CURRICULUM VITAE

NAME	POSITION TITLE
Norma Arcelia Alcantar	Professor in Chemical, Biological, and Materials Engineering

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
University of California, Dept of Chem Eng & Mat Sci/UC Davis & Mat Res Lab/UCSB, CA, USA	Post-Doc	2001	Surface Science and Materials Science
University of California at Santa Barbara, Dept. of Chem. Engineering, (UCSB), CA, USA	Ph.D.	1995 - 2000	Interfacial Science/ Chemical Engineering
National Autonomous University of Mexico (UNAM), School of Chemistry, Mexico City, MEX	B.S.	1989 - 1993	Chemical Engineering

PROFESSIONAL POSITIONS

2022–present	**Board of Directors Member** of Synapse Florida Inc.
2020–present	**Member-at-Large** of the USF-Chapter Advisory Board of the National Academy of Inventors.
2020-present	**Member of the Council for Racial Justice**, University of South Florida (USF).
2017–present	**Board of Directors** of the USF Foundation, INC.
2015–present	**Professor**, Department of Chemical & Biomedical Engineering, USF.
2020-2023	**Member of the BME Organizations Leading Diversity** (BOLD)
2020-2022	**Chair of the Committee of Underrepresented Minorities**, American Institute of Medical and Biological Engineering, AIMBE.
2020-2021	**USF Faculty Senate** – Senator representative of the College of Engineering (CoE).
2018–2019	**President** of the USF-Chapter Advisory Board of the National Academy of Inventors.
2017–2022	**Member-at-Large** of the Engineering Section of the American Association for the Advancement of Science, AAAS.
2017–2018	**Vice-President** of the USF-Chapter Advisory Board of the National Academy of Inventors.
2012–2015	**USF Faculty Senate –** Senator representative of the CoE.
2013–2017	**ERAC** (Engineering Research Advisory Council) and **FGC** (Faculty Governance Committee -CoE).
2011– Present	**Director**, Materials Science and Engineering, Graduate Certificate, USF.
2009– Present	**Co-Director**, Water, Health and Sustainability Program, Graduate Certificate, USF.
2009–2015	**Associate Professor**, Department of Chemical & Biomedical Engineering, USF.
2007–2009	**Advisory Board Member,** Engineering representative - Patel Center for Global Solutions-USF.
2003–2009	**Assistant Professor –** Department of Chemical Engineering at the University of South Florida (USF). Green chemistry, interfacial phenomena, and bioengineering.
2002–2003	**Research Assistant –** Materials Research Laboratory (MRL) at UCSB. Interfacial Science.
2000–2001	**Post-doctoral Researcher –** Chem. Eng. & Mat. Dept. at UC-Davis and MRL at UCSB.
1999–2000	**Consulting Researcher –** SurForce Corporation. Clients included DOW Chemicals and Rockwell Scientific Center. Santa Barbara, CA, USA.
1994–2000	**Graduate Student Researcher –** Department of Chemical Engineering. University of California, Santa Barbara, CA. *Dissertation title:* "Plasma assisted synthesis and characterization of biocompatible surface coatings." Advisors: Professors Jacob Israelachvili and Eray Aydil.
1993–1994	**Graduate Student Researcher –** Department of Chemical Engineering, School of Chemistry. UNAM, Mexico City, Mexico.
1993–1994	**Lecturer –** Chemistry School. UNAM, Mexico City, Mexico.

PROFESSIONAL ACTIVITIES

2022	Programing Chair of the International Materials Research Congress, Cancun, Mexico, August 14-19, 2022.
2021	Organizer, Virtual Summit for Equity and Anti-racism in Academia: A roadmap to policy transformation in Biomedical Engineering, AIMBE-BMES, (https://aimbe.org/diversity-summit/) January 28-29, 2021.
2019	Co-Organizer, Tribute to Jacob Israelachvili I (Invited Talks), AIChE Annual Meeting, November 10-15, 2019, Orlando, Florida.
2019	Guest Editor, Langmuir, 2019, Intermolecular Forces and Interfacial Science Special Issue, Dedicated to Jacob N. Israelachvili, 1944–2018.
2019	Surface and Interfacial Phenomena Session co-Chair, American Institute of Chemical Engineers (AIChE) National Meeting, Nov 11, Orlando, Florida.
2019	Co-organizer of the Florida Invention Convention, August 8, 2019, USF-Marshall Student Center.
2019	Launching Academics on the Tenure-Track: An Intentional Community in Engineering (LATTICE) Symposium, May 30 - June 2, 2019, Bainbridge Island, Washington. Panels: 1) Getting the Mentoring You Need to Succeed; 2) Improving your Teaching Experience; and 3)Navigating Organizations and Tenure.
2018	Colloids and Surface Forces Session co-Chair, Colloids & Surface Science Symposium 2018, July 10-13, Penn State.
2017	McKnight Annual Fellows Meeting 2017, Panel participant in "*Dementia: A Public Priority and Its Challenges.*" Tampa, Florida, October 14, 2017.
2017	Co-host for the MRS On-Demand Webinar Series on "System Integration of Functionalized Natural Materials", which aired internationally on June 7. Link and details are: MRS Webinar: System Integration of Functionalized Natural Materials, https://www.mrs.org/system-integration-webinar, June 7, 2017, Noon to 1:30 pm EST
2017	Colloids and Surface Forces Session Chair, Colloids & Surface Science Symposium 2017, July 9-13, The City College of New York (CCNY).
2017–2016	Mobilizing the Dream Workgroup (Strategies for Enhancing Faculty Diversity), USF-wide.
2016-2017	Guest Editor, Materials Research Society Bulletin on "*System integration of functionalized natural materials*," May 2017.
2016–2017	Member-at-Large of the Advisory Board of the National Academy of Inventors.
2015–2017	Council on Faculty Issues, USF-wide.
2015	Co-Chair of the Frontiers in Dispersant Science and Technology at the Gulf of Mexico Oil Spill and Ecosystem Science Conference, February 19, Houston, TX.
2015	Speaker at the "*Institute on Teaching and Mentoring*," Washington, DC, October 31st, 2015.
2014	PI, Chair and Organizer of the Colloidal and Interfacial Science, Technology, Engineering and Mathematics, Cancun, MX.
2014	Session Chair: 008. Advances in Dispersant Science and Technology: Molecular Mechanisms, Novel Dispersant Systems, and Environmental Impacts, 2014 Gulf of Mexico Oil Spill and Ecosystem Science Conference Meeting, Mobile, AL, January 26-29, 2014.
2013	Speaker at the "*Compact for Faculty Diversity Institute on Teaching and Mentoring*," Arlington, VA, October 31 – November 3, 2013.
2013	Invited lecturer-Natural Materials Course - PASI on Polymer and Composite Materials from Renewable Resources and Biorefinery: from Chemistry to Applications, San Jose, Costa Rica.

2008	Organizer of the Life Science Applications Session at the 82th ACS Colloids and Surface Science Symposium in North Carolina State Univ.-Raleigh, North Carolina (June 15-18, 2008).
2008	Member, The Alzheimer's Association International Society to Advance Alzheimer Research and Treatment (ISTAART).
2008	Invited panelist at the "Defining our way: Challenges of the Faculty Career for Women" at Virginia Commonwealth Univ. School of Engineering, Richmond VA (June 5-7, 2008).
2008	Guest Editor for Langmuir. Special Issue in Molecular and Surface Forces. (Volume 24, Number 4, February 2008).
2007–2008	Advisory board member in Engineering for the Patel Center for Global Solutions-USF.
2007	Session Chair: Surface Interactions in Biomaterials (08B14) American Institute for Chemical Engineers (AICHE), National Meeting, Salt Lake City, UT.
2005–2006	Organizer and PI: International Workshop on Bridging Nanoscale Forces and Interfacial Phenomena to the Macroscopic World, Cancun, MX (May 5-12, 2006).
2006	Session Chair: Biomaterials for Drug Delivery (08B16) and Biomaterials IV (08B13). American Institute for Chemical Engineers (AICHE), National Meeting, San Francisco, CA.
2005	Invited speaker at the International Workshop on Arsenic Contamination and Safe Water, Atomic Energy Centre, Dhaka, Bangladesh.
2005	Session Chair (TF006): Educational Outreach: Teaching Nanotechnology Session, American Institute for Chemical Engineers (AICHE), National Meeting.
2005	Session Chair (TF014): Interfacial Phenomena within Nanomaterial Surfaces, Dispersions, and Composites, AICHE National Meeting.
2005	Presiding Session at the American Chemical Society National Meeting: Green Polymer Chemistry, New Materials.
2004–2005	Speakers Bureau Member. SERVE program. School District Hillsborough County, Tampa, FL.
2004–2006	Research Experience for Undergraduate Students coordinator, ChE USF.
2012– Present	Member, National Academy of inventors.
2004– Present	Member, Biophysical Society.
2003– Present	Member, Society for Women in Engineering (SWE).
1999– Present	Member, American Association for the Advancement of Science (AAAS).
1996– Present	Member, Materials Research Society (MRS).
1996– Present	Member, American Chemical Society (ACS).
1993– Present	Member, American Institute of Chemical Engineers (AICHE).

HONORS AND AWARDS

2022	Outstanding Faculty Award, USF Academic Affairs
2021	Fellow of the American Association for the Advancement of Science (AAAS)
2021	Fellow of the National Academy of Inventors (NAI)
2021	Fellow of the American Institute of Chemical Engineers (AIChE)
2021	Induction to the Florida Inventors Hall of Fame, National Academy of Inventors.
2019	Fellow of the American Institute of Medical and Biological Engineering, AIMBE.
2018	Jewish National Fund Faculty Fellowship.
2017	USF-Outstanding Faculty Award.
2017	Core Fulbright Scholar Award.
2016	Excellence in Innovation Award by the National Academy of Inventors.

2012 Diversity Honor Roll Award-USF 9th Annual Diversity Summit.

2011 Best Poster Competition – 2nd International congress on Sustainability Science and Engineering, ICOSSE'11.

2008 Molecular Conformation Changes of Aß Peptides Induced By Anti-Aß Antibodies. "Hot Topics" oral session at the 11th International Conference on Alzheimer's Disease (ICAD) in Chicago, Il, July 30.

2008 Going Green Tampa Bay Environmental Sustainability Expo 2008-USF, April 15, 2008 (Awarded Runner-up).

2008 Honorable Mention to Presentation in the Materials Processing section. Annual Joint Symposium of the Florida Chapter of the American Vacuum Society (FLAVS) Science and Technology Society and the Florida Society for Microscopy (FSM), March 10-11, 2008, UCF.

2005 USF-Graduate School's Outstanding Thesis Award, mentee: Jeffy Jimenez.

2004 2nd Best poster prize. Second Annual Honors College, Undergraduate Research Symposium at USF.

2004 Honorable Mention in Characterization for the poster "Study of Tribological and Optical Properties of CdSe Nanoparticles Films," University of Central Florida, March 18.

2002 Executive Vice Chancellor International Fellowship, MRL, UCSB. *Construction and surface characterization of hydrogels*. Institute for Microsystem technology, University of Freiburg, Germany, July 4th-August 16th.

2002 2nd Best poster prize. Materials Research Outreach Symposium, MRL, UCSB.

1999 Executive Vice Chancellor International Fellowship, MRL, UCSB. *Protein absorption studies on PEG surfaces*. Laboratory for surface science and technology (LSST), Materials Department, Swiss Federal Institute of Technology (ETHZ), Switzerland, February 28th-March 16th.

1999 Distinguished Contribution. Natl. Collegiate Invention Comp, BFGoodrich.

1995 Teaching assistant instructional grant, Office of Academic Affairs, UCSB.

1994 Education Abroad Program Fellowship. General Office of Acad Affairs, UNAM.

1993 Honorable Mention, Professional Exam, School of Chemistry, UNAM.

PEER-REVIEWED PUBLICATIONS

1. M Wiranowska, R Singh, R Falahat, E Williams, JO Johnson, **N Alcantar**, "Preferential drug delivery to tumor cells than normal cells using a tunable niosome–chitosan double package nanodelivery system: a novel in vitro model," Cancer Nanotechnology 11 (1), 1-20, 2020.
2. F. Guo, D. de Lima Stebbins, R. Toomey, **N. Alcantar**, "Interfacial Phenomena of Natural Dispersants for Crude Oil Spills," Langmuir, 2019, 35, 48, 15904-15913.
3. G. Efe-Sanden, N. Gallant, **N. Alcantar**, R. Toomey, "Adhesion and Particle Removal from Surface-Tethered Poly(N-Isopropylacrylamide) Coatings Using Hydrodynamic Shear Forces," Langmuir, 2019, 35, 48, 15751-15758.
4. Rodriguez-Gonzalez, L., S.L. Pettit, W. Zhao, J.T. Michaels, J.N. Kuhn, **N.A. Alcantar**, and S.J. Ergas, Oxidation of off flavor compounds in recirculating aquaculture systems using UV-TiO2 photocatalysis. Aquaculture, 2019. 502: p. 32-39.
5. Zeinab Veisi, **Norma Alcantar**, and Ryan Toomey, "Responsive Hydrogel Coatings from Pectin Polysaccharides Extracted from Orange Peels and Cacti," August 23, 2019, NANOscientific, Aug 2019.

6. Veisi Z, Gallant ND, Alcantar NA, Toomey RG. Responsive coatings from naturally occurring pectin polysaccharides. Colloids Surf B Biointerfaces. 2019 Apr;176 387-393. doi:10.1016/j.colsurfb.2018.12.060. PMID: 30660012.
7. Thomas, S., & **Alcantar, N.** (2017). "System integration of functionalized natural materials." MRS Bulletin, 42(5), 343-349. doi:10.1557/mrs.2017.90.
8. Falahat, R., M. Wiranowska, R. Toomey, and **N. Alcantar**, ATR-FTIR analysis of spectral and biochemical changes in glioma cells induced by chlorotoxin. Vibrational Spectroscopy, 2016. 87: p. 164-172.
9. Vecino, X., Devesa-Rey, R., de Lima Stebbins, D.M., Moldes, A.B., Cruz, J.M., **Alcantar, N.A.**, Evaluation of a cactus mucilage biocomposite to remove total arsenic from water. Environmental Technology & Innovation, 2016. 6: p. 69-79.
10. Fox, Dawn I., Stebbins, Daniela M., and **Alcantar, Norma A.** (2016). "Combining Ferric Salt and Cactus Mucilage for Arsenic Removal from Water." Environ. Sci. Technol.: DOI: 10.1021/acs.est.1025b04145.
11. K Ghebremichael, S Ergas, **N Alcantar**, "Enhancement of the performance of a biosand filter using Pumice media and natural coagulant Dosing," World Environmental & Water Resources Congress 2016, 256-264.
12. Falahat, R., M. Wiranowska, N.D. Gallant, R. Toomey, R. Hill, and **N. Alcantar**, A Cell ELISA for the quantification of MUC1 mucin (CD227) expressed by cancer cells of epithelial and neuroectodermal origin. Cellular Immunology, 2015. 298(1-2): p. 96-103.
13. W Zhao, Y Zhang, L Rodriguez-Gonzalez, F Zhong, SJ Ergas, **NA Alcantar**, "Removal of Off-Flavor Compounds in Aquaculture Water by Spray-Coated TiO_2 Photocatalysis," Journal of Chemical Engineering Process Technology 6, 237, 2015, 1000237.
14. Daniel Restrepo, Nicholas S. Laconi, **Norma A. Alcantar**, Leigh A. West, Audrey L. Buttice, Saumil Patel, Mark L. Kayton, Inhibition of heparin precipitation, bacterial growth, and fungal growth with a combined isopropanol–ethanol locking solution for vascular access devices, J Pediatr Surg (2014), http://dx.doi.org/10.1016/j.jpedsurg.2014.07.003.
15. Eva Christabel Williams, **Norma A. Alcantar** and Marzenna Wiranowska, Nanoparticle Based Delivery of Therapeutics to Glioma, in Gliomas: Symptoms, Diagnosis and Treatment Options, Nova Science Publishers, Chapter 21, Review Article, 2014, ISBN-13: 978-1626180895.
16. Pettit, SL; Rodriguez-Gonzalez; Michaels, JT; **Alcantar, NA**; Ergas, SJ; Kuhn, JN, Parameters Influencing the Photocatalytic Degradation of Geosmin and 2-Methylisoborneol Utilizing Immobilized TiO_2, Catalysis Letters, Vol. 144 (8), p: 1460-1465, 2014.
17. Daniela Stebbins, Audrey L. Buttice, Dawn Fox, Deni Maire Smith, **Norma A. Alcantar**, Cactus Mucilage as an Emergency Response Biomaterial to Provide Clean Drinking Water, in Monitoring Water Quality, 2013, Ed. Sutinder Ahuja, Elsevier, New York, p. 249-260.
18. Buttice, A. L. and **N. Alcantar** (2014). Sediment Removal with the *Opuntia ficus-indica* Cactus: A Water Purification Method for Communities in Latin America, in Comprehensive Water Quality and Purification. Comprehensive Water Quality and Purification. S. Ahuja. New York, United States of America, Elsevier.
19. Jain, P., R. Muralidharan, J. Sedloff, X. Li, **N. A. Alcantar** and J. P. Harmon (2013). "Processing and Performance of Polymeric Transparent Conductive Composites." International Journal of Polymer Science DOI (845432-10.1155/2013/845432).
20. Williams, Eva Christabel; Toomey, Ryan; **Alcantar, Norma**, Controlled release niosome embedded chitosan system: Effect of crosslink mesh dimensions on drug release, J of biomedical Materials Research Part A, Vol. 100 A (12), p: 3296-3303, 2012.
21. Zhang, Q., D. Durham, **N. Alcantar**, Teaching Sustainability in an Interdisciplinary Environment, Proceedings of ASEE Southeastern Section Conference, Starkville, MS, April 1-3, 2012.
22. Richard, Brandon; **Alcantar, Norma**; Hoff, Andrew; Thomas, Sylvia, Optical properties of ATO sol-gel coated carbon fibers, MRS Online Proceedings Library (2012), 1454 (Nanocomposites, Nanostructures and Heterostructures of Correlated Oxide Systems), 221-226.

23. Sylvia W. Thomas, **Norma A. Alcantar** and Yanay Pais, Electrospinning and Characterization of Novel Opuntia ficus-indica Mucilage Biomembrane, Mater. Res. Soc. Symp. Proc. Vol. 1480, 2012, DOI: 10.1557/opl.2012.
24. Richard, Brandon Demar; **Alcantar, Norma**; Thomas, Sylvia Wilson, Cobalt-Doped Antimony/Tin Oxide Sol-Gels on Carbon-Silicon Layers for Modeling Sol-Gel-Carbon Fiber Interfaces, Japanese J of Applied Physics, Vol. 51 (11), Special Issue, Art. Number: 11PG15, Part 2, 2012.
25. Dawn I. Fox, Thomas Pichler, Daniel H. Yeh, and **Norma A. Alcantar**, Removing Heavy Metals in Water: The Interaction of Cactus Mucilage and Arsenate (As (V)), Environmental Science & Technology, 2012, 46 (8), p. 4553–4559.
26. T Pichler, K Young and **N Alcantar**, Eliminating turbidity in drinking water using the mucilage of a common cactus, Water Science & Technology: Water Supply, 2012, 12.2, p. 179-186.
27. Buttice, A.L., Stroot, J.M., Lim, D.V., Stroot, P.G., and **Alcantar, N.A.**, Removal of Sediment and Bacteria from Water Using Green Chemistry. Environmental Science & Technology, 2010. 44(9): p. 3514-3519.
28. Nguyen, T., N. Hupalo, J. Jimenez, D. Morgan and **N. Alcantar** (2009). "Monitoring A beta Peptides Species Assemble During Their Aggregation Process." Cell Transplantation 18(2): 228-229.
29. Kevin A. Young, Alessandro Anzalone, Thomas Pichler, **Norma Alcantar**. The mucilage of *Opuntia ficus-indica* for use as a flocculant of suspended particulates and arsenic, in Arsenic Contamination of Groundwater: Mechanism, Analysis, and Remediation, edited by Sut Ahuja, John Wiley & Sons (2008), 207-225.
30. Jeffy Jimenez, August J. Heim II, Garrett Matthews, **Norma Alcantar**, Construction and Characterization of Soft-Supported Lipid Bilayer Membranes for Biosensors Application Engineering in Medicine and Biology Society, 2006. IEEE-EMBS 2006, Art. No. EMBC061976.
31. Kevin A. Young, Alessandro Anzalone, Thomas Pichler, **Norma Alcantar**. The mucilage of *Opuntia ficus-indica* for use as a flocculent of suspended solids and arsenic, Materials Science of Water Purification, edited by M.A. Shannon, D. Ginley, A.M. Weiss, Warrendale, PA, 2006, Paper No. 0930-JJ01-01.
32. Meyer E. E., Greene G. W., **Alcantar N. A.**, Experimental investigation of the dissolution of quartz by a muscovite mica surface: Implications for pressure solution, J Geophysical Research-Solid Earth, 111 (B8) Art. No. B08202 AUG 10 2006.
33. Alessandro Anzalone, James Boles, George Greene, Kevin Young, Jacob Israelachvili and **Norma Alcantar**, Confined fluids and their role in pressure solution, Chemical Geology, Volume 230, Issues 3-4, 22 June 2006, Pages 220-231.
34. Young, Kevin; Anzalone, Alessandro; **Alcantar, Norma A.** Using the Mexican cactus as a natural-based process for removing contaminants in drinking water. PMSE Preprints (2005), 93 965-966.
35. Young, K., **N. Alcantar**, by A. Cunningham, Cactus goo purifies water. Science News, 2005. 168(12): p. 190.
36. Seferos DS, Banach DA, **Alcantar NA**, Israelachvili JN, Bazan GC, alpha,omega-bis(thioacetyl)-oligo-phenylene-vinylene chromophores from thioanisol precursors, J ORG CHEM 69 (4): 1110-1119 FEB 20 2004.
37. Israelachvili, Jacob N.; **Alcantar, Norma A.**; Maeda, Nobuo; Mates, Thomas E.; Ruths, Marina. Preparing Contamination-free Mica Substrates for Surface Characterization, Force Measurements, and Imaging. Langmuir (2004), 20(9), 3616-3622.
38. W. A. Hamilton, G. S. Smith, **N. A. Alcantar**, J. Majewski, R. G. Toomey, and T. L. Kuhl, Determining the Density Profile of Confined Polymer Brushes using Neutron Reflectivity, Journal of Polymer Science Part B: Polymer Physics, 2004, 42(17), 3290-3301.
39. Ruths M; **Alcantar NA**; Israelachvili JN. Boundary friction of aromatic silane self-assembled monolayers measured with the surface forces apparatus and friction force microscopy. J of Phys Chem B, 2003, 107(40): 11149-11157.

40. **Alcantar NA**, Boles J, Israelachvili JN. Forces and ionic transport between mica surfaces: Implications for pressure solution, Geochimica et Cosmochimica Acta, 2003, 67 (7): 1289-1304.
41. **Alcantar NA**, Park C, Pan J-M, Israelachvili JN. *Adhesion and coalescence of ductile metal surfaces and nano-particles.* Acta Materialia. (2003) 51(1), 31-47.
42. Kuhl T, Smith GS, Majewski J, Hamilton W, **Alcantar N**. *Investigating confined complex fluids with neutron reflectivity*. Neutron News. (2003) 14(1), 29-31.
43. Drummond C, **Alcantar NA**, Israelachvili JN. *Shear alignment of confined hydrocarbon liquid films***.** Phys. Rev. E: (2002), 66(1), 011705/1-011705/6.
44. Drummond C, **Alcantar N**, Israelachvili J, Tenne R, Golan Y. *Microtribology and friction-induced material transfer in WS_2 nanoparticle additives.* Adv. Funct. Mat., 2001, 11 (5): 348-354.
45. Kuhl T, Smith GS, Majewski J, Hamilton W, **Alcantar N.** Investigating confined complex fluids with neutron reflectivity. Los Alamos Neutron Science Center (LANSCE) Department of Energy. Division Research Review. LA-13943-PR, 2001.
46. Golan Y, **Alcantar NA**, Kuhl TL, and Israelachvili JN. *A generic substrate for the Surface Forces Apparatus: preparation and characterization of silicon nitride surfaces.* Langmuir, 2000, 16: 6955-6960.
47. **Alcantar NA**, Aydil ES, and Israelachvili JN. *Polyethylene glycol coated biocompatible surfaces***.** J.Biom. Mater. Res.*,* 2000, 51: 343–351.
48. **Alcantar NA**, Aydil ES, and Israelachvili JN. *Effect of Water Plasma on Silica Surfaces: Synthesis, Characterization and Applications***.** In: Fundamental and applied aspects of chemically modified surfaces*.* Edited by: Blitz, J and Little CB. May 1999, Royal Society of Chemistry. London, UK.
49. Israelachvili JN, Giasson S, Kuhl T, Drummond C, Berman A, Luengo G, Pan J-M, Heuberger M, Drucker W, **Alcantar NA**. *Some fundamental differences in the adhesion and friction of rough versus smooth surfaces*. Proceedings of the 26th Leeds-Lyon Symposium. Dowson D, ed. Elsevier Science. September 1999.
50. Seitz M, Wong JY, Park CK, **Alcantar NA**, Israelachvili JN. *Formation of tethered supported bilayers via membrane-inserting reactive lipids.* Thin Solid Films, Aug 31, 1998, 329: 767-771.
51. **Alcantar NA**, Herrera R, Manero O. *Synthesis and rheology of modified polybutadienes. Predictions of the Doi and Edwards model.* Acta Mex. Cienc. Tecnol., (1998), 13(43): 91-99.
52. **Alcantar NA**, Salinas MD, Herrera R, Manero O. *Rheological characterization of 4,4'-bis(diethylamino) benzophenone functionalized polybutadienes with low and medium vinyl content.* J. Appl. Polym. Sci., Sep 6, 1995, 57(10): 1173-1181.

ISSUED PATENTS (23 TOTAL, 2 OF THEM HAVE BEEN LICENSED)

- Alcantar; Norma A., de Lima Stebbins; Daniela Miranda, Main; Kevan. Scaling-up off-flavor compound degradation using aquaculture reacting canister technology, **Patent # 10,660,315** (2020) and **Patent # 11,278,011** (2022).
- NA Alcantar, D Morgan, V Zeinab, T Peng, R Toomey, L Breydo, V Uversky, E Lobbens, Inhibition of Formation of Amyloid B-Protein Fibrils Using Cactus Mucilage Extracts, **Patent #s 10,946,056** (2021)**, 10,391,135** (2019).
- Alcantar; Norma Arcelia, Toomey; Ryan Gates, Guo; Fei, Veisi; Zeinab, Peng; Tunan, FL. Cutin-like materials with advanced functionalities and methods of manufacture, **Patent #s: 10,934,453** (2021), **10,253,208** (2019).
- Alcantar; Norma A., Zhao; Wen, Ergas; Sarina Joy. Ammonia removal in freshwater and saltwater systems **Patent # 10,766,790** (2020).
- NA Alcantar, S Ergas, W Zhao, Ammonia Removal in Freshwater and Saltwater Systems, **Patent # 10,166,528** (2019).
- NA Alcantar, A44 Buttice, Composition and Method to Reduce Sediment and Bacterial Contamination from Water, **Patent # 10,125,037** (2018).
- SW Thomas, NA Alcantar, Pais, Yanay, Electrospun Cactus Mucilage Nanofibers, **Patent # 10,105,656** (2018)

- NA Alcantar, S Ergas, W Zhao; Ammonia Removal in Freshwater and Saltwater Systems, **Patent # 10,138,143** (2018).
- NA Alcantar, DI Fox, Cactus mucilage and ferric ions for the removal of arsenate (As (V)) from water, **Patent #: 9,776,895** (2017).
- Thomas; Sylvia W., Pais; Yanay, Alcantar; Norma A. Electrospun cactus mucilage nanofibers, **Patent #:9,555,392** (2017).
- Alcantar; Norma A., Falahat; Rana, Wiranowska; Marzenna, Toomey; Ryan G., Enhanced targeted drug delivery system via chitosan hydrogel and chlorotoxin, **Patent #: 9,522,114** (2016).
- Norma Alcantar, Dawn Fox, Sylvia Thomas, Ryan Toomey, Use of Cactus Mucilage as a Dispersant and Absorbant for Oil in Oil-Water Mixtures, **Patent #: 9,163,374**-(2015).
- Kayton, Mark, Alcantar, Norma, Restrepo, Daniel, Laconi, Nicholas, Buttice, Audrey, Ebaugh, Michael P., Compositions and Methods for Reducing or Preventing Medical Device-Related Infections, **Patent #s: 9,839,709** (2017), **9,339,574** (2016) and **9,125,959** (2015). Compositions and methods for reducing or preventing medical device-related infections.
- Cardenas-Valencia Andres M., Alcantar Norma A., Ding Xiaoling, Toomey Ryan G., and Langebrake Lawrence C., Method of controlled delivery for use in electrochemical power sources, in three U.S. **Patent #s: 8,501,338 B1** (2013), **8,163,418** (2012), **7,943,259**, (2011).
- Alcantar Norma A and Harmon Julie, Transparent conducting composites (TTCs) for creating chemically active surfaces, in, U.S. **Patent #: 61154809**. 2011: U.S.
- Alcantar, N. A.; Joseph, B.; Young, K., Water purification method using plant molecules for removal of arsenic. From U.S. (2011), US **Patent #: 7943049 B1** 20110517.

CURRENT AND PENDING RESEARCH SUPPORT

- National Science Foundation – Alcantar (coPI) Pending
  MRSEC: Center for Bioinformed Materials for Environmental Sustainability (BioMES) $4,999,999
- USF-Internal Seed Program – Alcantar (coPI) 6/1/20-5/31/2021
  Strategic Investment Pool -Anton Paar Rheometer, MCR 702. $100,000
- Sloan CMR – Alcantar (Contributor) 6/1/04-Open-end day
  Becoming a Participants of the Sloan Minority Ph.D. Program, Source of Support: Alfred P. Sloan Foundation. $250,000
- USF-Foundation – Alcantar (PI) 10/01/16 – 12/31/21
  The Foundation Bull Ring Accelerator Grant program Project, "Water, Health and Sustainability, LLC." $ 25,000.00

COMPLETED RESEARCH SUPPORT

- NSF-CBET 1512225, Alcantar (PI) 07/01/15-7/31/2020
  Collaborative Research- SusChEM: Graded Interpenetrating Polymer Membranes Based on Sustainable Materials for Selective Removal of Organics from Water, National Science Foundation, Division of Molecular Separations, CBET. $327,460.00
- NSF-CBET 1560579, Alcantar (PI) 03/21/14-04/30/15
  ICorps: Clean Water by Nature. $50,000.00
- Florida Aquaculture Review Council, Alcantar (PI) 07/01/12-06/30/13
  Phase II: Removal of Off-Flavor Compounds. $203,000.00
- GoMRI. Alcantar (PI) 04/16/12-12/31/15

The Science and Technology of natural dispersants (Part of C-MEDS: Consortium for Molecular Engineering Dispersant Systems). $333,000.00

- NSF-CBET 1351543 and 1547834 (supplement), Alcantar (PI) 03/21/14-06/30/16
  Integrative program to sustain and strengthen colloidal and interfacial science, technology, engineering, and mathematics (CAI-STEM) capabilities. $60,000.00
- USF-Byrd Alzheimer's Institute, Alcantar (PI) 07/01/15-06/30/16
  Natural Materials and Their Ability to Counteract the Aggregation of Amyloid Beta Plaques. $20,000.00
- GofMRI. Alcantar (PI) 04/16/12-04/15/15
  The Science and Technology of natural dispersants. $333,000.00
- NSF-CBET 1351543, Alcantar (PI) 03/21/14-04/30/15
  Integrative program to sustain and strengthen colloidal and interfacial science, technology, engineering, and mathematics (CAI-STEM) capabilities. $50,000.00
- USF-Byrd Alzheimer's Institute, Alcantar (PI) 07/01/14-06/30/15
  Natural materials and their ability to counteract the effects of Alzheimer's disease. $25,000.00
- NSF-CBET 1241582, Alcantar (co-PI), Thomas (PI) 04/17/12-12/31/14
  EAGER: Fabrication, Characterization, and Implementation of an Ofi Mucilage Nanofiber Membrane System. $150,000.00
- NSF-CBET 1239606, Alcantar (PI) 09/18/12-09/30/13
  Novel Experiments in Biological Systems Symposium, August 12-17, 2012, Cancun, Mexico. $10,000.00
- Florida Aquaculture Review Council, Alcantar (PI) 07/01/12-06/30/13
  Phase I: Removal of Off-Flavor Compounds. $180,000.00
- Marine Metal Products. Alcantar (PI) 05/15/13-12/31/13
  Selectivity Studies for Ammonia Removal in fish tanks. $10,000.00
- USF-Internal Award. Alcantar (PI) 06/01/12-05/31/13
  Conference Grant: International Materials Research Congress, Mexico. $10,000.00
- NSF-CBET 1034849, Alcantar (PI) 05/31/10-12/31/11
  RAPID: Remediation of Earthquake-Impacted Potable Water Sources with Cactus Mucilage. $100,000.00
- NSF-CBET 1057897, Alcantar (PI) 08/31/10-12/31/11
  RAPID: Water-based, Natural Polymer Surfactants: Implications for Deepwater Horizon Oil Spill Dispersions. $80,000.00
- Schlumberger Foundation. Alcantar (PI) 01/01/09-12/31/12
  Faculty for the Future Award. $87,500.00
- NSF-OIIA 1057897, Alcantar (co-PI), Yeh (PI) 06/01/09-12/31/12
  IRES: Sustainable Clean Water Technologies for the UN's Millennium Development Goals - A Partnership Between UNESCO-IHE (Delft, Netherlands) and Univ. South Florida.

$150,000.00

- NIH-NCI 21071051, Alcantar (PI) 01/01/11-12/31/13
  Smart Packaging: A Novel Technology for Localized Cancer Treatment.
  $63,500.00
- Rinat-Pfizer. Alcantar (PI) 04/16/07-04/15/09
  Antibody Mediated Conformational Changes in Aß Peptides.
  $206,000.00
- NSF-CBET 0808053, Alcantar (PI) 02/01/08-01/31/09
  SGER: Conducting and Semi-transparent Chemically Active Surfaces.
  $100,000.00
- BITT-USF, Alcantar (PI) 06/01/08-05/31/09
  Aggregation and Structural Changes of Amyloid Proteins.
  $37,000.00
- State of Florida, Alcantar (coPI), Yeh (PI) 01/01/07-9/31/10
  Sustainable Communities: water- Integrating global capabilities into STEM education: Critical technologies and strategies for meeting the UN's Millennium Development Goals on water and sanitation.
  $490,000.00
- NSF 0530444 Alcantar (co-PI), Gupta (PI) 01/01/06-12/31/09
  Implementation Grant: Transforming the Educational Experience of Transfer Students in Chemical Engineering using a Multi-Dimensional Approach. $1,005,000.00
- ONR 0530444 Alcantar (co-PI), Saddow (PI) 05/01/06-10/31/08
  Novel Processing of SiC Epitaxial Layers Using Halo-Carbon Precursors.
  $1,000,000.00
- Signature Program in Neuroscience, USF-Health. Alcantar (PI) 05/16/07-05/15/08
  Smart-Packaging for Controlled Drug Delivery in the Treatment of Brain Tumors.
  $9,000.00
- NSF-EAR GEO 0342796 Alcantar (co-PI), Boles (PI) 07/31/04-06/31/08
  Understanding the Role of Clay Mineral Surface Interactions in Pressure Solution.
  $405,000.00
- USF-Internal Award. Alcantar (PI) 01/01/06-12/31/06
  New Researcher Grant for studying the structure of amyloid beta peptides as a function of solvent conditions. $10,000.00
- NSF 0542282. Alcantar (PI) 08/15/05-07/31/06
  Educational Outreach: Teaching Nanotechnology Session at the AICHE meeting.
  $5,000.00
- NSF-OISE 0537115. Alcantar (PI) 05/15/05-06/30/06
  Bridging Nanoscale Forces and Interfacial Phenomena to the Macroscopic World.
  This grant is to support an international workshop on May 5-12, 2006, Cancun Mexico.
  $65,000.00
- ECS 0421238 Alcantar (co-PI), Schlaf (PI) 08/15/04-07/31/05
  MRI: Acquisition of Focused Ion Beam Tool for the USF Nanomanufacturing and Nanomaterials Research Center. $320,000.00

- NSF/DBE - MUSES 0442977 Alcantar (PI) 08/15/04-08/14/05
  BE-MATERIALS USE: SCIENCE, ENG & SOCIETY. Implementing a Natural-based Process for Removing Contaminants in Water. $115,000.00
- NSF-CTS- NER 0304671 Alcantar (co-PI), Israelachvili (PI)
  08/15/03-08/14/04
  Controlled Processing and Electro-Optical Characterization of Nanoparticles Mechanical Pressure, shear & Rolling. $100,000.00
- USF-Start up. Alcantar (PI) 09/01/03-9/30/05
  Nanosurface-Chemistry and Green Materials Chemistry Laboratory.
  $380,000.00

INVITED ORAL PRESENTATIONS

1) "The Implementation of Cactus Mucilage and Cactus Pectin Polysaccharides into Functional Sustainable Systems for Biomedical and Colloidal Applications", "Colloidal, Macromolecular and Polyelectrolyte Solutions Gordon Research Seminar (GRS)", Ventura, CA, 2020.
2) "Cactus mucilage: Industrial Applications," Auburn University, Auburn, 2019.
3) "The use of smart materials in drug delivery," NanoScientific Symposium on SPM, Mexico City, 2019.
4) "Using Cactus Mucilage as a Dispersant," Smart Materials Conference, Houston, TX, March 2019.
5) "Dispersion of Crude Oil Using Cactus Mucilage," at the Smart Flow Conference, Houston, TX, March 2018.
6) "Using Natural Materials for Achieving Sustainable Water Treatments," OSU Plant Science Symposium, College of Food, Agricultural and Environmental Sci., Ohio State University, April 6-7, 2018, Wooster, OH.
7) "Water Treatments to be implemented in Air Force Applications Using Natural Functional Materials," USF - Air Force S&T 2030 Workshop, Sessions: Idea Refinement, Idea Presentations, and Summary and Findings, April 26, 2018, Tampa, Florida.
8) "Scholar Identity, Collaboration, and Building Your Research Program," NSF Minority Faculty Development Workshop presents the 2018 Symposium: Engineering A World of Difference, University of Michigan, Ann Arbor, MI, September 26 -29th, 2018.
9) "Natural Materials for Functional Applications in Drug Delivery and Water Treatment," Ilse Katz Institute for Nanoscale Science and Technology, Department of Materials Engineering Ben-Gurion University of the Negev, Beer Sheva, Israel, June 10, 2018.
10) "Cactus mucilage: Cleaning water in a sustainable Approach," at the GSSPC: Water Sustainability Chemists in Pursuit of Clean Water, American Chemical Soc., San Francisco, CA, April 4, 2017.
11) "The Ins and Outs of Functionalized Natural Materials for Applications in Drug Delivery and Separations" Norma Alcantar, R. Toomey, Z. Veisi, A. Cardenas-Valencia, M. Cardenas, R. Falahat, T. Peng, F. Guo, Biomaterial Interfaces Division, 2017 AVS 64th International Symposium, Tampa, FL, October 29-November 3, 2017.
12) "Understanding Natural Materials Properties," Forschungsklausur des FB Chemie (Research Symposium of Chemistry) Kuralpe-Kreuzhof, Germany, April 27, 2017.
13) "Using Cactus Mucilage to Purify Natural Materials," Technische Universität Darmstadt, Darmstadt, Germany, May 16, 2017.
14) "If I knew then what I know now panel," 2017 Minority Faculty Development Workshop, Houston, Texas, September 2, 2017.

15) "Dementia: A Public Priority and Its Challenges," Florida Education Fund's 33rd Annual McKnight's Fellow's Meeting and 21st Annual Graduate School Conference, Tampa, Florida.

16) "Using Natural Materials to Address Challenges in Biomedical Research," in the Annual Biomedical Research Conference for Minority Students (ABRCMS). Nov 11, 2016, Tampa Florida.

17) "Frontiers on dispersant technology: the use of natural materials in oil spill cleanups." International Workshop in Colloidal and Interfacial Science, Technology, Engineering and Mathematics, SFA 2014, Cancun, Mexico, August 24-29, 2014.

18) "The implications of Property-Structure Relationships of Nano-Biological Systems." NanoFlorida 2013, Reitz Union, University of Florida, September 30, 2013.

19) "Sustaining the Earth-An Engineering Approach," 3-day-course. Sustainable Bioproducts Initiative of the Louisiana State University's Audubon Sugar Institute, April 28-30, 2014.

20) "Elucidating property-structure relationships of biological systems: Implications for Alzheimer's disease, Flocculation and drug delivery systems." Georgia Tech Departmental Seminar, Feb 2013, Atlanta, GA.

21) "Polymer Applications 2: Natural Materials." PASI-Polymer and Composite Materials from Renewable Resources and Biorefinery from Chemistry to Applications, Costa Rica, Aug 14, 2013.

22) "Polymer Applications 4: Biomimicry. PASI-Polymer and Composite Materials from Renewable Resources and Biorefinery from Chemistry to Applications," Costa Rica, Aug 14, 2013.

23) "Work-Life Balance." The 20th Institute on teaching and mentoring. Junior Faculty Professional Development Conference. The 20th Institute on teaching and mentoring. October 31 - November 3, 2013, Crystal Gateway Marriot in Arlington, VA.

24) "The use of natural surfactants for oil spills," Update on the Consortium for Molecular Engineering Dispersant Systems (C-MEDS), API D3 Steering Committee/Modeling Workshop, Safety Harbor Resort and Spa, June 6-7, 2013.

25) "Property-structure relationships of Biological systems: Implications for Alzheimer's disease and drug delivery systems." Boston University Departmental Seminar, April 2012, Boston, MA.

26) "Water-based, natural polymer surfactants: Implications for Deepwater Horizon oil spill." ACS National Meeting & Exposition, San Diego, CA, March 25-29, 2012 (2012), ENVR-112.

27) "Using cactus mucilage for oil clean-up operations." 1st CMEDS Meeting. San Diego CA, March 26, 2012.

28) "Elucidating property-structure relationships of biological systems: From Alzheimer's fibers to natural dispersants." Symposium in Novel Characterization Methods for Biological Systems. International Materials Research Congress, Cancun, MX Aug 13-17, 2012.

29) "The Do's, Don'ts and shoulds of Academia." The Institute on Teaching and Mentoring, October 25-28, 2012, Tampa, Florida.

30) "Elucidating property-structure relationships of biological systems: Implications for Alzheimer's disease, Flocculation and drug delivery systems." FSU Departmental Seminar, March 2011, Tallahassee, FL.

31) "Remediation of disaster-impacted water sources with cactus mucilage." 43rd IUPAC World Chemistry Congress, 46th IUPAC General Assembly. 70th CQPR Annual Conference and Exhibition, July 30 to August 5, 2011, San Juan, Puerto Rico, Puerto Rico Convention Center.

32) "Using cactus mucilage for oil clean-up operations." 43rd IUPAC World Chemistry Congress, 46th IUPAC General Assembly. 70th CQPR Annual Conference and Exhibition, July 30 to August 5, 2011, San Juan, Puerto Rico, Puerto Rico Convention Center.

33) "Water-based, natural polymer surfactants implications for Deepwater Horizon oil spill dispersions." 11th National Conference on Science, Policy and the Environment, Jan 19-21, 2011, Washington 2011.

34) "Water Relieve Systems, Earthquake Engineering Research Institute," Haiti RAPID and Research Needs Workshop, September 30 2010, Washington, DC.

35) "Removal of particulates, heavy metals and bacteria using cactus mucilage." Vietnam Academy of Science & Technology (VAST), Institute of Geological Sciences, VIEN DIA CHAT- Ngo 84, Pho Chua Lang, Dong Da, Hanoi, Vietnam.

36) "Water-based, Natural Polymer Surfactants: Implications for Deepwater Horizon Oil Spill Dispersions," Collaborative Scientific Research in Relation to the Gulf Oil Spill, November 1-2, 2010 at the Marriott New Orleans Convention Center.

37) "Elucidating Property-Structure Relations." Surface Analysis 2010, Orlando Florida, March 10, 2010.

38) "Novel Double Packaged System For Localized Drug Delivery For Ovarian Cancer." Florida Centre of Excellence for Biomolecular Identification and Targeted Therapeutics (FCoE-BITT) Symposium.

39) "Using Surface Forces To Design A Localized Drug Delivery System For Cancer Treatment." 8th World Congress of Chemical Engineering (WCCE8), Oral Presentation, August 23-27, 2009. Montreal, Canada.

40) "The Use of Cactus Mucilage as Strategy to Scour Arsenic and Bacteria in Water." American Society for Tropical Medicine and Hygiene, November 18–22, 2009, Marriott Wardman Park, Washington, DC, USA.

41) "Direct Observation of the Effect of Monoclonal Antibodies on the Evolution of Amyloid Peptide Fibrils." USF Neuroscience Program - Byrd Alzheimer Center Research Symposium. Mechanistically Targeted Therapies in Alzheimer's Disease. 4 MAY 2009. Harborview Center, Clearwater Florida.

42) "Synthesis and Characterization of Surface Active Films." Smart Coatings 2009, Orlando, Florida, February 25-28.

43) "Using a Natural Material for Removing Bacteria and Heavy Metals from Drinking Water." University of Florida Mexico Forum Keynote Address, UF, 6-Oct-09.

44) "What I Wish I Had Known Then." Defining our way: Challenges of the Faculty Career for Women at Virginia Commonwealth Univ. School of Engineering, Richmond VA (June 7, 2008).

45) "The Role of Surface Forces and Interfacial Phenomena on Biomedical Applications," Physics Colloquium. USF, March 28, 2008.

46) "Systematic Study of Amyloid Beta Peptides: Implications for Alzheimer's disease," Rinat-NeuroScience, South San Francisco, CA, November 20 2007.

47) "Using cactus goo to remove contaminants from drinking water," Environmental Chemistry Symposium of the Florida ACS FAME 2007 Conference, May 10, 2007, Orlando, FL.

48) "Removal of heavy metals, microbial organisms and particulates from drinking water using a natural material." Division of Environmental Chemistry, American Chemical Society National Meeting, Chicago, Il. March 30, 2007.

49) "Intermolecular forces and interfacial phenomena in bioengineered and green materials," Environmental Science & Engineering Seminar, University of Texas at El Paso, Center for Environmental Resource Management, Nov 1, 2006.

50) "Using Intermolecular Forces and Interfacial Phenomena to Explain AD," Neuroscience Signature, Research Program Retreat and Town Hall Meeting, USF-College of Medicine, Tampa, FL, July 28, 2006.

51) "Using Intermolecular Forces and Interfacial Phenomena to Help Humanity," International Workshop: Bridging Nanoscale Forces and Interfacial Phenomena to the Macroscopic World, May 8, 2006, Cancun, MX.

52) "The Mexican Cactus as a New Environmentally Benign Material for the Removal of Contaminants in Drinking," Session JJ1: Materials for Water Treatment, Materials Research Society, Spring meeting, San Francisco, CA, April 19, 2006.

53) "How to remove contaminants from drinking water by using green chemistry," 231st ACS National Meeting, Atlanta, GA, United States, March 27, 2006, ANYL-407.

54) "Dos, Shoulds, and Don'ts" of minority scholars," Ethnic Inclusion Effort for Iowa Engineering, University of Iowa, March 23, 2006.

55) "The Role of Intermolecular Forces and Interfacial Phenomena in Bioengineered and Green Materials," Department of Chemical and Biochemical Engineering, University of Iowa, March 23, 2006.

56) "Using green chemistry to remove As from drinking water at the Arsenic Removal and Safe Water Workshop," American Chemical Society and National Science Foundation, University of Dhaka, Dhaka, Bangladesh, Dec 11-14, 2005.

57) "Intermolecular Forces of Biocompatible Materials," the 81th Florida Annual Meeting and Exposition (FAME 2005), American Chemical Society, Orlando, May 9, 2005.

58) "The role of intermolecular forces in plasma assisted biocompatible coatings," in Biomaterial Interfaces at the Florida Chapter of the AVS Science and Technology Society (FLAVS), March 13, 2005.

59) "The role of surface forces in thin film applications." Department of Physics. University of South Florida, September 24, 2004.

60) "Forces and Ionic transport between clays: Implications for 'pressure solution'." Goldschmidt 2004. Copenhagen, Denmark. June 5, 2004.

61) "Intermolecular forces and thin film technology," Universidade Estadual de Campinas. Centro de Componentes Semiconductores. Campinas, Brazil. May 21, 2004.

62) "The role of surface forces in polymeric film applications," FAME 2004. American Chemical Society. Industrial and Academic Advances in Polymer Science in Florida: May 7, 2004.

63) "The Role of Surface Forces in Thin Film Applications," Assembled by the Institute for Complex Adaptive Matter, Materials Research Calendar at Los Alamos National Laboratory, New Mexico. October 16, 2003.

PAPERS PRESENTED AT PROFESSIONAL CONVENTIONS BY MY RESEARCH GROUP

National and International

1. "Removal of Taste and Odor Compounds from Fish Water By Catalytic Oxidization with Innovative Catalyst Under Visible Light," Tunan Peng, Daniela M. L. Stebbins, and Norma Alcantar, Catalysis and Reaction Engineering Division, AIChE Virtual Meeting, Nov 16-20, 2020.
2. "Interfacial Phenomena of Natural Dispersants for Crude Oil Spills," Fei Guo, Zeinab Veisi, and Norma Alcantar, 2020 Gulf of Mexico Oil Spill and Ecosystem Science Conference, Tampa, Florida, February 3-6, 2020.

3. "Degradation of Taste and Odor Compounds with Cactus Mucilage Extraction Enhanced Photo-Catalysis Under Solar Light," Tunan Peng, Daniela Stebbins, Norma Alcantar, 2019 AIChE Annual Meeting, November 10-15, 2019, Orlando, Florida.
4. Responsive Coatings from Low-Methoxyl Opuntia Ficus-indica Cactus Intended for Controlled Release Applications Zeinab Veisi, Ryan Toomey and Norma Alcantar, 2019 AIChE Annual Meeting, November 10-15, 2019, Orlando, Florida.
5. "The Synergistic Emulsification of Cactus Mucilage with d-Limonene and Silica Nanoparticles for Oil in Water Emulsion," Fei Guo, Zeinab Veisi and Norma Alcantar, 2019 AIChE Annual Meeting, November 10-15, 2019, Orlando, Florida.
6. "Electrospun Cactus based Nanofiber Membrane for Water Filtration," Idi Tulloch, Norma Alcantar, Sylvia Thomas, Idi received ERN conference travel award, 2018 Emerging Researchers National (ERN) Conference in STEM, Washington, DC, February 22-24, 2018.
7. "Electrospun Cactus based Nanofiber Membrane for Water Filtration," Idi Tulloch, N. Alcantar, S. Thomas, Idi received NOBCChE travel award. 2018 National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) National Conference, Orlando, FL, September 17-20, 2018.
8. "Quantitative assessment of the intracellular uptake of chlorotoxin in a U87 human glioma mouse model for the targeted drug delivery system," Roberts, Alan, Johnson, Aleksandra Karolak, Joseph J.; Rejniak, Katarzyna, A.; Alcantar, Norma; Wiranowska, Marzenna, AACR Annual Meeting, Chicago, Il, April, 2018.
9. "Stimuli-responsive Thin Films made from Highly Methoxylated Citrus Pectin," Zeinab Veisi, M. Cardenas, A. Cardenas-Valencia, R. Toomey, N. Alcantar, Biomaterial Interfaces Division, AVS 65th International Symposium & Exhibition Zeinab, received third-place poster award. Long Beach, CA, October 21-26, 2018.
10. "Thermo- and pH-responsive thin films made from the mucilage of *Opuntia ficus-indica* cactus," Z. Veisi, Alcantar, R. Toomey, 92nd ACS Colloid & Surface Science Symposium in 2018, State College, Pennsylvania, June 10-13, 2018.
11. "Stimuli-Responsive Thin Coatings Made from Natural Pectins," Z. Veisi, Alcantar, R. Toomey, 2018 AIChE Annual Meeting, Pittsburgh, PA., Oct 28-Nov 1, 2018.
12. "Novel and Natural Oil Spill Dispersant Based on the Cactus-Mucilage," Fei Guo, Daniela Stebbins, Ryan Toomey, Norma Alcantar, 2018 AIChE Annual Meeting, Pittsburgh, PA., Oct 30, 2018.
13. "Evaluation of the Cactus Based-Mucilage as an Alternative Natural Dispersant to be Incorporated in Oil Spill Response Strategies," Fei Guo, Daniela Stebbins, Norma Alcantar, 92nd ACS Colloids and Surface Symposium, State College, Pennsylvania, June 10-13, 2018.
14. "Cactus Based-Mucilage as an Alternative Natural Dispersant for Oil Spill Applications," Fei Guo, Daniela Stebbins, Sylvia Thomas, Ryan Toomey, Norma Alcantar, AVS 64th International Symposium & Exhibition, Tampa, FL, Apr. 1 November 30, 2017.
15. "Responsive coatings from natural materials," Z. Veisi, M. Cardenas, A. Cardenas-Valencia, N. Alcantar, R. Toomey, Colloids & Surface Science Symposium 2017, The City College of New York (CCNY), Monday, July 10, 2017.
16. "Stimuli-responsive Thin Films made from the Mucilage of *Opuntia Ficus-indica* Cactus," Zeinab Veisi, M. Cardenas, A. Cardenas-Valencia, R. Toomey, N. Alcantar, Biomaterial Interfaces Division, 2017 AVS 64th International Symposium- Received Dorothy M. and Earl S. Hoffman Travel scholarship, Tampa, FL, October 29-November 3, 2017.

17. "Cross-Disciplinary Optimization of Nano-Drug Delivery to Ovarian Carcinoma and Glioma Cells," Singh, Rupin; Johnson, Joseph J.; Rejniak, Katarzyna, A.; Alcantar, Norma; Wiranowska, Marzenna, AACR Annual Meeting Washington DC April 1-5, 2017.
18. "Cross-Disciplinary Optimization of Nano-Drug Delivery to Ovarian Carcinoma and Glioma Cells," Singh, Rupin; Johnson, Joseph J.; Alcantar, Norma; Wiranowska, Marzenna; Rejniak, Katarzyna, A.;H. Lee Moffitt Research Symposium, Tampa, FL, April 27, 2017.
19. "Quantitative Assessment of the Intracellular Distribution of Chlorotoxin Following Direct Intratumoral and Intravenous Injections in a U87 Human Glioma Mouse Model," Alan Roberts; Katarzyna Rejniak; Norma Alcantar; Marzenna Wiranowska, Morsani-College of Medicine Student Research Symposium, Tampa, FL, Nov 3, 2017.
20. "Counteracting the Formation of Amyloid Beta Fibers With Natural Polysaccharides to Prevent Certain Neurodegenerative Diseases," Molly Skinner, Zeinab Veisi, Norma Alcantar, USF Research Colloquium-Winner of the Excellence in Research Award, Tampa, FL, April 7, 2017.
21. "Counteracting the Formation of Amyloid Beta Fibers With Natural Polysaccharides to Prevent Certain Neurodegenerative Diseases," Molly Skinner, Zeinab Veisi, Norma Alcantar, SWE Annual Conference- Finalist in the WE17 Poster Competition- Winner of the poster award, Austin, Texas, October 26, 2017.
22. "Membrane for cleaner water on a microscopic scale," Idi Tulloch, Norma Alcantar, Sylvia Thomas Emerging Researchers National Conference-Winner of travel grant, Washington, D.C., February 22-24/ 2017.
23. "Cell viability study on the mucilage membranes," Katty Pierre-Charles, Norma Alcantar, Sylvia Thomas, ABRCMS-Winner of travel award, Phoenix, AZ, November 1 -5, 2017.
24. Rana Falahat, Eva Williams, Marzenna Wiranowska, Ryan Toomey, Norma Alcantar. Enhanced targeting drug delivery to tumor cells using mucoadhesive chitosan and chlorotoxin. Conference: 2014 AACR Annual Meeting, Location: San Diego, CA, April 9, 2014.
25. Zhao, W., Zhang, Y-Y, Stebbins, D., Pettit, S., Ergas, S., Alcantar, N. (2014) The use of natural ammonia removing agents for preserving bait and fresh caught fish, Proc. Gulf of Mexico Oil Spill and Ecosystem Science Conference, Mobile AL, January 26-29.
26. Zhao, W., Stebbins, D., Pettit, S., Ergas, S., Alcantar, N. (2014) Naturally removing ammonia for preserving bait and fresh caught fish, Proc. 18th Annual Green Chemistry & Engineering Conference, Rockville MD, June 17-19.
27. Tunan Peng, Fei Guo, Daniela Stebbins, Ryan Toomey and Norma Alcantar (2014) Alternative Water Treatment using cactus mucilage from *Opuntia spp*: Application On bacteria removal, Surface Force Apparatus Conference 2014, Cancun, Mexico, August 24-29.
28. Fei Guo, Daniela Stebbins, Ryan Toomey and Norma Alcantar. Cactus based-mucilage as an alternative natural dispersant to be incorporated in oil spill response strategies. Gulf of Mexico Oil Spill and Ecosystem Science Conference, Mobile AL, January 26-29, 2014.
29. Fei Guo, Daniela Stebbins, Ryan Toomey and Norma Alcantar. Effect of a natural cactus based-mucilage dispersant on the surface tension and droplet size of dispersed crude oil. 18th Annual Green Chemistry & Engineering Conference, North Bethesda, MD, June 17-19, 2014.
30. Fei Guo, Daniela Stebbins, Ryan Toomey and Norma Alcantar, Effect of a natural cactus based-mucilage dispersant on the surface tension and droplet size of dispersed crude oil. Surface Forces Apparatus Conference 2014, Cancun, Mexico, August 24-29, 2014.

31. Zhao, W., Zhang, Y-Y, Gonzalez, L, Zhong, F., Stebbins, D., Pettit, S., Ergas, S., Alcantar, N. (2014) Removal of methyl orange in aquaculture water by spray-coated TiO_2 photocatalysis, Surface Force Apparatus Conference 2014, Cancun, Mexico, August 24-29.
32. Falahat, R; Williams, EC; Wiranowska, M; Toomey, R; Alcantar, N, "Tunable Drug Delivery", Amer. Assoc. Cancer Research. April 2013, March 25-29, 2012 (2012), ENVR-112.
33. De Lima Stebbins, Xanel Vecino, N. A. Alcantar, "Effect of a natural biomaterial on the droplet size of crude oil dispersed in water". 2013 Gulf of Mexico Oil Spill, Jan 21-23, 2013 New Orleans, Louisiana.
34. J. Lara, N.Alcantar, "Nopal Cactus Extracts for Organic Compounds Water Remediation", 2013 Gulf of Mexico Oil Spill, Jan 21-23, 2013 New Orleans, Louisiana.
35. Stebbins D M L, Smith, Deni-Maire, Alcantar N "Biochemical Oxygen Demand (BOD) in oil-polluted seawater samples treated with cactus plant-based mucilage", 2013 Gulf of Mexico Oil Spill. Jan 21-23, 2013 New Orleans, Louisiana.
36. Daniela Stebbins, Dawn Fox, Audrey Buttice, Deni-Maire Smith Norma Alcantar. Alternative Water Treatment Using Cactus Mucilage from *Opuntia Spp.*: Application in Bacteria Removal. 2012 Annual Meeting, Pittsburg, PA Oct 27-Nov 3, 2012.
37. Simultaneous Measurements of Interfacial Forces and Electrochemical Reactions in the EC-Surface Forces Apparatus, Markus Valtiner, Jing Yu, Matthew A. Gebbie, Michael Rapp, Kai Kristiansen, Dong Woog Lee, Stephen H. Donaldson Jr., Saurabh Das, Xavier Banquy, George W. Greene, Norma Alcantar and Jacob Israelachvili. 2013 AIChE Annual Meeting, November 3-8, 2013, San Francisco, CA.
38. Fei Guo, Tunan Peng, Deni-Maire Smith, Daniela M. L. Stebbins, Maria Celis and Norma Alcantar. Evaluation of Mucilage From the Common Cactus As a Natural Dispersant for Oil Spill Clean-Up Operations. 2013 AIChE Annual Meeting, November 3-8, 2013, San Francisco, CA.
39. Daniela M. L. Stebbins, Audrey Buttice, Fei Guo, Jorge Lara and Norma Alcantar. Use of a Plant-Based Natural Biomaterial in Flocculation-Separation and in Absorption Systems for Removing Organic Contaminants in Water. 2013 AIChE Annual Meeting, November 3-8, 2013, San Francisco, CA.
40. Rana Falahat, Eva Christabel Williams, Marzenna Wiranowska, Norma Alcantar, Ryan Toomey. Tunable Nano-Delivery System for cancer treatment with Chlorotoxin: A new approach for targeted drug delivery. 2013 AIChE Annual Meeting, November 3-8, 2013, San Francisco, CA.
41. S. Pettit, L. Rodriguez-Gonzalez, J. Lara-Viera, W. Zhao, J. Michaels, S. Ergas, J. Kuhn, and N. Alcantar. Photocatalysis as an Advanced Oxidation Process (AOP) for Water Treatment. The Society of Women Engineers National Conference will be held in Baltimore, MD from October 24-26th, 2012.
42. Stebbins D M L, Fox D I, Buttice Audrey, Alcantar N. Cactus Mucilage from *Opuntia Spp.*: A Natural Biopolymer to Treat Contaminated Water. New Trends in Polymer Chemistry and Characterization. International Materials Research Congress, Cancun, MX Aug 13-17, 2012.
43. Daniela Stebbins, Dawn Fox, Audrey Buttice, Deni-Maire Smith Norma Alcantar. Alternative water treatment using Cactus Mucilage from Opuntia Spp.: Application in Bacteria Removal. 2012 Annual Meeting, Pittsburg, PA Oct 27-Nov 3, 2012.
44. Eva Christabel Williams, Marzenna Wiranowska, Marcia Gordon, Ryan Toomey, Gael Nicolas, and Norma Alcantar. Preferential Drug Delivery to Cancer Cells than to Normal Cells by Using Niosome chitosan Thermo-responsive Double Package System (NCTR-DPS), American Association for Cancer Research 2012, Chicago, IL.

45. Eva Christabel Williams, Marzenna Wiranowska, Ryan Toomey, and Norma Alcantar, Localized drug delivery system for ovarian cancer treatment. Nano-Bio Collaborative International Conference 2012, Embassy Suites, Tampa FL.
46. Stebbins D M L, Fox D I, Atherton L, Alcantar N "Rapid: Remediation of earthquake impacted potable water sources with cactus mucilage" ICOSSE'11 Second International Congress on Sustainability Science and Engineering, Jan 9-12, 2011, JW Marriott Starr Pass Resort & Spa, Tucson, Arizona.
47. Fox D I, T Pichler, D Yeh, N Alcantar "Cactus based materials for removal of arsenic from drinking water" ICOSSE'11 Second International Congress on Sustainability Science and Engineering, Jan 9-12, 2011, the Graduate Student Poster Award. JW Marriott Starr Pass Resort & Spa, Tucson, Arizona (Poster presentation) Co-winner of Student Poster Award.
48. Dawn I. Fox, Thomas Pichler, Daniel H. Yeh, and Norma A. Alcantar, "Cactus Mucilage and Iron for the removal of As from drinking water", Advances that Deal with Water Depletion and Degradation Session, The Association of Environmental Engineering and Science Professors (AEESP), Education and Research Conference, July 10-12, 2011 in Tampa, Florida.
49. Dawn I. Fox, Thomas Pichler, Daniel H. Yeh, and Norma A. Alcantar, "Cactus Mucilage and Iron for the removal of As from drinking water", Advances that Deal with Water Depletion and Degradation Session, The Association of Environmental Engineering and Science Professors (AEESP), Education and Research Conference, July 10-12, 2011 in Tampa, Florida.
50. D. Stebbins, D. Fox, N. Alcantar, "Alternative treatment using a cactus mucilage to treat drinking water: Focus on areas impacted by earthquake, The Association of Environmental Engineering and Science Professors (AEESP), Education and Research Conference, July 10-12, 2011 in Tampa, Florida.
51. T.J. Lynn, A. Buttice, P. Wanjugi, J. Yakubu, S. Ergas, V.J. Harwood, N. Alcantar, "Water quality improvement of impaired surface waters with the aide of selected coagulants", The Association of Environmental Engineering and Science Professors (AEESP), Education and Research Conference, July 10-12, 2011 in Tampa, Florida.
52. Fox, D I, T Pichler, D Yeh, N Alcantar "Arsenic Removal From Drinking Water Using Cactus Mucilage and Iron" 2011 American Institute of Chemical Engineers (AIChE) Annual Meeting, October 16-21, 2011, Minneapolis Convention Center, Minneapolis, MN.
53. Daniela M. L. Stebbins, Dawn Fox, Audrey Buttice and Norma Alcantar, "Cactus Mucilage As An Emergency Response Biomaterial to Provide Clean Drinking Water" 2011 American Institute of Chemical Engineers (AIChE) Annual Meeting, October 16-21, 2011, Minneapolis Convention Center, Minneapolis, MN.
54. Audrey Buttice and Norma A. Alcantar, "Using a Natural Material to Enhance the Aggregation of Sediments and Bacteria: Implications In Water Treatment" 2011 American Institute of Chemical Engineers (AIChE) Annual Meeting, October 17, 2011, Minneapolis Convention Center, Minneapolis, MN.
55. Daniela M. L. Stebbins, Training Course: Arsenic Speciation by High Performance Liquid Chromatography December 5 - 10, 2011, Federal University of Minas Gerais (UFMG), Brazil.
56. Daniela M. L. Stebbins, Training Course: Hydride Generation Atomic Fluorescence Spectrometry (HPLC-HG-AFS), Belo Horizonte, Minas Gerais, Brazil and Federal University of Viçosa (UFV), Viçosa, Minas Gerais, Brazil.
57. Maria Celis, Ryan Toomey, and Norma A. Alcantar, Evaluation of Natural Surfactants: Implications to Oil Spill Emulsions and Clean-up. Advances that Deal with Water Depletion and Degradation Session, The Association of Environmental Engineering and Science Professors (AEESP), Education and Research Conference, July 10-12, 2011 in Tampa, Florida.

58. Using a Natural Material to Enhance the Aggregation of Sediments and Bacteria: Implications In Water Treatment, Audrey Buttice, Norma A. Alcantar, AIChE 2011, Minneapolis Convention Center.
59. Cactus Mucilage As An Emergency Response Biomaterial to Provide Clean Drinking Water, Daniela M. L. Stebbins, Dawn Fox, Audrey Buttice and Norma Alcantar, AIChE 2011, Minneapolis Convention Center.
60. Arsenic Removal From Drinking Water Using Cactus Mucilage and Iron, Dawn I. Fox, Thomas Pichler, Daniel H. Yeh and Norma A. Alcantar, AIChE 2011, Minneapolis Convention Center.
61. Fox D I, T Pichler, D Yeh, N Alcantar, "Cactus mucilage: Toward an environmentally friendly alternative to remove arsenic from drinking water", The 37th Annual Technology Conference of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE)*, March 29 - April 2, 2010, Atlanta Marriott Marquis.
62. Fox, D I, T Pichler, D Yeh, N Alcantar, "Mechanistic studies on the interaction of cactus mucilage with arsenic" 240th American Chemical Society National Meeting & Exposition, August 22-26, 2010, Boston, MA.
63. Williams E, Toomey R, Alcantar N., Design and Characterization of a Double Packaged System For Localized Drug Delivery For the Treatment of Cancers. AACR 101st Annual Meeting 2010, Poster Presentation, April 17-21, 2010. Washington D.C.
64. Williams E, Toomey R, Alcantar N. Double Packaged System For Localized Drug Delivery For Ovarian Cancer. Biophysical Society 54th Annual Meeting, Poster Presentation, February 20-24, 2010. San Francisco.
65. Fox, D I, T Pichler, D Yeh, N Alcantar, "Mechanism of arsenic removal from water by interaction with cactus mucilage". 2010 American Institute of Chemical Engineers (AIChE) Annual Meeting, November 7-12, 2010, Salt Palace Convention Center, Salt Lake City, Utah.
66. Buttice, A.L, Stroot, P.G., Alcantar, N.A., "Concentrating and Removal of Waterborne Bacteria for Easy Detection", Poster Presentation, 54th Annual Biophysics Society Conference, San Francisco, CA. March, 2010.
67. Dawn I. Fox and Norma Alcantar. Cactus Mucilage: Using a Natural Hydrocolloid to Remove Arsenic from Drinking Water. 13th IACIS International Conference on Surface and Colloid Science and the 83rd ACS Colloid & Surface Science Symposium, June 14 – 19, 2009, Alfred Lerner Hall, Columbia University, New York, New York.
68. Dawn I. Fox, Thomas Pichler, Daniel Yeh, Norma Alcantar. Using Cactus Mucilage to Remove Inorganic Contaminants From Drinking Water. Annual Meeting of AIChE 2009, Oral Presentation, November 8-13, 2009. Nashville.
69. Angel D. Rodriguez, Dawn I. Fox, Norma Alcantar. Arsenic Removal From Water through Simple Mucilage-Based Filters, Annual Meeting of AIChE 2009. Poster Presentation, November 8-13, 2009. Nashville.
70. Audrey L. Buttice, Joyce Stroot, Daniel Lim, Peter Stroot, Norma Alcantar. Removing bacteria and heavy metals from drinking water with cactus mucilage. The 237th ACS National Meeting, Salt Lake City, UT, March 22-26, 2009.
71. Audrey L. Buttice, Joyce Stroot, Daniel Lim, Peter Stroot, Norma Alcantar. Using A Natural Material For Bacteria Concentration and Removal From Water. 53rd Annual Meeting of Biophysical Society. Poster Presentation, February 28-March 4th, 2009. Boston.
72. Jeffy Jimenez, Dave Morgan, Dione Kobayashi, Norma Alcantar. Altering the Process of Aß-Plaque Formation: Effect of Monoclonal Antibodies. 53rd Annual Meeting of Biophysical Society. Poster Presentation, February 28-March 4th, 2009. Boston.

73. Marlyn Colon, Eva Christabel Williams, Ryan Toomey, Norma Alcantar. Localized Drug Delivery System For The Treatment Of Cancer. 53rd Annual Meeting of Biophysical Society. Poster Presentation, February 28 – March 4th, 2009. Boston.
74. Marlyn Colon, Eva Christabel Williams, Ryan Toomey, Norma Alcantar, Localized Drug Delivery System for the Treatment of Cancer. 8th World Congress of Chemical Engineering (WCCE8). Poster Presentation, August 23-27, 2009. Montreal, Canada.
75. Williams E, Toomey R, Alcantar N. Smart Packaging: A Novel Technique For Localized Drug Delivery. 53rd Annual Meeting of Biophysical Society, Poster Presentation, February 28-March 4th, 2009. Boston.
76. Williams E, Toomey R, Alcantar N. Using Surface Forces To Design A Localized Drug Delivery System For Cancer Treatment. 8th World Congress of Chemical Engineering (WCCE8), Oral Presentation, August 23-27, 2009. Montreal, Canada.
77. Williams E, Toomey R, Alcantar N., Novel Double Packaged System For Localized Drug Delivery For Ovarian Cancer. Annual Meeting of AIChE 2009, Oral Presentation, November 8-13, 2009. Nashville.
78. Nicole Hupalo, Jeffy Jimenez, David Morgan, and Norma Alcantar, Biophysical Society 53rd Annual Meeting, Poster Presentation, Boston, Massachusetts, 1-Mar-09. Title: Monitoring and Discerning the Conformational Change of the Most Common Peptide Related to Neuritic Plaques in Alzheimer's Disease.
79. Nicole Hupalo, Jeffy Jimenez, David Morgan, and Norma Alcantar. Studying the Conformational Changes Suffered by Amyloid Beta Peptide Molecules: Implications for Alzheimer's Disease. 8th World Congress of Chemical Engineering, Poster Presentation, Montreal, QC, Canada, 25-Aug-09.
80. Norma Alcantar, Jeffy Jimenez, and David Morgan, Antibody Mediated Conformational Changes in aß Peptides, Life Science Applications Session: Drug Delivery, The 82nd ACS Colloid & Surface Science Symposium, North Carolina, June 15-18 2008.
81. Dawn I. Fox, Thomas Pichler, Daniel Yeh, and Norma Alcantar, Removal of Arsenic from Drinking Water Using Cactus Mucilage, Environmental Applications and Natural Colloids Session: Water and Waste Stream Processing, The 82nd ACS Colloid & Surface Science Symposium, North Carolina, June 15-18 2008.
82. Audrey L. Buttice, Norma Alcantar, Kathryn Bailey, Peter Stroot, Joyce Stroot, and Daniel Lim; 3245-Preconditioning Water for Bacteria Detection Using a Natural Material, Biophys. Soc. Annual Meeting. 2008 94: 3245.
83. Eva C. Williams, Ryan Toomey, and Norma Alcantar; 438-Using Embedded Vesicles In Hydrogels For Localized Drug Delivery For Ovarian Cancer, Biophys. Soc. Annual Meeting, 2008 94: 438.
84. Jeffy P. Jimenez, David Morgan, and Norma A. Alcantar; 2741-Destabilizing Aggregation Conditions of Aß Proteins: Alzheimer's disease Passive Immunotherapy, Biophys. Soc. Annual Meeting. 2008 94: 2741.
85. Williams E, Toomey R, Alcantar N. Designing a Localized Drug Delivery System for Ovarian Cancer using Biomimetic Materials, presented at the AIChE Conference, session: Biomimetic Materials II. November 4th to 9th, 2007. Salt Lake City, Utah.
86. Jimenez, Jeffy, Alcantar, Norma; Effects of Antibodies on Amyloid Beta Peptide Aggregates: Intermolecular Interactions Perspective, BEST (Building Engineering and Science Talent) Symposium at Dow Chemicals. Midland, MI. September 26, 2007.
87. Jeffy P. Jimenez, MS, David G. Morgan, PhD, Norma A. Alcantar; 83-In Vitro Kinetic Studies of Amyloid Beta 42 Peptide Aggregation, Biophys. Soc. Annual Meeting, March 4, 2007, Baltimore, MD.

88. Vinay K. Gupta, Babu Joseph, Aydin Sunol, Norma Alcantar, and Ryan G. Toomey, Transforming the Educational Experience of Transfer Students in Chemical Engineering Using a Multi-Dimensional Spiral Curriculum, 13 November 2006, Undergraduate Education (04a), #68 - Curriculum Revision (04A01), AICHE 2006.
89. Kristina O. Dearborn, Ryan G. Toomey, Michael D. VanAuker, and Norma Alcantar; A Release Rate Study for Controlled Drug Delivery Using Niosomes, 16 November 2006 - Engineering Fundamentals in Life Science (15d), #586 - Drug Delivery (II) (15D14), AICHE 2006.
90. Jeffy Jimenez, August J. Heim II, Garrett Matthews, Norma Alcantar, Construction and Characterization of Soft-Supported Lipid Bilayer Membranes for Biosensors Application. IEEE International Conference of the Engineering in Medicine and Biology Society. New York, NY – US, September 3rd, 2006.
91. Jeffy Jimenez, David Morgan, Norma Alcantar. Study and Evaluation of Adhesion Forces and Chemical Structures Involved in the Aggregation Pathways for Both Amyloid Beta Peptides 40 and 42. International Workshop: "Bridging Nanoscale Forces and Interfacial Phenomena to the Macroscopic World". Cancun – Mexico, May 7th – May 12th, 2006.
92. Kristina O Dearborn, Ryan G. Toomey, Michael D. VanAuker and Norma A. Alcantar; The Design and Implementation of Drug Encapsulated Nanoparticles Embedded in Chitosan Hydrogels for the Controlled Release of Drug Delivery to Brain Tumor Sites, SESSION AA4: Nanomachines and Engineered Bio-Hybrid Systems, Thursday Evening, April 20, 2006, Materials Research Society, San Francisco, CA 2006.
93. Jeffy Jimenez and Norma Alcantar, Direct measurement of adhesive forces and surface conformation of Amyloid beta peptide structures, BIOL 142-. Lipids and Membranes, Metabolism and Chemical Biology, The 230th ACS National Meeting, in Washington, DC, Aug 28-Sept 1, 2005.
94. Kevin Young, Alessandro Anzalone, and Norma Alcantar, Using the Mexican cactus as a natural-based process for removing contaminants in drinking water, PMSE 555- Green Polymer Chemistry, The 230th ACS National Meeting, in Washington, DC, Aug 28-Sept 1, 2005.
95. Jeffy Jimenez, David Morgan, and Norma Alcantar, Direct Measurement of Adhesive Forces in Amyloid Beta Peptide Structures, International Conference on Prevention of Dementia: Early Diagnosis and Intervention Session Title: Biomarkers for Risk and Disease Progression, Alzheimer's Association International Prevention of Dementia Conference in Washington, D.C., USA, June 18 – 21, 2005.
96. Jeffy Jimenez, Monica J. Escobar, David Morgan, and Alcantar Norma. In Vitro Investigations of Interactions between Amyloid Beta Peptides (1-40, 1-42) Structures and Substrates with Different Natures, #594 - Biomimetic Interfaces (08B03), 2005 AICHE National Meeting.
97. Kevin A. Young, Alessandro Anzalone, Karla Davis-Salazar, Babu Joseph, Mark Stewart, Thomas Pichler, Tomas Viveros, Michel Picquart, and Norma A. Alcantar. International Multidisciplinary Efforts in the Development of a Sustainable Green Technology for the Removal of Contaminants in Drinking Water, #561 - Sustainability, Principles, Applications and Case Studies (TE013), 2005 AICHE National Meeting.
98. Kevin A. Young, Alessandro Anzalone, and Norma A. Alcantar, Using the Mexican Cactus as a Natural-Based Separating Agent in a Filter for Removing Contaminants in Drinking Water, #448 - Biobased/Green Materials: General Session (17002), 2005 AICHE National Meeting.
99. Monica J. Escobar, Jeffy Jimenez, Garrett Matthews and Alcantar Norma. Soft Supported Biomimetic Membranes: Assembly and Performance 08B06 Self-Assembled Biomaterials: Part I, 2005 AICHE National Meeting.

100. Boles, J., Israelachvili, J., Alcantar, N., Anzalone, A., Meyer, E., and Greene, W., "Direct measurements of the dissolution of silica-mica interfaces and its implication for pressure solution mechanisms", presented by Boles and Anzalone at the American Geophysical Union (AGU) 2004 Fall Meeting, December 13-17, San Francisco, California.

101. Anzalone, A., Alcantar, N, "Study of a Natural Flocculating Agent for Water and Wastewater Treatment", presented at the AIChE 2004 Annual Meeting, November 7-12, Austin, Texas.

102. Alcantar, N., Anzalone, A., Boles, J., and Israelachvili, J., "Forces and Ionic Transport Between Clays: Implications for Pressure Solution", presented by Alcantar at the AIChE 2004 Annual Meeting, November 7-12, Austin, Texas.

103. O'Callaghan, J., Morgan D., Alcantar N. "Direct Measurement of Adhesive Forces in Amyloid Beta Peptide Structures", presented at AIChE, session: Biomimetic Interfaces. November 7th to 11th, 2004, Austin, Texas.

104. O'Callaghan J., Majewski, P., Morgan, D., Alcantar, N. "Comprehensive Study of Molecular Conformations of Aß40 and Aß42 Peptides and their Effects to Surface Adhesion Mechanisms." Annual Biomedical Research Conference for Minority Students, Poster Presentation held on November 13, 2004.

105. Anzalone, Alessandro, Joseph, Babu; Davis-Salazar, Karla; Viveros, Tomas, Picquart, Michel, Steward, Mark; Alcantar, Norma; Implementing a natural material for contaminant removal, Biocomplexity in the Environment Materials Use: Science, Engineering and Society (MUSES) Workshop, National Science Foundation, Arlington, Virginia, October 6-7, 2004.

106. Manero, Octavio; Alcantar, Norma; Studies of Tribological Properties of Micellar Surfactant Systems under Confinement and Shear at the Nanoscale Interfacial Fundamentals session. 2003 AICHE Annual meeting, November 16-21, San Francisco, CA.

107. Alcantar, Norma; The Surface Forces Apparatus in Nanotechnology Applications Presented at the Nanotools session, 2003 AICHE Annual meeting, November 16-21, San Francisco, CA.

Regional

108. "Coatings of Natural Materials for smart applications in the Air Force operational platforms," ," Zeinab Veisi, Ryan Toomey, Norma A. Alcantar, 2018 Air Force Science and Technology Workshop, Tampa, FL, April 25, 2018.

109. "Coatings for enhancing the performance and capabilities of Air Force operational platforms," Zeinab Veisi, Ryan Toomey, Norma A. Alcantar, 2018 Air Force Science and Technology Workshop, Tampa, FL, April 25, 2018.

110. "Removal of Trace Organic Compounds Using Cactus Mucilage," Tunan Peng, Daniela Stebbins, Norma Alcantar, 2018 U.S. Air Force Science and Technology Workshop, Tampa, FL, April 25, 2018.

111. "Natural Dispersant as an Emergency Response Strategy for Aviation Fuel Spill," Fei Guo, Daniela Stebbins, Norma Alcantar, 2018 U.S. Air Force Science and Technology Workshop, April 25, 2018, Tampa, Florida.

112. "Natural Dispersants for Oil Dispersion: Strategy for Sustainable Treatments," Fei Guo, Daniela Stebbins, Norma Alcantar, 2018 U.S. Air Force Science and Technology Workshop, April 26, 2018, Tampa, Florida.

113. "Efficient Removal of Volatile Organic Compounds (VOCs) using Cactus Mucilage Beads," Tunan Peng, Daniela Stebbins, Norma Alcantar, 2018 U.S. Air Force Science and Technology Workshop, Tampa, FL, April 25, 2018.

114. L. Rodriguez-Gonzalez, S. Pettit, W. Zhao, J. Lara-Viera, D. Stebbins De Lima, J. Michaels, N. Alcantar S. Ergas. Removal of Off-Flavor Compounds in Aquaculture Food Products: Optimizing New Techniques for Sustainable Aquaculture Systems. FAEP Conference, Orlando, Florida, Sept 11-13, 2013.

115. Removal of Geosmin and MIB from Aqueous Systems using Advanced Oxidation Processes. S. Pettit, L. Rodriguez-Gonzalez, J. Lara-Viera, W. Zhao, J. Michaels, S. Ergas, J. Kuhn, and N. Alcantar. FAEP Conference, Orlando, Florida, Sept 11-13, 2013.

116. Dawn Fox, Thomas Pichler, Daniel Yeh, Norma Alcantar, Cactus mucilage: an environmentally-friendly alternative for arsenic removal from drinking water, Florida (chapter of ACS) Annual Meeting and Exposition (FAME) 2008, May 8-10, 2008, Orlando Sun Resort, Orlando

117. Dawn Fox, Thomas Pichler, Daniel Yeh, Norma Alcantar, Removal of arsenic from drinking water using cactus mucilage, Going Green Tampa Bay Environmental Sustainability Expo 2008, April 15, 2008, (Awarded Runner-up).

118. Dawn Fox, Thomas Pichler, Daniel Yeh, Norma Alcantar, Removal of arsenic from drinking water using cactus mucilage, Annual Joint Symposium of the Florida Chapter of the American Vacuum Society (FLAVS) Science and Technology Society and the Florida Society for Microscopy (FSM), March 10-11, 2008, UCF (Awarded Honorable Mention).

119. Dearborn K, Toomey R, VanAuker Michael, Alcantar Norma; The Characterization of Non-Ionic Surfactant Vesicles: A Release Rate Study for Drug Delivery, Commercialization of Micro and Nano Systems Conference, St. Petersburg, Fl, August 27-31, 2006.

120. O'Callaghan, J., Anzalone, A., Correa, J., and Alcantar, N., "Study of Tribological and Optical Properties of CdSe Nanoparticles Films", poster presented at the 2004 Annual Joint Symposium of the Florida Chapter of the American Vacuum Society, the Florida Chapter of the American Ceramic Society, and the Florida Society for Microscopy, March 8-12, 2004, University of Central Florida.

121. Anzalone, A., O'Callaghan, J., Correa, J., and Alcantar, N., Study of Tribological and Optical Properties of CdSe Nanoparticles Films Using a Surface Forces Apparatus", poster presented at the 80th Florida Annual Meeting and Exposition (FAME 2004), American Chemical Society, Orlando, May, 2004.

Local

122. Molly Skinner, Zeinab Veisi, Norma Alcantar; "Counteracting the Formation of Amyloid Beta Fibers With Natural Polysaccharides to Prevent Certain Neurodegenerative Diseases," USF Research Colloquium- Winner of the Excellence in Research Award, April 7, 2017, Tampa, Florida.

123. Singh, Rupin; Johnson, Joseph J.; Alcantar, Norma; Wiranowska, Marzenna; Rejniak, Katarzyna, A.; "Cross-Disciplinary Optimization of Nano-Drug Delivery to Ovarian Carcinoma and Glioma Cells," H. Lee Moffitt Research Symposium, April 27, 2017, Tampa, Fl.

124. Alan Roberts; Katarzyna Rejniak; Norma Alcantar; Marzenna Wiranowska,; "Quantitative Assessment of the Intracellular Distribution of Chlorotoxin Following Direct Intratumoral and Intravenous Injections in a U87 Human Glioma Mouse Model," Morsani-College of Medicine Student Research Symposium, Nov. 3, 2017, Tampa, Florida.

125. Jorge Arturo Lara Viera, Dr. Manoj K. Ram, Dr. Norma A. Alcantar. Cactus Mucilage Biobeads and Absorption of Methylene Blue. CoE Symposium, 2013.

126. Fox, D I, N Alcantar, Water treatment system for disaster release, USF Research day, Nov 2010.

127. Audrey Buttice, Norma A. Alcantar, Sediment and Bacteria Aggregation using Mucilage Gum, University of South Florida, College of Engineering Research Day, Thursday, November 17, 2011.

128. Williams E, Toomey R, Alcantar N., Thermo-Responsive Double Packaged System For Localized Drug Delivery For Ovarian Cancer. Florida Centre of Excellence for Biomolecular Identification and Targeted Therapeutics (FCoE-BITT) Symposium, Poster Presentation, October 2009. Tampa.

129. Williams E, Toomey R, Alcantar N. Smart Packaging: Localized Drug Delivery for the Treatment of Brain Cancer. USF Neuroscience Research Day 2009. Poster Presentation, March 13, 2009. Tampa.

130. Nicole Hupalo, Jeffy Jimenez, David Morgan, and Norma Alcantar, The Seventh Annual Undergraduate Research Symposium and Celebration, Poster Presentation, Tampa, FL, 3-Apr-09, Title: Monitoring and Discerning the Conformational Change of the Most Common Peptide Related to Neuritic Plaques in AD.

131. Selma Hokennek, Perul Panin, Julie Harmon, Norma Alcantar. USF-Research Day, Charaterization of conductive films. Poster Presentation. April 2009.

132. Dawn Fox, Thomas Pichler, Daniel Yeh, Norma Alcantar, Removal of arsenic from drinking water using cactus mucilage, AEESP Distinguished Lecture & Poster Session, Mar 5, 2008.

133. Dawn Fox, Thomas Pichler, Daniel Yeh, Norma Alcantar, Removal of arsenic from drinking water using cactus mucilage, USF Health Research Day 2008, Feb 22, 2008.

134. Buttice, A., P. Stroot, J. Stroot, K. Bailey, D. Lim, N. Alcantar Reducing Waterborne Pathogens Using a Natural Material Poster November 9th, 2007. University of South Florida, Tampa, FL. Presentation at the 1st Annual USF Graduate School Student Success Research Symposium Soiree.

135. Jimenez, Jeffy, Alcantar, Norma; Antibody - Aß Peptide Interactions and their Implications for Alzheimer's Disease Therapies". First Annual Celebration of Scholarship Day at the USF College of Engineering. University of South Florida. Tampa, Florida. April 5th, 2007.

136. Williams E, Toomey R, Alcantar N. Designing a Localized Drug Delivery System for Ovarian Cancer. USF Scholarship Day, Poster Presentation, March 2007.

137. Williams E, Toomey R, Alcantar N. Designing a Localized Drug Delivery System for Ovarian Cancer. Florida Centre of Excellence for Biomolecular Identification and Targeted Therapeutics (FCoE-BITT) Symposium, Poster Presentation, October 2007.

138. Correa, J., Anzalone, A., O'Callaghan, J., and Alcantar, N., "Characterization of CdSe Nanoparticles Films", poster presented at the Second Annual Undergraduate Research Symposium and Celebration, University of South Florida Honors College, April 15th 2004.

CONTINUING REVIEWER

CUNY-Internal Proposal Program
International Journal of Pharmaceutics
Environmental Science and Engineering
The Alfred P. Sloan Foundation
National Science Foundation
Langmuir

TEACHING

Undergraduate Courses:

ECH 4931.005 Spring 2004, Fall 2004, Spring 2005, Fall 2009, Fall 2010, Fall 2011, Fall 2017, Spring 2019: Intro to Materials Science, 3 credits.
ECH 4931.002 Fall 2005: ST: Polymer Science & Eng., 3 credits.
ECH 4123.001 Spring 2006, Spring 2007, Spring 2008, Spring 2009, Spring 2011, Fall 2018, Fall 2019: Chemical Engineering Thermodynamics, 3 credits.
ENG 3000L.001 Spring 2019, Spring 2020, Fall 2020, Spring 2021: Foundations of Engineering Lab, 3 credits.
EGN 3000.001 and 2 Spring 2007, Fall 2007, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Spring 2015: Foundations of Engineering, 1 credit.
ECH 4387 Spring 2020, Spring 2021, Sustainability, 3 credits.
ECH 4931 012 Spring 2011, 2012, 2013, 2014, 2015, 2016, 2018, 2019 Sustaining the Earth: Eng. App for Undergraduate Students, 3 credits.

Graduate Courses:

ECH 5931.001Fall 2005: ST: Polymer Science & Eng., 3 credits.
ECH 6931.001Fall 2005, 2008, 2013: ST: Graduate Seminar. 1 credit.
ECH 6105.001, Spring 2013, Advance Thermodynamics, 3 credits.
ECH 5785.001 Spring 2010, 2011, 2012, 2013, 2014 Sustaining the Earth: Eng. App for M.S.
ECH 6931.005 Spring 2011, 2012, 2013, 2014 Sustaining the Earth: Eng. App for Ph.D.
BME 6634 Biotransport Phenomenon: Spring 2016.

Other:

Co-Director of the Water, Sanitation, and Health Graduate Certificate Program for Engineering, Public Health and Anthropology Students (Implementation date: Fall 2010)
The graduate certificate in Water, Sanitation, and Health is intended for public health professionals, humanitarian aid providers, engineers and other planners, or anyone with an interest in addressing critical shortages and health problems associated with inadequate and unsanitary water throughout the world. The coursework is designed to provide instruction in the testing, treatment, and management of water supplies; the role of water resources within the broader context of the earth's environment, particularly from a sustainability perspective; the role of water as a crucial component to global health; and the cultural dimensions of local and international health. As a result, the curriculum is highly interdisciplinary and aims to provide the skills and information necessary to address complex problems associated with water, resources, and health as part of teams that bring together many specialties.

Materials Science and Engineering Graduate Certificate Program for Engineering, Physics, and Chemistry Students. (Implementation date: Fall 2009)
Materials Science & Engineering (MSE) students will be able to demonstrate the understanding of fundamental principles of physics and chemistry to designing materials with desired combinations of mechanical, optical, electrical, magnetic, electrochemical and other properties. Increasingly, innovative materials are being developed with the benefit of lessons that have been learned from nature.

Former Ph.D.'s Students:

Fei Guo	"Cactus-based Mucilage as a Natural Dispersant for Crude Oil Spills." Fall 2019.
Sanaz Veisi	"Responsive Coatings and Functional Systems from Pectin Polysaccharides." Summer 2019.
Wen Zhao	"The Control of Water Contaminants Assisted by Natural Materials." Summer 2017.
Rana Falahat	"A Flexible Treatment for Brain and Ovarian Carcinomas Using Targeted-Drug Delivery Systems." Summer 2016.
Yvy Drexler	"A Passive Membrane Photobioreactor for the Isolated Cultivation of Microalgae Using Wastewater as a Feedstock". (*Co-major Professor) Yvy graduated Fall 2014 and it is doing a postdoctoral fellowship in Environmental Science.
Audrey Buttice	"Aggregation of Sediment and Bacteria with Mucilage from the *Opuntia ficus-indica* Cactus." Graduated Fall 2012. Dr. Buttice is the co-owner of Scientific League LLC.
Eva Williams	"Smart Packaging: A Novel Technique for Localized Drug Delivery for Ovarian Cancer." Graduated Summer 2012. Dr. Williams currently is employed as a Formulation A. Scientist at Amgen, CA.
Dawn Fox	"Cactus Mucilage-Assisted Heavy Metal Separation." Graduated Fall 2011. Dr. Fox is currently a faculty member in the Chemistry Department of the University of Guyana.
Jeffy Jimenez	"Effects of Anti-Aβ Monoclonal Antibodies on the Amyloid Beta (Aβ) Peptide Fibrillogenesis and Their Involvement in the Clearance of Alzheimer's Disease Plaques." Graduated Summer 2009. Dr. Jimenez currently is employed as a Process/Product Development Engineer, R&D, at The Ritedose Corporation (TRC), NC.

Postdoctoral Fellows:

Daniela Stebbins	Pilot Unit for Aquaculture Cleaning Systems.
Maria Celis	Molecular Distribution of Dispersant Droplets.
Alexandro Anzalone	Cactus Mucilage Extraction and Implementation.

Current Ph.D.'s Students:

Khuload Asrashdi	"Biosustainable soil systems." Expected graduation Fall 2024.
Tunan Peng	"Disruptive Kinetic Compounds for the Dissolution of Amyloid Beta Plaques Using Natural Materials." Expected graduation Winter 2022.
Taranjot Kaur	"3D printing of the polyimide polymers." Expected graduation Summer 2022.
Eesha Bhattacharjee	"Sustainable Packaging Systems for Extreme Environments." Expected graduation Spring 2026.

Former Master's Students:

Jose Leon	"*Opuntia ficus-indica* Mucilage Potential to Remove Nuclear Active Contaminants from Water Based on a Surrogate Approach." Graduated Summer 2014. Mr. Leon is a field engineer at Baker Hughes, Houston, TX.
Marlyn Colon	Novel Encapsulation of Oxidizer Applied to Galvanic Cells: Aluminum / H_2O_2 Galvanic Cell as a Case Study. Graduated Spring 2012. Marlyn is a production engineer at Bausch & Lomb.
Audrey Buttice	"Reducing Sediment and Bacterial Contamination in Water Using Mucilage Extracted from the *Opuntia ficus-indica* cactus." Graduated Spring 09, cont. with Ph.D. studies.
Selma Hokenek	"Characterization of Conductive Polycarbonate Films." Graduated Spring 2009. Dr. Hokenek obtained her Ph.D. in 2013 and is a postdoctoral fellow at the University of Fribourg, Switzerland.
Kevin Young	"The Mucilage of *Opuntia ficus-indica*: A Natural, Sustainable, and Viable Water Treatment Technology for Use in Rural Mexico for Reducing Turbidity And Arsenic." Graduated Spring 2006. Ms. Young works at TECO Energy, Inc., Tampa, as a Sr. Policy Analyst.
Kristina Dearborn	"The Characterization of Non-Ionic Surfactant Vesicles: A Release Rate Study for Drug Delivery." Graduated Spring 2006. Ms. Dearborn works for the Sarasota (Florida) High School System as a science teacher.
Jeffy Jimenez	"Conformation and Stability of Amyloid Beta Peptides: Implications for Alzheimer's Disease Plaque Formation." Graduated 2005, continued with Ph.D. studies.

Former Undergraduate Students:

Bao Ma, Beatriz DaSilva Inacio, Maisha Khan, Nicholas Coppola, Mitchel Ortega, Danny Lopez, Molly Skinner, Nicole Vargas, Danny Lopez, Huat Thart Chiang, Monica Escobar, Jonathan Correa, Paul Majewski, Maria Coruzzi, Janese Trimaldi, Renee Nelson, Nicole Davenport, Meriem Diouri; Jesse Parks, Mandek Richardson, Carlos Bello, Dayling Chaparro, Ryan Watley, Symone White, Marlyn Colon, Tam Nguyen, Nicole Hupalo, Danielle Tabar, Deni-Maire Smith, Laura Atherton, Rachel Ruang, Mena George, and Stephanie Moreno.

High School Teachers and Students Mentoring:

Thomas Fritz, Apurva Dave, Lisa Peake, Danielle Stewart, Erik Yo.