Auroral and Stratospheric Studies. 2016. Award Amount: \$100,000
 - DOE Project: " Toward a better understanding of Bacterial: fungal dynamics in the context of soil microbial communities" 2018. UH Award Amount: \$508,633.00.
- 2010-2016 **University of Houston**, Civil and Environmental Engineering Department, Assistant Professor
 - University of Houston Tech Gap 2015 award recipient 2015: "Large scale production of nanocomposite beads for drinking water treatment". Award amount: \$50,000.
 - NSF I-Corps award recipient in 2013: "Graphene-based nanocomposite filters for antibacterial and heavy metal removal". Award amount: \$50,000
 - NSF REU supplement for the NSF Career Award. 2013. Award Amount: \$6,000.
 - NSF Career Award Grant recipient in 2012: "Toxicology of graphene-based nanomaterials: A molecular biotechnology approach". Award amount: \$ 449,367
 - Grant recipient of Grants to Enhance and Advance Research (GEAR):" Development of multifunctional Carbon-Based Nanomaterial Composite Coatings and corrosion". 2012. Award amount: \$30,000

- Grant recipient of NSF RET in Engineering and Computer Science Site at the University of Houston: “Innovations in Nanotechnology”. 2011. Award amount: \$ 429,288
 - Grant recipient of New Faculty Research Program – University of Houston. 2011. Award amount: \$6,000
- 2007-2010 **Yale University**, Environmental Engineering Program, Chemical Engineering Department – Advisor: Dr. Menachem Elimelech
 - Member of the Environmental Engineering Seminar Committee (Spring 2009)
 - Investigating mechanisms of bacterial adhesion to surfaces and biofilm formation.
 - Investigating the antimicrobial effects of carbon nanotubes on viruses and bacteria.
 - Developed and wrote a section on microbiology for an NSF proposal: Carbon Nanotubes in Soils: Transport, Filtration, and Impact on Soil Microbial Community (funding awarded: 2008).
- 2002-2007 **Michigan State University**, Center for Microbial Ecology/Microbiology and Molecular Genetics Department
Ph.D. Degree, Graduate Research Assistant - Advisor: Dr. James Tiedje
Thesis Title: Ecology, physiology and metabolism of cold-adapted Microorganisms from the Siberian permafrost
 - Member of the Graduate Admissions Committee (Spring 2005 - Fall 2006).
 - Graduate teaching assistant (Spring 2004).
 - Developed and wrote a proposal to the U.S. Department of Energy, Office of Biological and Environmental Research (OBER) to sequence two microbial genomes (funding allocated directly to JGI in 2006).
- 2000-2002 **University of São Paulo**, São Paulo, Brazil, Microbiology Department
Masters Degree, Graduate Research Assistant - Advisor: Dr. Vivian Helena Pellizari
Thesis title: Polyphasic characterization of xenobiotic pollutant-degrading bacteria diversity in Santos Estuary.
- 1999-2000 **Ambiterra Ltda. Environmental Technology**, São Paulo, Brazil.
Microbiologist consultant
Responsible for conducting validation tests in a hospital waste-treatment plant for environmental agencies in São Paulo (CETESB and São Paulo Secretary of Green and Environment).
- 1997-1999 **University of São Paulo**, São Paulo, Brazil, Microbiology department
Undergraduate Research assistant
Advisor: Dr. Vivian Helena Pellizari/ Dr. James Tiedje
 - Investigated virus movement in underground water.
 - Investigated PCB-degrading bacteria from Antarctica (Collected and analyzed samples in Antarctica in December 1998 and performed further analyses while at Michigan State University, from May to July 1999).
- 1995-1996 **University of São Paulo**, São Paulo, Brazil, Biology department
Undergraduate Research assistant
Advisors: Dr. Maria Rita Passos-Bueno/ Dr. Mayana Zatz
Investigated leporine lips and cleft palate gene association in the Brazilian population. Provided technical help to demonstrate linkage of two Duchene muscular dystrophy-like families to 5q33-34.

REFERRED JOURNAL PUBLICATIONS (in chronological order): H-index: 25 and Citations: 2773

1. Carpio, I.E.M.; Ansari, A; **Rodrigues, D.F.** Relationship of biodiversity with heavy metal tolerance and sorption capacity: A meta-analysis approach.2018. *Env Sci & Tech*. DOI: 10.1021/acs.est.7b04131
2. Nguyen, H.N.; **Rodrigues, D.F.** Chronic toxicity of graphene and graphene oxide in sequencing batch bioreactors: A comparative investigation. 2018. *Journal of Hazardous Materials*. 343, 200-207.
3. McLay, R.B.; Nguyen, H.N.; Jaimes-Lizcano, Y.A.; Dewangan, N.K.; Alexandrova, S.; Rodrigues, D.F.; Cirino, P.C.; Conrad, J.C. Level of fimbriation alters the adhesion of *Escherichia coli* bacteria to interfaces. 2017. *Langmuir*. DOI: 10.1021/acs.langmuir.7b02447v.

4. Tiu, B.D.B.; Nguyen, H.N.; **Rodrigues, D.F.**; Advincula, R.C. Electrospinning Superhydrophobic and Antibacterial PS/MWNT Nanofibers onto Multilayer Gas Barrier Films. 2017. *Macromol Symp.* 374 (1). 1600138. doi:10.1002/masy.201600138.
5. Grande, C.D.; Mangadlao, J.; Fan, J.; Leon, A.D.; Delgado-Ospina, J.; Rojas, J. G.; **Rodrigues, D.F.**; Advincula, R.C. Chitosan Cross-Linked Graphene Oxide Nanocomposite Films with Antimicrobial Activity for Application in Food Industry. 2017. *Macromol. Symp.*, 374: 1, 1600114. doi:10.1002/masy.201600114
6. Fan, J.; Grande, C.D.; **Rodrigues, D.F.** Biodegradation of graphene oxide-polymer nanocomposite films in wastewater. 2017. *Environmental Science: Nano*. DOI: 10.1039/C7EN00396J.
7. Nadres, ET; Perez, JVD; **Rodrigues, DF.** High-capacity hydrogel polymer composite adsorbent for nitrate and phosphate removal from water. 2018. *Proceedings of the Water Environment Federation* 2017 (3), 438-460.
8. Oliveira, R.C. Davenport, K.W.; Hovde, B.; Silva, D.; Chain, P.S.G.; Correa, B.; **Rodrigues, D. F.**; Draft Genome Sequence of Sorghum Grain Mold Fungus *Epicoccum sorghinum*, a Producer of Tenuazonic Acid. 2017. *Genome announcements* 5 (4), e01495-16.
9. Nguyen, H.N.; Nadres, E.T.; Almani, B.G.; **Rodrigues, D.F.**; Designing polymeric adhesives for antimicrobial materials: poly(ethylene imine) polymer, graphene, graphene oxide and molybdenum trioxide – a biomimetic approach. 2017. *Journal of Materials Chemistry B*. DOI: **10.1039/C7TB00722A**
10. Perez, J.V.D.; Nadres, E.T.; Nguyen, H.N.; Dalida, M.L.P.; **Rodrigues, D.F.**; Response surface methodology as a powerful tool to optimize the synthesis of polymer-based graphene oxide nanocomposites for simultaneous removal of cationic and anionic heavy metal contaminants. 2017. *RSC Advances* 7 (30), 18480-18490.
11. Nguyen, H.N; Castro-Wallace, S.L.; **Rodrigues, D.F.** Acute toxicity of graphene nanoplatelets on biological wastewater treatment process. 2017. *Environmental Science: Nano*. DOI: 10.1039/C6EN00442C
12. Peña-Bahamondea, J.; Miguel, V.S.; Nguyen, H.N.; Ozisik, R.; **Rodrigues, D.F.**; Cabanelas, J.C. Functionalization of reduced graphene oxide with polysulfone brushes enhance antibacterial properties and reduce human cytotoxicity. 2017. *Carbon*. Volume 111, January 2017, Pages 258–268.
13. Okyay, T.O.; Nguyen, H.N.; Castro, S.L.; **Rodrigues, D.F.** CO₂ sequestration by ureolytic microbial consortia through microbially-induced calcite precipitation. 2016. *Science of The Total Environment*, 572, 671-680.
14. Medina, R.; Nadres, E.T.; Florencio Jr, B.; **Rodrigues, D.F.** Incorporation of Graphene oxide into Chitosan-Poly (acrylic acid) porous polymer nanocomposite for enhanced lead adsorption. 2016. *Environmental Science: Nano* (3), 638-646. DOI: 10.1039/C6EN00021E.
15. Carpio, I. E M.; Franco, D.C.; Sato, M.I.Z.; Sakata, S.; Pellizari, V.H.; Filho, S.S.F.; **Rodrigues, D.F.** Biostimulation of metal-resistant microbial consortium to remove zinc from contaminated environments. 2016. *Sci Total Env.* V.550, 670-675.
16. Santos, GM; de Santi Ferrara, FI; Zhao, F.; **Rodrigues, DF**; Shih, W.C. Photothermal inactivation of heat-resistant bacteria on nanoporous gold disk arrays.2016. *Optical Materials Express* 6 (4), 1217-1229.
17. Fan, J.; Li, Y.; Nguyen, H.N.; Yao, Y.; Rodrigues, D.F. Toxicity of exfoliated-MoS₂ and annealed exfoliated-MoS₂ towards planktonic cells, biofilms, and mammalian cells in the presence of electron donor. 2015. *Environmental Science: Nano* 2 (4), 370-379.
18. Smith, S.C.; **Rodrigues, D.F.** Carbon-Based Nanomaterials for Removal of Chemical and Biological Contaminants from Water: A Review of Mechanisms and Applications. 2015. *Carbon*. 91, 122-143.
19. Onal, T.O.; **Rodrigues, D.F.** Biotic and abiotic effects on CO₂ sequestration during microbially-induced calcium carbonate precipitation. 2015. *FEMS Microbiology Ecology*. doi: 10.1093/femsec/fiv017.
20. J. D. Mangadlao, C. M. Santos, M. J. L. Felipe, A. C. C. de Leon, **D. F. Rodrigues** and R. C. Advincula. On the antibacterial mechanism of graphene oxide (GO) Langmuir–Blodgett films. 2015. *Chem. Commun.* DOI: 10.1039/C4CC07836E.
21. Onal, T.O.; Bala, R.K.; Nguyen, H.N; Atalay, R.; Bayam, Y.; **Rodrigues, D.F.** Antibacterial Properties and Mechanisms of Toxicity of Sonochemically Grown ZnO Nanorods. 2015. *RSC Advances*. V. 5 (4), p. 2568-2575. (DOI: 10.1039/C4RA12539H).
22. Beless, B., Rifai, H.S.,**Rodrigues, D.F.** Efficacy of Carbonaceous Materials for Sorbing Polychlorinated Biphenyls from Aqueous Solution. 2014. *ES&T*. v.48 (17), p. 10372-10379 .
23. Fan, Jingjing, Onal, T.O.; **Rodrigues, D.F.** The synergism of temperature, pH and growth phases on heavy metal biosorption by two environmental isolates. 2014. *J. Hazardous materials*.v. 279, p. 236-243.

24. Mejías, I.E.C.; Santelli, G.I; Sakata, S.; Filho, S.S.F.; **Rodrigues, D.F.** Copper removal using a heavy-metal resistant microbial consortium in a fixed-bed reactor. 2014. *Water Res.* v. 62, p.156-166.
25. Mejías, I.E.C.; Mangadlao, J.D.; Nguyen, H.; Advincula, R.C.; **Rodrigues, D. F.** Non-human cytotoxic Graphene Oxide functionalized with ethylenediamine triacetic acid for Heavy Metal Adsorption and Anti-microbial applications. 2014. *Carbon*, V. 77, p. 289–301. doi:10.1016/j.carbon.2014.05.032.
26. Musico, Y.L.F.; Santos, C.M.; Dalida, M.L.; **Rodrigues, D.F.** Surface modification of membrane filters using graphene-based nanomaterials for bacterial inactivation and removal. 2014. *ACS Sustain Chem Eng*, v. 2 (7), p. 1559–1565. dx.doi.org/10.1021/sc500044p
27. Smith, S.C.; Ahmed, F.; Gutierrez, K.; **Rodrigues, D.F.** A Comparative Study of Protein Adsorption with Graphene, Graphene Oxide, and Single-Walled Carbon Nanotubes: Potential Environmental Applications. 2014. *Chem. Eng. J.* v. 240, p. 147-154.
28. Onal, T.O.; **Rodrigues, D.F.** Optimized carbonate micro-particle production by *Sporosarcina pasteurii* using response surface methodology . 2014. *Ecol. Eng. J. V.* 62, 168–174.
29. Onal, T.O.; **Rodrigues, D.F.** High Throughput Colorimetric Assay for Rapid Urease Activity Quantification. 2013.*J. Microbiol. Methods.* V.95 (3), 324–326.
30. Ahmed, F.; Santos, C.M.; **Rodrigues, D.F.** Implications of Graphene Oxide on wastewater microbial communities and wastewater treatment process performance. *Journal of Hazardous Materials*, 256–257 (2013) 33– 39.
31. Ahmed, F.; Santos, C.M.; Mangadlao, J.; Advincula, R.; **Rodrigues, D.F.** Application of electroactive PVK-SWNT nanocomposite as effective antimicrobial coating material for membrane filter. 2013. *Water Research*, V. 47 (12), 3966–3975.
32. Smith S.C., **Rodrigues D.F.** The Fate of Carbon-Based Nanomaterials in the Environment. *J Bioremed Biodeg*, 2013. 3:e129. doi:10.4172/2155-6199.1000e129.
33. Musico, Y.L.F.; Santos, C.M.; Dalida, M.L.; **Rodrigues, D.F.** Improved removal of lead(II) from water using a polymer-based graphene oxide nanocomposite. *J Mat Chem A*. 2013, 1 (11), 3789 - 3796 (DOI: 10.1039/c3ta01616a)
34. **Rodrigues, D.F.**; Jaisi, D.; Elimelech, M., Toxicity of Functionalized Single-Walled Carbon Nanotubes on Soil Microbial Communities: Implications for Nutrient Cycling in Soil. *Environmental Science & Technology*. 2013 Jan 2;47(1):625-33 (DOI: http://dx.doi.org/10.1021/es304002q)
35. Pangilinan, K.D.; Santos, C.M.; Estillore, N.C.; **Rodrigues, D.F.**; Advincula, R.C. Temperature-Responsiveness and Antimicrobial Properties of CNT–PNIPAM Hybrid Brush Films. *Macromol. Chem.Physic.*2012 (DOI: 10.1002/macp.201200464)
36. Santos, C.M.; Mangadlao, J.; Leon, A.; Ahmed, F.; Advincula, R.C.; **Rodrigues, D.F.**. Graphene nanocomposites for biomedical applications: Fabrication, Characterization, Antimicrobial and Cytotoxic investigations *Nanotechnology* 2012 Oct 5;23(39):395101.
37. Mejías, C. I. E.; Wei, X.; **Rodrigues, D.F.**, Toxicity of a polymer-graphene oxide composite against bacterial planktonic cells, biofilms, and mammalian cells. *Nanoscale* 2012. v.4, p.4746-4756.
38. Ahmed, F.; Santos, C. M.; Vergara, R. A. M. V.; Tria, M. C. R.; Advincula, R. C.; **Rodrigues, D. F.**, Antimicrobial applications of electroactive PVK-SWNT nanocomposites. *Environmental Science & Technology* 2012. v.46, p. 1804-1810.
39. Santos, C. M.; Milagros Cui, K.; Ahmed, F.; Tria, M. C. R.; Vergara, R. A. M. V.; Leon, A. C.; Advincula, R. C.; **Rodrigues, D. F.**, Bactericidal and Anticorrosion Properties in PVK/MWNT Nanocomposite Coatings on Stainless Steel. *Macromolecular Materials and Engineering* 2012. v. 297, 807-813.
40. Santos, C. M.; Tria, M. C. R.; Vergara, R. A. M. V.; Ahmed, F.; Advincula, R. C.; **Rodrigues, D. F.**, Antimicrobial graphene polymer (PVK-GO) nanocomposite films. *Chemical Communications*, 2011. 47 (31), 8892 – 8894.
41. **Rodrigues, D.F.**, Biofilters: A Solution for Heavy Metals Removal from Water. *J Bioremed Biodegrad* 2011, 2, e101.
42. Vishnivetskaya, T. A.; Lucas, S.; Copeland, A.; Lapidus, A.; del Rio, T. G.; Dalin, E.; Tice, H.; Bruce, D. C.; Goodwin, L. A.; Pitluck, S., Saunders E, Brettin T, Detter C, Han C, Larimer F, Land ML, Hauser LJ, Kyrpides NC, Ovchinnikova G, Kathariou S, Ramaley RF, **Rodrigues DF**, Hendrix C, Richardson P, Tiedje JM. Complete genome sequence of the thermophilic bacterium *Exiguobacterium* sp. AT1b. *Journal of bacteriology* 2011, 193, (11), 2880-2881.
43. Pernites, R. B.; Santos, C. M.; Maldonado, M.; Ponnappati, R. R.; **Rodrigues, D. F.**; Advincula, R. C., Tunable Protein and Bacterial Cell Adsorption on Colloidally Templated Superhydrophobic Polythiophene Films. *Chemistry of Materials* 2011. (in press DOI: 10.1021/cm2007044).
44. **Rodrigues, D. F.**; Elimelech, M., Toxic effects of single-walled carbon nanotubes in the development of *E. coli* biofilm. *Environmental Science & Technology* 2010, 44, (12), 4583-4589.

45. Ayala-del-Río, H. L.; Chain, P. S.; Grzymalski, J. J.; Ponder, M. A.; Ivanova, N.; Bergholz, P. W.; Di Bartolo, G.; Hauser, L.; Land, M.; Bakermans, C.; **Rodrigues, D.F.**; Klappenback, J.; Zarka, D.; Larimer, F.; Richardson, P.; Murray, A.; Thomashow, M.; Tiedje, J.M. The genome sequence of *Psychrobacter arcticus* 273-4, a psychroactive Siberian permafrost bacterium, reveals mechanisms for adaptation to low-temperature growth. *Applied and environmental microbiology* **2010**, 76, (7), 2304-2312.
46. **Rodrigues, D. F.**; Elimelech, M., Role of type 1 fimbriae and mannose in the development of *Escherichia coli* K12 biofilm: from initial cell adhesion to biofilm formation. *Biofouling* **2009**, 25, (5), 401-411.
47. **Rodrigues, D. F.**; da C Jesus, E.; Ayala-del-Río, H. L.; Pellizari, V. H.; Gilichinsky, D.; Sepulveda-Torres, L.; Tiedje, J. M., Biogeography of two cold-adapted genera: *Psychrobacter* and *Exiguobacterium*. *The ISME journal* **2009**, 3, (6), 658-665.
48. **Rodrigues, D.F.**; Sakata, S.; Comasseto, J.; Bicego, M.; Pellizari, V., Diversity of hydrocarbon-degrading *Klebsiella* strains isolated from hydrocarbon-contaminated estuaries. *Journal of applied microbiology* **2009**, 106, (4), 1304-1314.
49. **Rodrigues, D. F.**; Tiedje, J. M., Coping with our cold planet. *Applied and environmental microbiology* **2008**, 74, (6), 1677-1686.
50. **Rodrigues, D.F.**; Ivanova, N.; He, Z.; Huebner, M.; Zhou, J.; Tiedje, J., Architecture of thermal adaptation in an *Exiguobacterium sibiricum* strain isolated from 3 million year old permafrost: a genome and transcriptome approach. *BMC genomics* **2008**, 9, (1), 547.
51. Kang, S.; Herzberg, M.; **Rodrigues, D. F.**; Elimelech, M., Antibacterial effects of carbon nanotubes: size does matter! *Langmuir* **2008**, 24, (13), 6409-6413.
52. **Rodrigues, D. F.**; Tiedje, J. M., Multi-locus real-time PCR for quantitation of bacteria in the environment reveals *Exiguobacterium* to be prevalent in permafrost. *FEMS microbiology ecology* **2007**, 59, (2), 489-499.
53. **Rodrigues, D. F.**; Goris, J.; Vishnivetskaya, T.; Gilichinsky, D.; Thomashow, M. F.; Tiedje, J. M., Characterization of *Exiguobacterium* isolates from the Siberian permafrost. Description of *Exiguobacterium sibiricum* sp. nov. *Extremophiles* **2006**, 10, (4), 285-294.
54. Andrade, L. H.; Comasseto, J. V.; **Rodrigues, D. F.**; Pellizari, V. H.; Porto, A. L. M., Enantioselective reduction of ortho-substituted-acetophenones by bacterial strains isolated from medium enriched with biphenyl or diesel fuel. *Journal of Molecular Catalysis B: Enzymatic* **2005**, 33, (3), 73-79.
55. Sakata, S. K.; Taniguchi, S.; **Rodrigues, D. F.**; Urano, M. E.; Wandermüren, M. N.; Pellizari, V. H.; Comasseto, J. V., Development of a static headspace gas chromatographic/mass spectrometric method to analyze the level of volatile contaminants biodegradation. *Journal of Chromatography A* **2004**, 1048, (1), 67-71.

REPRESENTATIVE POSTERS AND ORAL PRESENTATIONS

- J. Peña-Bahamonde, V. San Miguel, J.C. Cabanelas, **D.F. Rodrigues**. Biodegradation and stability effect in PSU nanocomposites adding rGO nanosheets. Pannano-2017. Guarujá, Brasil. Nov, 2017.
- Bandara, P.C., Nadres, E., **Rodrigues, D. F.**, Development of Multifunctional Nanocomposite Coating for Indirect Potable Reuse Water Treatment, 6th Sustainable Nanotechnology Organization Conference in Los Angeles, November 2017.
- Bandara, P.C., Nadres, E., **Rodrigues, D. F.**, Development of Multifunctional Nanocomposite Coating for Indirect Potable Reuse Water Treatment, 3rd Graduate Research and Scholarship Projects Day in Houston, November 2017.
- Bandara, P.C., Nadres, E., **Rodrigues, D. F.**, Development of Multifunctional Nanocomposite Coating for Indirect Potable Reuse Water Treatment, 1st PanNano conference in Sao Paulo, November 2017.
- Ansari, A., Cao, B., Yi, X., Hu, Y. & **Rodrigues, D. F.**, Investigating the effect of graphene oxide on scaling in thin-film composite polyamide reverse osmosis membrane, 6th Sustainable Nano Organization Conference in Los Angeles, November 2017.
- J. Peña-Bahamonde, V. San Miguel, H. Nguyen, R. Ozisik, D. F. Rodrigues, J. C. Cabanelas. Antimicrobial properties of RGO modified with Polysulfone Brushes and their nanocomposites. European Graphene Forum. Paris, France. Jun, 2016
- Rodrigues, D.F.**; "Chitosan-based Polyethyleneimine Graphene Oxide Nanocomposite Beads for Heavy Metal Treatment of Electroplating Wastewater". IWA Nano & Water Specialist Conference: Addressing the Water-Energy-Food Nexus, May 16-18, 2016 (invited talk).
- Nguyen, H. N. & **Rodrigues, D. F.**, Acute Toxicity of Graphene to Activated Sludge, Texas water at student forum in Fort Worth, April 2016.

- Nguyen, H. N. & **Rodrigues, D. F.**, Acute Toxicity of Graphene to Activated Sludge, International Conference on Environmental Science and Technology in Houston, June 2016.
- Rodrigues, D.F.**; Ngyen, H.; Ahmed, F." Acute Impact of graphene and graphene oxide on wastewater treatment processes" 5th Sustainable Nanotechnology Conference, Orlando, Florida, November 10-12, 2016 (invited talk)
- Nadres, E. T.; **Rodrigues, D. F.** "Simultaneous nitrate and phosphate removal from drinking water using immobilized polyethyleneimine" 8th International Conference on Environmental Science and Technology, Houston, TS, United States, June 6-10, 2016 (2016).
- Perez, J.V; Dalida, M.L.P.; **Rodrigues, D. F.** Optimized Synthesis of Polymer-based Graphene Oxide Nanocomposites for Heavy Metal Adsorption using Response Surface Methodology. 8th International Conference on Environmental Science and Technology, Houston, TS, United States, June 6-10, 2016 (2016).
- GM Santos, FI de Santi Ferrara, F Zhao, **DF Rodrigues**, WC Shih. Photothermal inactivation of bacteria on plasmonic nanostructures. Proc. SPIE 9724, Plasmonics in Biology and Medicine XIII, 97240D (April 22, 2016); doi:10.1117/12.2213191.
- Rodrigues, D.F.** & Onal, T.O. CO₂ Sequestration through Microbially-Induced CaCO₃ Precipitation (MICP) using Ureolytic Aquatic Microorganisms. 251st ACA National Meeting, San Diego, CA, March 13-17, 2016. (invited talk)
- Rodrigues, D.F.** Environmental impact of carbon-based nanomaterials released during nanocomposite biodegradation. U.S. Air Force. Dalton, OH. Jan 28th 2016 (invited talk).
- Rodrigues, D.F.** Impact of Nanomaterials on Environmental Microbial Communities: perspectives for Future applications Texas A&M University-Kingsville. October 7th 2015 (invited talk).
- Rodrigues, D.F.** CO₂ Sequestration through Microbially-Induced CaCO₃ Precipitation (MICP) using Ureolytic Aquatic Microorganisms. Johns Hopkins University. Nov. 17th 2015. (invited talk)
- Rodrigues, D.F.** & Mejias, I.E.C. Copper removal by bioadsorption: A biotechnology approach. 249th ACS National Meeting, Denver, CO, March 22-26, 2015.
- Nguyen, H. N. & **Rodrigues, D. F.**, Acute Toxicity of Graphene to Activated Sludge, Gordon Research Seminar: Environmental Nanotechnology, West Dover, VT, June 20-21, 2015.
- Nguyen, H. N. & **Rodrigues, D. F.**, Acute Toxicity of Graphene to Activated Sludge, Graduate Research and Scholarship Projects Day, University of Houston, Houston, TX, October 30rd, 2015.
- Nguyen, H. N. & **Rodrigues, D. F.**, Acute Toxicity of Graphene to Activated Sludge, Fourth Annual Conference of Sustainable Nanotechnology Organization, Portland, OR, November 8-10, 2015.
- TJ Cutright; LN Williams; LT Coats; **DF Rodrigues**; JE Puskas; FJ Claydon. Easing the Tortuous Road that Under-represented Minorities take to Be Engineering Faculty. 122nd ASEE Annual Conference & Exposition, June 14-17, 2015. Seattle, WA. Paper ID#: 11279.
- RP Medina, FC Ballesteros, **DF Rodrigues**. 2015. The influence of physical configuration in the performance of chitosan-poly(acrylic acid) hydrogel beads as adsorbent. 14th International Conference on Environmental Science and Technology. Rhodes, Greece. Paper ID#: cest2015_00688.
- CD Grande T., J Mangadlao, B Tiu, AD León, F Jingjing, **DF Rodrigues** and RC Advincula. 2014. Chitosan/graphene oxide nanocomposite membranes with antimicrobial activity. XIV SLAP/XII CIP 2014, October 12-16th, 2014, Porto de Galinhas, Brazil. Paper ID#: O3-8.
- LV Monsalve, J Mangadlao, RC Advincula, F Jingling, **DF Rodrigues**, M Valencia, CD Grande 2014. Evaluation of chitosan films supplemented with essentials oils of Colombian oregano (*Origanum vulgare* L.) and rosemary (*Rosmarinus officinalis*) plants as antimicrobial and antioxidant agents. XIV SLAP/XII CIP 2014, October 12-16th, 2014, Porto de Galinhas, Brazil. Paper ID#: O4-20.
- Fan, J.; **Rodrigues, D.F.** Photocatalytic Antimicrobial Properties of 1T-MoS₂ and 2H-MoS₂ in the presence of electron donor and visible light. Sustainable Nanotechnology Organization (SNO). Boston, MA, Nov. 2-4, 2014.
- Rodrigues, D. F.**, Mejias, I.C. Graphene oxide functionalized with ethylenediamine triacetic acid for heavy metal adsorption and anti-microbial applications. Sustainable Nanotechnology Organization (SNO). Boston, MA, Nov. 2-4, 2014.
- Rodrigues, D.F.** Impact of Nanomaterials on Environmental Microbial Communities: perspectives for Future applications. Georgia Institute of Technology. Atlanta, GA, March 13th, 2014. (invited talk)
- Rodrigues, D.F.** Environmental Engineering Implications and applications of carbon-based nanomaterials. University of Southern California. Los Angeles, CA, March 10th, 2014. (invited talk)
- Rodrigues, D.F.** Environmental Engineering Implications and applications of carbon-based nanomaterials. University of Washington. Seattle, WA, February 24th, 2014. (invited talk)
- Rodrigues, D.F.** Environmental Engineering Implications and applications of carbon-based nanomaterials. Princeton University. Princeton, NJ, February 17th, 2014. (invited talk)

- Rodrigues, D.F.** Sustainable Application of Nanocomposites for the Water and Energy Nexus. Rice University, Houston, TX, February 14th, 2014. (Invited talk)
- Rodrigues, D.F.**, Environmental Applications of graphene oxide nanocomposites on surfaces. Sustainable Nanotechnology Organization (SNO). Santa Barbara, CA, Nov. 2-5, 2013.
- Onal, T.O.; Bala, R.K.; Atalay, R.; Bayam, Y.; **Rodrigues, D.F.** Fast Growth of ZnO Nanorods and Their Antimicrobial Properties . IEEE 7th International Conference on Nano/Molecular Medicine and Engineering. Phuket, Thailand, November 10 – 13, 2013. (**Conference paper**)
- Ahmed, F. and **Rodrigues, D.F.** The Impact of Graphene Oxide on aquatic biogeochemical cycle, World Environmental and Water Resource Congress, Cincinnati, Ohio, May 19-23, 2013.
- Ahmed, F. and **Rodrigues, D.F.**, Investigation of acute effects of graphene oxide on wastewater microbial community: A Case Study, Gordon Research Conference on Environmental Nanotechnology, Stowe, Vermont, June 2-7, 2013.
- Onal Okay, T.; **Rodrigues, D. F.**, Microbial calcium carbonate precipitation and its contribution to the environment. University Forum at Texas Water 2013, WEAT and Texas Section AWWA Annual Conference, April 9-12, 2013, Galveston, TX.
- Ahmed, F.; **Rodrigues, D.F.** Investigation of acute toxicity of Graphene Oxide on wastewater microbial communities and related short term effects on wastewater treatment process performance: a case study on Sims South Bayou wastewater treatment plant, Houston, Texas . University Forum of Texas Water Exhibition , April 09-12, 2013, Galveston, Tx.
- Onal Okay, T.; **Rodrigues, D. F.**, Application of response surface methodology for the optimized precipitation of calcium carbonate using *Sporosarcina pasteurii*. Annual Fall Meeting of the Texas Branch of the American Society for Microbiology, October 18-20, 2012, Waco, TX.
- Rodrigues, D. F.** Ahmed. Application of membranes containing single-walled carbon nanotube-polymer nanocomposites for water treatment. 68th Southwest Regional Meeting of the American Chemical Society, November 4-7, 2012, Baton Rouge, LA.
- Ahmed, F.; **Rodrigues, D.F.** Application of Electroactive PVK-SWNT Nanocomposite as Effective Antimicrobial Coating Material for Membrane Filter. University Forum of Texas Water Exhibition , April 10-13, 2012, San Antonio, Tx.
- Rodrigues, D.F;** Ahmed, F.; Santos, C.M. PVK-SWNT and PVK-MWNT coated stainless steel for prevention of microbial growth and corrosion. ASME 2012, November 15th, 2012. Houston, TX.
- Carpio, I.E., C.M. Santos, R.C. Advincula, **D.F. Rodrigues**. Environmental Engineering applications of graphene oxide nanomaterials: 243rd ACS National Meeting & Exposition, March 25-29th, 2012. San Diego, CA.
- Rodrigues, D.F.** Applications of graphene oxide nanomaterials on surfaces. 32nd PAASE Meeting, May 5th, 2012, Houston, TX.
- Rodrigues, D. F.** Environmental Engineering applications of carbon-based nanomaterials. University of Texas San Antonio, April 6th 2012, San Antonio, TX.
- Ahmed, F.; Santos, C.M.; Advincula, R.; Rodrigues, D.F. Protection of Stainless Steel Surfaces Against Biofilm Formation and Corrosion by Nanocomposite Coatings. 6th International Conference on Environmental Science and Technology, June 25-29, 2012, Houston, TX.
- Ahmed, F., D.F. Rodrigues. Application of Electroactive PVK-SWNT Nanocomposite as Effective Antimicrobial Coating Material for Membrane Filter. Texas Water, April 10-13th 2012, San Antonio, TX.
- Claydon, F.; Long, S.; **Rodrigues, D.F.** Research Experience for Teachers (RET) site at the University of Houston (UH) “ Innovations in Nanotechnology”. National Science Foundation Engineering Education Awardees Conference, March 4-6th, 2012. Arlington, Virginia.
- Santos, C.M., R.C. Advincula, **D.F. Rodrigues**. Fabrication and antibacterial applications of carbon nanomaterial containing polymer based nanocomposites: 243rd ACS National Meeting & Exposition, March 25-29th 2012, San Diego, CA.
- Borba, T. R., S. K. Sakata, R.V.P. Ferreira, M. H. Bellini, **D. F. Rodrigues**, J. T. Marumo. Application of Bacteria to Remove Americium from Radioactive Liquid Waste: WM2011 Conference, February 27 - March 3, 2011, Phoenix, AZ.
- Ahmed F., C. M. Santos, K. M. Cui, R.C. Advincula, **D. F. Rodrigues***. Antimicrobial Properties of Membrane-filters modified with carbon-based nanomaterials: IWA (International Water Association) Conference, 15-18 May 2011, Monte Verita, Switzerland. (*Invited speaker)
- Rodrigues, D.F.**, 2010. Microbial Interactions with Carbon nanotubes: from single cells to biofilms. *In:* University of Houston, Houston, July 23th. (Invited speaker for the UH-AGEP program).
- Rodrigues, D. F.**, 2009. Microbial Interactions with Carbon nanotubes: from single cells to biofilms. *In:* University of Texas, San Antonio, March 19th. (Invited speaker).

- Rodrigues, D. F.**, 2009. Microbial Interactions with Carbon nanotubes: from single cells to biofilms. *In*: University of Delaware, March 11th. (Invited speaker).
- Rodrigues, D. F.**, 2009. Biogeography, Diversity, and Physiology of Extreme Microbes. *In*: Southern Illinois University, Carbondale, January 29th. (Invited speaker).
- Rodrigues, D.F.**, 2009. Microbial Interactions with Carbon nanotubes: from single cells to biofilms. *In*: University of California, Los Angeles, January 27th. (Invited speaker).
- Rodrigues, D. F.**, Elimelech, M. 2008. Influence of D-mannose on Biofilm Formation. *In*: Gordon Research Conference on Environmental Sciences: Water, Holderness, NH, June 22-27.
- Rodrigues, D.F.**, Elimelech, M. 2008. Influence of Carbon Source on Biofilm Formation. *In*: 235th ACS meeting, New Orleans, April 10th.
- Rodrigues, D.F.**, H.L. Ayala-del-Río, D. Gilichinsky, V.H. Pellizari, E.C. Jesus, L. Sepulveda-Torres, J.M. Tiedje. 2007. Is the Bass-Becking Hypothesis true: "The Environment Selects and is Responsible for Spatial Variation in Microbial Diversity?". Amer. Soc. Microbiol. General Meeting, Toronto, Canada. # N-026.
- Rodrigues, D. F.**, Ivanova, N. & Tiedje, J.M. 2006. Metabolism inference from the genome of *Exiguobacterium sibiricum* sp. isolated from the Siberian permafrost [Abstract]. Amer. Soc. Microbiol. General Meeting, Orlando, FL. # K-080.
- Rodrigues, D.F.**, H.L. Ayala-del-Río, C.-J. Lin, D. Gilichinsky, J.M. Tiedje. 2006. Detection and Quantification in the Siberian permafrost of *Exiguobacterium* sp. and *Psychrobacter* sp. through quantitative real-time PCR. *In*: International Conference on Alpine and Polar Microbiology, Innsbruck, Austria, March 27-31.
- Rodrigues, D.F.**, C.J. Lin, N.K. Rehman, D. Gilichinsky, J.M. Tiedje. 2005. *Exiguobacterium* spp. abundance in the Siberian permafrost. Abstract 39. *In*: The Joint International Symposia for Subsurface Microbiology (ISSM 2005) and Environmental Biochemistry (ISEB XVII), Jackson Hole, WY, Aug. 14-19.
- Vishnivetskaya, T. A., R. Ramaley, **D. F. Rodrigues**, J. M. Tiedje, and S. Kathariou. 2005. *Exiguobacterium* from frozen subsurface sediments (Siberian Permafrost) and other sources have growth temperature ranges reflective of the environmental thermocline of their origin. Abstract 254. *In*: The Joint International Symposia for Subsurface Microbiology (ISSM 2005) and Environmental Biogeochemistry (ISEB XVII), Jackson Hole, WY, August 14-19.
- Rodrigues, D.F.**, J. Goris, M.F. Thomashow, J.M. Tiedje. 2005. Phylogeny of three *Exiguobacterium* isolates from Arctic permafrost. *Astrobiology* 5:264.
- Gilmour J.S., **D. Rodrigues**, J.M. Tiedje, D.M. Lubman, M.F. Thomashow. 2002. Changes in Gene Expression in Response to low temperature in two *Psychrobacter* isolates from Arctic Permafrost. *Astrobiology* 2: 549.
- Rodrigues, D.F.**, A. C. Lopez, G.T. Yogui, R.C. Montone, M. Bicego, G. Manfio, V.H. Pellizari. 2001. Isolation and characterization of hydrocarbons and polychlorinated biphenyl bacterial consortia from Santos Estuary. *In*: XXI Brazilian Conference in microbiology. Foz do Iguaçu, RS, Brazil.
- Gilson, P.M., V.H. Pellizari, V.M. de Oliveira, R.F. Vazoller, A. Conationi, **D.F. Rodrigues**, G. Bellincanta, F.F. Piza, C. R. Nakayama, F. Talarico. 2000. Diversity of aerobic organochlorine-degrading bacteria in nature. *In*: I Biota/FAPESP program symposia. São Paulo, Brazil.
- Rodrigues, D.F.**, B.A. Matos, A. Pacheco, V.H. Pellizari. 2000. Transport and retention of coliphage T4 in soil Columns from a Cemetery in São Paulo, Brazil. *In*: International Water Association Health - Related Water Microbiology Symposium. Paris, France. July 3-7.
- Rodrigues, D.F.**, G.B. Ghion, A. Rubin, R. Montone, R.R. Weber, V.H. Pellizari. 1999. Characterization and degradation ability of bacteria isolated from Antarctica. *In*: The Joint 1^o International Scientific Initiation Symposia and 7^o Scientific Initiation of University of São Paulo, Brazil.
- Rodrigues, D.F.**, M.R. Passos-Bueno. 1996. Leporine lips and cleft palates gene association in the Brazilian population. *In*: 4^o Scientific Initiation of University of São Paulo, Brazil.

PATENTS

- 1) **Rodrigues, D.F.** "Nanocomposite hydrogel polymer beads for water purification". US Patent App. 62/009,060, 2014.
- 2) **Rodrigues, D.F.**; Advincula, R.; Claydon, F.; Santos, C.; Tria, M.C. "Nanocomposite PVK-graphene based nanomaterial filters for the simultaneous removal of bacteria and heavy metal". WO Patent 2,013,039,895, 2013.
- 3) **Rodrigues, D.F.**; Advincula, R.; Claydon, F.; Santos, C.; Tria, M.C. "Nanocomposite polymer-carbon based nanomaterial filters for the simultaneous removal of bacteria and heavy metals". US Patent App. 13/609,179, 2012.

BOOKS and BOOK CHAPTERS:

1. Bakermans, C., P. W. Bergholz, **D. F. Rodrigues**, T. A. Vishnivetskaya, H. L. Ayala-del-Rio, and J. M. Tiedje. 2012. Genomic and expression analyses of cold-adapted microorganisms. In L. G. Whyte and B. Miller (ed.), Polar Microbiology. ASM Press, Washington, DC.
2. Santos, C.M.; Tria, M.C.R.; Foster, E.; Advincula, R.C.; **Rodrigues, D.F.** Carbon-based polymer nanocomposites: From preparation to antimicrobial applications. In: Munoz-Bonilla, A.; Cerrada, M.L.; Fernandez-Garcia M., 2014, Polymeric Materials with antimicrobial activity: From synthesis to applications. Published by the Royal Society of Chemistry. ISBN: 9781849738071
3. Tiquia-Arashiro, S; **Rodrigues, D.F.** Extremophiles: Applications in Nanotechnology. 2016. Published by Springer Nature.
4. Nadres, E.T.; Fan, J.; **Rodrigues, D.F.** Toxicity and Environmental Applications of Graphene-based Nanomaterials. In: Gonçalves, G.; V., Mercedes; Marques T; 2016. The new paradigm of graphene-based materials in medicine and environment. Published by Springer- International Publisher.

TEACHING AND MENTORING EXPERIENCE

- 2010- 2013 **University of Houston:**
 - Instructor for CIVE 6391, CIVE 4331, and CIVE 7397-1 (Advanced Environmental Engineering Microbiology) and CIVE 7397-2 (Water Quality).
 - Supported and helped Ph.D. students to obtain scholarships, such as, the LHSAMP scholarship, the Texas Association of Environmental Professionals (TAEP) scholarship and the Rotary Ambassadorial Scholarship to gain experience abroad in a Brazilian University for one year.
 - Supported and helped undergraduate students to obtain UH-SURF, UH-LHSAMP, and PURS fellowship. The student (Alex Leon) poster presentation (2011) received a certificate award in the undergraduate research day at UH.
 - Participated in a NSF STEP pilot project that focused on retention of a much greater at-risk undergraduate population, freshmen female engineering majors, through a 3- month long research project related to the Grand Challenges in Engineering from the National Academy of Engineers.
 - Prepared workshops to help high school teachers in the development and implementation of learning theory-based nanotechnology modules for their classroom as part of the NSF Research experience for teachers project. Hosted 2 teachers in my laboratory to conduct research in the field of nanotechnology. A short video of the RET activity in my research laboratory can be found in the following website: <http://www.youtube.com/watch?v=eIWnHNqfuzk>.
 - Mentored four high school students. One of the high school students (Ms. Maddy Landon) is currently pursuing a college degree in Engineering at Yale University, the other high school student (Manvitha Katta) won 1st place in the Environmental Sciences category and also won the Grand Award at the Science and Engineering Fair of Houston. This Grand Award is only given to the best projects at the entire fair.
- 2007-2009 **Yale University:** supervises three Ph.D. students and one undergraduate student in their projects.
- 2004-2006 **Michigan State University:** Mentored and supervised two undergraduate research assistants in their senior theses.
- 2004 (Spring) **Michigan State University,** Graduate Teaching assistant:
Served as a lecturer assistant and taught a Bioinformatics laboratory in Microbial Genomics (MMG 433).

- 1999-2001 **University of São Paulo, Brazil:**
 - Instructor for an “Environmental Microbiology” course at Santo Amaro University (2000).
 - Member of the Undergraduate Senior Thesis Committee. Responsible for tutoring, supervising and training an undergraduate student for her senior thesis project (2000).
 - Graduate Teaching Assistant for a workshop entitled: "Sanitary Microbiology Fundamentals: Practical Aspects" (1999).
- 1999 **Applied School of FEUSP:** taught biology classes for Junior High (6th grade) and High School (12th grade).

STUDENTS ADVISED:

Post-docs:

Felipe Ibañez, Ph.D. (2 years)
 María Rodríguez-Moyá, Ph.D (6 months)
 Enrico Nadres, Ph.D. (3 years)
 Ying Zhou, Ph.D. (2 years)
 Janire Peña-Bahamonde, Ph.D. (1 year)

UH- PhD students:

Dr. Farid Ahmed (defended in July 2013)
 Dr. Isis Carpio (defended in July 2014)
 Dr. Tugba Onal Okyay (defended in April 2015) – 2nd best Cullen College of Engineering Dissertation Award
 Dr. Hang Nguyen (defended in July 2017)
 Ms. Jingjing Fan (started Ph.D. in Aug. 2013)
 Mr. Pasan Bandara (started Ph.D. in Aug. 2014)
 Mr. Ali Ansari (started Ph.D. in Aug. 2016)
 Mr. Benjamin Emley (started Ph.D. in Aug. 2015)
 Mr. Sachin Paudel (started Ph.D. in Aug. 2017)
 Ms. Sofia Fanourakis (started Ph.D. in Aug. 2017)

UH-M.S. Students:

Ms. Caitlin Carrigan (defended M.S. in July. 2015)
 Ms. Jingjing Fan (defended M.S. in May 2013)

UH and non-UH Undergraduate students (REU):

Mr. Alex Leon (published 1 article) – SURF scholar (2011)
 Ms. Krystal Gutierrez (2012) (Published 1 article)
 Mr. Mark Sharpe – PURS and LHSAMP scholar (2012)
 Ms. Yolci Ruiz Velazquez – PURS scholar (2013)
 Ms. Sarah Rai – NSF REU scholar (2014)
 Ms. Kelly Hainline – NSF REU scholar (summer 2014)
 Ms. Lauren Blake – NSF REU scholar (spring 2014)
 Ms. Mariana Reis Monteiro da Cruz– Sciences without Frontier (CNPq- Brazil) (Spring and Summer 2015)
 Ms. Francielle França – IIE- Brazil Scientific Mobility Program (Summer 2015)
 Ms. Minh Đổ - WAVVE Stream Scholarship (Fall 2015) and PURS (Spring 2016)
 Ms. Sujata Gautam (Spring 2016)
 Mr. Yuri Finotti Ribeiro Mendes - IE- Brazil Scientific Mobility Program (Summer 2016)
 Mr. Mateus Padua - IE- Brazil Scientific Mobility Program (Summer 2016)
 Ms. Brittany Trinh – SURF Scholar (summer 2016) and Fall 2016, Spring 2017
 Mr. Matthew Gage Murray (Fall 2016)
 Ms. Olivia Kuligowski- REU (Spring 2017)
 Mr. Aaron Perez (Spring 2017)
 Ms. Tayler Hedtke (Spring 2018)

Ph.D. visiting students working in my research laboratory:

Ms. Yvonne Musico (2012- 2013) – Thesis co-advisor University of Philippines Diliman

Mr. Ruji Medina (2012- 2013)- Thesis co-advisor University of Philippines Diliman
Mr. Aries A. Arcega (February 2014- July 2015) - Thesis co-advisor University of Philippines Diliman
Ms. Natália R. Guimarães (July-Dec. 2014) – University of Sao Paulo, Brazil
Ms. Jem Perez (2014-2015) - Thesis co-advisor University of Philippines Diliman
Mr. Fatih Aksoy (2015-2016) - Izmir Katip Celebi University, Turkey
Ms. Janire Peña-Bahamonde (Fall 2015 and Fall 2016) - University Carlos III of Madrid. Leganés, Madrid, Spain
Mr. Rodrigo Cardoso de Oliveira (2015-2016) – University of Sao Paulo, Brazil
Ms. Louise Hase Gracioso (summer and Fall 2016) - CEPEMA POLI-USP, Brazil
Ms. Rheamay V. Antonio (August 2016 to 2018)- Thesis co-advisor University of Philippines Diliman
Mr. Louie Anciado Lapenas (January 2017 to January 2018)- Thesis co-advisor University of Philippines Diliman
Ms. Okozide Osekokhune (July 2017 -December 2017)
Ms. Salametu Saibu (July 2017-2017)

- **High School Teachers (summer):**

Jennifer Dietz (Galena Park High School) (2012 and 2013)
Ashley I. Buhring (North Shore Senior High School) (2011)
Anne Marie Norman (2014 and 2015)
Marjorie Hernandez (2016)

- **High School Students (summer):**

Ms. Maddy Landon (2011)
Mr. Yanni Economou (2011)
Ms. Manvitha Katta (2012)
Ms. Avanthika Gopal (2013)
Mr. Dixie Cooper (2013 and 2014)
Ms. Natash Turkmani (2013)
Mr. Jay Swarup (2014 and 2015)
Mr. Howard Yong (2016)
Mr. Akash Tarkunde (2016)

VISITING FACULTY:

- Prof. Liqiu Zhang (Guangzhou University, China) -2015-2016
- Prof. Shugeng Li (Guangzhou University, China)
- Prof. Clemencia Chaves Lopez (Università degli Studi di Teramo, Italy) 2015

AWARDS AND FELLOWSHIPS

- FAPESP (Brazil): Graduate Research Fellowship (2000-2002).
- FAPESP (Brazil): Research Support Fellowship (2000).
- CNPq – Brazilian Antarctic Program (Proantar) (Brazil): Antarctic research fellowship (2000).
- CNPq-PIBIC (Brazil): undergraduate research fellowship (1998)
- CNPq-PIBIC (Brazil): undergraduate research fellowship (1995)
- Michigan State University: graduate research assistantship (USA) (2002-2007)
- Marvis A. Richardson Fellowship (USA) (2006)
- Gordon Research Conference on Environmental Sciences: Water (USA): Travel award (2008)
- AEESP meeting (USA): Travel award (2009)
- IWA Specialist Conference on Applications of Nanotechnology in the Water Sector fellowship: Travel award (2011)
- ASCE ExCEEd Fellowship (USA) (2011)
- Distinguished Faculty Scholar Award from the University of Houston Commission on Women (2013)
- UH Cullen College of Engineering Outstanding Teaching Award (2013)
- UH CEE Outstanding faculty award (2013)
- UH President letter of appreciation for my commitment to the institution and UH students (2014)
- Recipient of the Certificate of Appreciation from the Wolff Center for Entrepreneurship for supporting and mentoring undergraduate students (2014)

- Recipient of Certificate of Excellence in recognition of extraordinary achievements by the UH Provost (2014)
- NSF RET (Research experience for teachers) outreach Program earned the Spot on the U.S. President's Higher Education Community Service Honor Roll (2014)
- Sustainable Nanotechnology Organization Emerging Investigator Award (2014)
- U.S. Dept. of Energy C3E Research Award (2016)
- Civil/Environmental Award honoree for the 28th HENAAC Conference (2016)
- UH Energy Fellow (2016-2017)
- Certificate of Outstanding Reviewer for Environmental Science: Nano Journal (2017)
- Outstanding Reviewer for the Environmental Science & Engineering Journal (2017)

PROFESSIONAL ACTIVITIES

1) Professional organization activities:

- Lecture Committee Member for AEESP (2014-2017)
- Co-chair of the Lecture committees for AEESP (2016-2018)
- WEFTEC Subcommittee Assistant Chair (2016-2018)
- Session chair at the Environmental Challenges and Innovations conference (2011)
- Session chair at the Sustainable Nanotechnology Organization Conference (2016)

2) Editorial Board Member:

Journal of Bioremediation & Biodegradation (Omics publishing group)
Environmental Science: Nano (Royal Society of Chemistry) since September 2016

3) Professional Memberships:

Member of the American Society for Microbiology (ASM), Association of Environmental Engineering and Science Professors (AEESP), American Society of Civil Engineers (ASCE), and International Society for Microbial Ecology (ISME), International Water Association (IWA), American Society for Engineering Education (ASEE), American Chemical Society (ACS)

4) Ad Hoc Reviewer for Scholarly Journal: *Environmental Science and Technology, Applied and Environmental Microbiology, FEMS Microbiology Letter, FEMS Microbiology Ecology, Journal of Biotechnology, Antarctic Science, Current Microbiology, Journal of Basic Microbiology, Global Research Journal of Microbiology, Biofouling, Extremophiles, Open Forensic Science Journal, Journal of Environmental Informatics, RSC Advances, Soft Matter, Colloids and Surfaces B: Biointerfaces, Analytical Methods, Journal of Zhejiang University Science B, International Journal of Ambient Energy, nanoscale, Langmuir, Toxicology Research, ACS nano, Journal of Materials Chemistry, Analyst, Journal of Hazardous materials, Carbon, Analytical Chemistry, Water Research, ACS Applied Materials & Interfaces, Chemical Engineering Journal, Science of the Total Environment, polymers, metallomics, Applied Microbiology and Biotechnology, International Biodeterioration & Biodegradation, Environmental Science and Pollution Research, chemosphere, BMC Genomics, Bioresource Technology, Water, Air, & Soil Pollution, Analytical Methods, Environmental Engineering Science, Water Environment Research, Environmental Chemistry Letters, ES&T Letters, PLOS ONE, Applied Surface Science, Ecological Engineering, ACS Sustainable Chemistry & Engineering, Industrial & Engineering Chemistry Research, Ecotoxicology and Environmental Safety, Journal of Microbiological Methods, Materials Research Bulletin.*

5) Ad Hoc Reviewer for Grant Proposals

Served in the NSF, NASA and NIHEHS review panels, Antarctica New Zealand Program, the Chinese Research Fund for the Control of Infectious Diseases/Health and Health Services Research Fund, Proposal reviewer for the Maryland Industrial Partnerships Program at the University of Maryland, and United States- Israel Binational Science Foundation, China-Israel Cooperative Scientific Research program, COST Swiss program from the State Secretariat for Education Research and Innovation SERI.