

**THE UNIVERSITY OF TEXAS  
Cockrell School of Engineering  
Standard Resume**

**FULL NAME:** Navid B. Saleh **TITLE:** Associate Professor

**DEPARTMENT:** Civil, Architectural and Environmental Engineering

**EDUCATION:**

Bangladesh University of Engineering and Technology	Civil Engineering	B.S.	2001
Carnegie Mellon University	Civil and Environmental Engineering	M.S.	2004
Carnegie Mellon University	Civil and Environmental Engineering	Ph.D.	2007

**CURRENT AND PREVIOUS ACADEMIC POSITIONS:**

University of South Carolina	Assistant Professor	Jan 2009-Dec 2013
University of Texas at Austin	Assistant Professor	Jan 2014-Aug 2017
University of Texas at Austin	Associate Professor	Sept 2017-present

**OTHER PROFESSIONAL EXPERIENCE:**

Yale University	Postdoctoral Associate	Jun 2007-Dec 2008
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**HONORS AND AWARDS:**

Top 10 reviewer of Environmental Science: Nano, February 28, 2018.  
 Top 10 reviewer of Environmental Science: Nano, September 15, 2016.  
 Emerging Investigator Award, 2015, awarded by the Royal Society of Chemistry and Sustainable Nanotechnology Organization; November 08, 2015, Portland, OR.  
 Honorable Mention for Poster Presentation, 1<sup>st</sup> Sustainable Nanotechnology Conference, Nov, 2012  
 Explicitly profiled in USC College of Engineering Brochure for Outstanding Research Performance, Oct, 2009  
 Best Poster Award, Gordon Research Conference, Environmental Sciences: Water, 2008.  
 Outstanding Teaching Assistant Award, Carnegie Mellon University, Pittsburgh, PA, 2007.  
 Quantitative Environmental Analysis (QEA), LLC Graduate Scholarship 2006-2007.  
 ACS Environmental Chemistry Graduate Student Award, 2006.  
 ACS ‘Environmental Interfaces’ Travel Grant Award, 2006.  
 Sigma XI Grant in Aid of Research Award 2005-2006.  
 Air & Waste Management Association (A&WMA) Award, 2005-2006.

**MEMBERSHIPS IN PROFESSIONAL AND HONORARY SOCIETIES:**

American Chemical Association  
 American Society for Engineering Education  
 Association of Environmental Engineering and Science Professors

Sustainable Nanotechnology Organization

**UNIVERSITY COMMITTEE ASSIGNMENTS:**

Member, Strategic Vision Implementation Committee, CAEE, UT Austin, Fall 2014-Spring 2017

Member, Distinguished Lecturer Committee, CAEE, UT Austin, Fall 2015-present

Member, EWRE Seminar Organization Committee, Fall 2015-Fall 2016

Chair, EWRE Seminar Organization Committee, Fall 2016-Fall 2017

Member, Academic Support Committee, Cockrell School of Engineering, Fall 2017-present

Member, CAEE Computational and Data Skills Task Force, Fall 2017-Spring 2018

**OTHER UNIVERSITY SERVICES:**

Reviewer for 2018 Creative Grants Competition conducted by the Office of the Vice President of Research

**PROFESSIONAL SOCIETY AND MAJOR GOVERNMENTAL COMMITTEES:**

**Editorial Board**

Editorial Advisory Board Member, Environmental Science: Nano, A Royal Society of Chemistry Journal with impact factor 6.047.

**Journal Reviewer**

Accounts of Chemical Research, American Chemical Society Applied Materials and Interfaces, American Chemical Society Nano, American Chemical Society Sustainable Chemistry and Engineering, Bioorganic and Medicinal Chemistry Letters, Carbon, Chemical Engineering Journal, Chemosphere, Civil Engineering Infrastructure Journal, Colloids and Surfaces A, Critical Reviews in Environmental Science and Technology, Environmental Earth Sciences, Environmental Pollution, Environmental Science: Nano, Environmental Science: Water Research and Technology, Environmental Science and Pollution Research, Environmental Science and Technology, Industrial and Engineering Chemistry Research, Journal of American Chemical Society, Journal of Colloid and Interface Sciences, Journal of Contaminant Hydrology, Journal of Environmental Toxicology and Chemistry, Journal of Materials Chemistry A, Journal of Nanomedicine, Journal of Physical Chemistry, MRS Advances, Nanotoxicology, Reviews in Chemical Engineering, Particulate Science and Technology, Scientific Reports (nature group), Water Research.

**Research Proposal Reviewer**

National Science Foundation, 2011, 2012, 2013, 2016, 2018, 2019

AAAS Proposal Competition, 2018, 2019

**COMMUNITY ACTIVITIES:**

**Conference/Workshop Chair/Co-Chair**

**University of Texas:**

Co-Chair of National Workshop on “Future for Nanoparticle & Nanomaterial Research”, Arlington, VA, September, 2019.

Co-Chair of Nanotechnology for Water Treatment and Remediation Session, 8<sup>th</sup> Annual Meeting of Sustainable Nanotechnology Organization (SNO), San Diego, CA, November 07-09, 2019.

Member of the Organizing Committee and Co-Chair of the session titled “Smart Technologies to Reduce Environmental Pollution”, International Symposium on Environmental Geochemistry, Peking University, Beijing, China, August 7-10, 2019.

Co-Chair, 257<sup>th</sup> ACS National Meeting, Orlando, FL, March 31-April 04, 2019, “Emerging Issues on & Horizon Technologies for Water Disinfection”.

Attendee (invited) of Workshop on Nanomaterials for Subsurface Remediation, Nankai University, Tianjin, China, May 21-22, 2018.

Co-Chair of 255<sup>th</sup> ACS National Meeting, New Orleans, LA, August 18-22, 2017, “The Physics and Chemistry of Water Treatment: Symposium in Honor of Professor Desmond F. Lawler”.

Chair of Nanoeducation Session, 6<sup>th</sup> Annual Meeting of Sustainable Nanotechnology Organization (SNO), Los Angeles, CA, November 05-07, 2017.

Organizer of a nanoeducation workshop titled: Inspiring students and faculty at the interface of nano and water treatment, February 25, 2017, Oaxaca, Mexico.

Co-organizer of a pedagogical workshop titled: A workshop on nano education: Integration of social and ethical implications via problem based learning, Fall 2016, University of Texas at Austin.

Co-Chair (Principal Organizer) of 252<sup>nd</sup> ACS National Meeting, Philadelphia, PA, August 21-25, 2016, “Nanotechnology for Sustainable Agriculture and Food Systems”.

Co-Chair (Principal Organizer), 8<sup>th</sup> International Nanotoxicological Congress, Boston, MA, June 1-4, 2016, “Environmental Applications and Implications of Active Nanomaterials, Hierarchical Nanostructures, and Nanohybrids”.

Co-Chair, 90<sup>th</sup> ACS Colloid and Surface Science Symposium, Harvard University, Cambridge, MA, June 5-8, 2016, “Colloidal and Interfacial Phenomena in Environmental Systems”.

Co-Chair, 249<sup>th</sup> ACS National Meeting, Denver, CO, March 22-26, 2015, “Dispersion of nanoparticles and its implications for interfacial, biological, and environmental processes: Sorption and dispersion”.

Chair, Fate and Transport of Nanomaterials Session, 3<sup>rd</sup> Annual Meeting of Sustainable Nanotechnology Organization (SNO), Boston, MA, November 02-04, 2014.

Attendee (invited), Research workshop on NanoEHS: Fundamental Science Needs, 3<sup>rd</sup> Annual Meeting of Sustainable Nanotechnology Organization (SNO), Boston, MA, November 01, 2014.

### **University of South Carolina:**

Chair and Chief Organizer, NUE: Workshop on Problem-Based Learning for Nanotechnology, Columbia, SC, August 19-20, 2013.

Chair, Functional Nanomaterials for Trace Contaminant Detection, Removal, and Monitoring, 12<sup>th</sup> International Conference on the Biogeochemistry of Trace Elements, Athens, Georgia, June 16 – 20, 2013

Chair, Nanomaterials Interaction at Biological Interfaces, Division of Environmental Chemistry, American Chemical Society (ACS) Annual Meeting, San Diego, CA, March 25-29, 2012.

Chair, Role of Physicochemical Properties in Nanotoxicology, Environmental Effects of Nanoparticles and Nanomaterials, SETAC-Clemson University, Aug 22-26, 2010, Clemson, SC.

### Graduate and Postdoctoral Training:

Chair, Colloidal and Interfacial Phenomena in Aquatic Systems (09019), Environmental Division, American Institute of Chemical Engineers (AIChE) Annual Meeting, Philadelphia, PA, November 16-21, 2008.

### PUBLICATIONS:

#### A. Refereed Archival Journal Publications (in print or accepted: 67; h-index: 28; Citation: >6200)

*Underlining indicates supervised graduate student(s); § indicates visiting scholar(s); † indicates undergraduate advisee(s).*

#### University of Texas:

- UT-1. Bisesi Jr., J. H., Merten, J., Liu, K., Parks, A. N., Afrooz, A. R. M. N., Glenn, J. B., Klaine, S. J., Kane, A. S., Saleh, N. B., Ferguson, P. L., Sabo-Attwood, T. (January, 2014). Tracking and Quantification of Single-Walled Carbon Nanotubes in Fish Using Near Infra Red Fluorescence. *Environmental Science & Technology*. 48 (3), 1973-1983. DOI: 10.1021/es4046023.
- UT-2. Aich, N., Kim, E., ElBatanouny, M., Plazas-Tuttle, J., Yang, J., Ziehl, P., Saleh, N. B. (May, 2014). Detection of Crack Formation and Stress Distribution on Carbon Fiber Reinforced Polymer Specimens Through Triboluminescent-Based Imaging. *Journal of Intelligent Material Systems and Structures*. 1-8. DOI: 10.1177/1045389X14535017.
- UT-3. Saleh, N. B., Afrooz, A. R. M. N., Bisesi Jr., J. H., Aich, N., Plazas-Tuttle, J., Sabo-Attwood, T. (June, 2014). Emergent Properties and Toxicological Considerations for Nanohybrid Materials in Aquatic Systems. *Nanomaterials*. 4, 372-407. DOI: 10.3390/nano4020372.
- UT-4. Aich, N., Plazas-Tuttle, J., Lead, J. R., Saleh, N. B. (December, 2014). A Critical Review of Nanohybrids: Synthesis, Applications and Environmental Implications. *Environmental Chemistry*. 11, 609-623. DOI: 10.1071/EN14127. (Cover article).
- UT-5. Sanpui, P., Zheng, X., Loeb, J. C., Bisesi Jr., J. H., Khan, I. A., Afrooz, A. R. M. N., Liu, K., Badireddy, A. R., Wiesner, M. R., Ferguson, P. L., Saleh, N. B., Lednicky, J. A., Sabo-Attwood, T. (December, 2014). Single-Walled Carbon Nanotubes Increase Pandemic Influenza A H1N1 Virus Infectivity of Lung Epithelial Cells. *Particle and Fibre Toxicology*. 11 (66), 1-15. DOI: 10.1186/s12989-014-0066-0.
- UT-6. Afrooz, A. R. M. N., Hussain, S. M., Saleh, N. B. (December, 2014). Aggregate Size and Structure Determination of Nanomaterials in Physiological Media: Importance of Dynamic Evolution. *Journal of Nanoparticle Research*. 16 (12), 2771. DOI: 10.1007/s11051-014-2771-x.
- UT-7. Saleh, N. B., Aich, N., Plazas-Tuttle, J., Lead, J. R., Lowry, G. V. (February, 2015). Research Strategy to Determine When Novel Nanohybrids Pose Unique Environmental Risks. *Environmental Science: Nano*. 2 (1), 11-18. DOI: 10.1039/C4EN00104D. (Cover article).
- UT-8. Khan, I. A., Flora, J. R. V., Afrooz, A. R. M. N., Aich, N., Schierz, P. A., Ferguson, P. L., Sabo-Attwood, T., Saleh, N. B. (May, 2015). Change in Chirality of Semiconducting Single-Walled

- Carbon Nanotubes Can Overcome Anionic Surfactant Stabilization: A Systematic Study of Aggregation Kinetics. *Environmental Chemistry*. 12 (6), 652-661. DOI: 10.1071/EN14176.
- UT-9. Bisesi Jr., J. H., Ngo, T., Ponnayolu, S., Liu, K., Lavelle, C. M., Afrooz, A. R. M. N., Saleh, N. B., Ferguson, P. L., Denslow, N. D., Sabo-Attwood, T. (June, 2015). Examination of Single-Walled Carbon Nanotubes Uptake and Toxicity from Dietary Exposure: Tracking Movement and Impacts in the Gastrointestinal System. *Nanomaterials*. 5 (2), 1066-1086. DOI: 10.3390/nano5021066.
- UT-10. Plazas-Tuttle, J., Rowles III, L. S., Chen, H., Bisesi Jr., J. H., Sabo-Attwood, T., Saleh, N. B. (June, 2015). Dynamism of Stimuli-Responsive Nanohybrids: Environmental Implications. *Nanomaterials*. 5 (2), 1102-1123. DOI: 10.3390/nano5021102.
- UT-11. Saleh, N. B., Chambers, B., Aich, N., Plazas-Tuttle, J., Phung-Ngoc, H. N., Kirisits, M. J. (July, 2015). Mechanistic Lessons Learned from Studies of Planktonic Bacteria with Metallic Nanomaterials: Implications for Interactions Between Nanomaterials and Biofilm Bacteria. *frontiers in Microbiology*. 6, 1-8. DOI: 10.3389/fmicb.2015.00677.
- UT-12. Grassian, V. H., Haes, A. J., Mudunkotuwa, I. A., Demokritou, P., Kane, A. B., Murphy, C. J., Hutchison, J. E., Isaacs, J. A., Jun, Y.-S., Karn, B., Khondaker, S. I., Larsen, S. C., Lau, B. L. T., Pettibone, J. M., Sadik, O. A., Saleh, N. B., Teague, C. (February, 2016). NanoEHS – Defining Fundamental Science Needs: No Easy Feat When the Simple Itself is Complex. *Environmental Science: Nano*. 3 (1), 15-27. DOI: 10.1039/C5EN00112A.
- UT-13. Aich, N., Boateng, L. K., Sabaraya, I. V., Das, D., Flora, J. R. V., Saleh, N. B. (February, 2016). Aggregation Kinetics of Higher-Order Fullerene Clusters in Aquatic Systems. *Environmental Science & Technology*. 50 (7), 3562-3571. DOI: 10.1021/acs.est.5b05447.
- UT-14. Afrooz, A. R. M. N., Das, D., Murphy, C. J., Vikesland, P. J., Saleh, N. B. (August, 2016). Co-transport of Gold Nanospheres with Single-Walled Carbon Nanotubes in Saturated Porous Media. *Water Research*. 99, 7-15. DOI: 10.1016/j.watres.2016.04.006.
- UT-15. Saleh, N. B., Milliron, D. J., Aich, N., Katz, L. E., Liljestrang, H. M., Kirisits, M. J. (October, 2016). Importance of Doping, Dopant Distribution, and Defects on Electronic Band Structure Alteration of Metal Oxide Nanoparticles: Implications for Reactive Oxygen Species. *Science of the Total Environment*. 568, 926-932. DOI: 10.1016/j.scitotenv.2016.06.145.
- UT-16. Das, D., Plazas-Tuttle, J., Sabaraya, I. V., Jain, S. S., Sabo-Attwood, T., Saleh, N. B. (October, 2016). An Elegant Method for Large Scale Synthesis of Metal Oxide-Carbon Nanotube Nanohybrids for Nano-environmental Application and Implication Studies. *Environmental Science: Nano*. 4, 60-68. DOI: 10.1039/C6EN00294C.
- UT-17. Bisesi, J., Robinson, S., Lavelle, C., Ngo, T., Castillo, B., Crosby, H., Liu, K., Das, D., Plazas-Tuttle, J., Saleh, N. B., Ferguson, P., Denslow, N., Sabo-Attwood, T. (December, 2016). Influence of the gastrointestinal environment on the bioavailability of ethinyl estradiol sorbed to single-walled carbon nanotubes. *Environmental Science and Technology*. 51, 948-957. DOI: 10.1021/acs.est.6b04728.
- UT-18. Abtahi, S. M. H., Burrows, N. D., Idesis, F. A., Murphy, C. J., Saleh, N. B., Vikesland, P. J. (January, 2017). Sulfate Mediated End-to-End Assembly of Gold Nanorods. *Langmuir*. 33, 1486-1495. DOI: 10.1021/acs.langmuir.6b04114.
- UT-19. Saleh, N. B., Das, D., Plazas-Tuttle, J., Yang, D., Bonis-O'Donnell, J. T. D., Landry, M. P. (March, 2017). Importance and challenges of environmental ligand binding and exchange:

- Introducing single molecule imaging as a model characterization technique. *NanoImpact*. 6, 90-98. DOI: 10.1016/j.impact.2017.03.005.
- UT-20. Humes, S. T., Hentschel, S., Lavelle, C. M., Smith, L. C., Lednicky, J. A., Saleh, N. B., Sabo-Attwood, T. (June, 2017). Overcoming qRT-PCR interference by select carbon nanotubes in assessments of gene expression. *BioTechniques*. 63, 81-84. DOI: 10.21.44/000114578.
- UT-21. Plazas-Tuttle, J., Das, D., Sabaraya, I. V., Saleh, N. B. (November, 2017). Harnessing the power of microwaves for water disinfection with nanohybrids. *Environmental Science: Nano*. 5, 72-82 (cover article). DOI: 10.1039/C7EN00702G.
- UT-22. Rowles III, L. S., Alcalde, R., Bogolasky, F., Kum, S., Diaz-Arriaga, F. A., Ayres, C., Mikelonis, A. M., Toledo-Flores, L. J., Alonso-Gutiérrez, M. G., Pérez-Flores, M. E., Lawler, D. F., Ward, P. M., Lopez-Cruz, J. Y., Saleh, N. B. (November, 2017). Perceived versus actual water quality: Community studies in rural Oaxaca, Mexico. *Science of the Total Environment*. 622-623, 626-634. DOI: 10.1016/j.scitotenv.2017.11.309.
- UT-23. Chen, H., Zheng, X., Humes, S., Loeb, J., Robinson, S., Bisesi, J. H., Das, D., Saleh, N. B., Castleman, W., Lednicky, J., Sabo-Attwood, T. (December, 2017). Single-walled carbon nanotubes modulate pulmonary immune responses and increase pandemic influenza A virus titers in mice. *Virology*. 14, 242. DOI: 10.1186/s12985-017-0909-z.
- UT-24. Sabaraya, I. V.; Filonzi, A.; Hajj, R.; Das, D.; Saleh, N. B.; Bhasin, A. (December, 2017). Ability of nanomaterials to effectively disperse in asphalt binders for use as a modifier. *Journal of Materials in Civil Engineering*. 30, 04018166-1-8. DOI: 10.1061/(ASCE)MT.1943-5533.00023.
- UT-25. Das, D., Sabaraya, I. V., Sabo-Attwood, T., Saleh, N. B. (May, 2018). Insights into Metal Oxide and Zero-Valent Metal Nanocrystal Formation on Multiwalled Carbon Nanotube Surfaces During Sol-gel Process. *Nanomaterials*. 8, 403-1-10. DOI: 10.3390/nano8060403.
- UT-26. Isaac, K. M., Sabaraya, I. V., Ghousifam, N., Das, D., Pekkanen, A., Long, T. E., Saleh, N. B., Rylander, M. N. (June, 2018). Functionalization of single-walled carbon nanohorns for simultaneous fluorescence imaging and cisplatin delivery. *Carbon*. 138, 309-318. DOI: 10.1016/j.carbon.2018.06.020.
- UT-27. Das, D., Sabaraya, I. V., Zhu, T., Sabo-Attwood, T., Saleh, N. B. (June, 2018). Aggregation Behavior of Multiwalled Carbon Nanotube-Titanium Dioxide Nanohybrids: Probing the Part-Whole Question. *Environmental Science and Technology*. 52, 8233-8241. DOI: 10.1021/acs.est.7b05826.
- UT-28. Shi, L., Zhuo, S., Abulikemu, M., Mettela, G., Palaniselvam, T., Rasul, S., Tang, B., Yan, B., Saleh, N. B., Wang, P. (August, 2018). Annealing Temperature Effects on Photoelectrochemical Performance of Bismuth Vanadate Thin Film Photoelectrodes. *RSC Advances*. 8, 29179. DOI: 10.1039/c8ra04886h.
- UT-29. <sup>§</sup>Al-Masri, D. A., Saleh, N. B., McKay, G., Atieh, M. A., Ahzi, S. (November, 2018). Adsorption of phosphate on iron oxide doped halloysite nanotubes. *Scientific Reports*. 9, 3232. DOI: 10.1038/s41598-019-39035-2.
- UT-30. Saleh, N. B., Khalid, A., Tian, Y., Ayres, C., Sabaraya, I. V., Pietari, J., Hanigan, D., Chowdhury, I., Apul, O. G. (December, 2018). Removal of poly- and per-fluoroalkyl substances from aqueous systems by nano-enabled water treatment technologies. *Environmental Science: Water Research & Technology*. 5, 198-208. DOI: 10.1039/c8ew00621k.

UT-31. Smith, L., Moreno, S., Saleh, N. B., Das, D., Orandle, M., Robinson, S., Porter, D., Sabo-Attwood, T. (March, 2019). Multi-walled carbon nanotubes inhibit estrogen receptor expression in vivo and in vitro through transforming growth factor beta1. *NanoImpact (in press)*.

UT-32. Merryman, A. E., Sabaraya, I. V., Rowles III, L. S., †Toteja, A., †Carrillo, S. I., Sabo-Attwood, T., Saleh, N. B. (March, 2019). Interaction between functionalized multiwalled carbon nanotubes and MS2 bacteriophages in water. *Science of the Total Environment (in press)*.

#### University of Texas (submitted, 8):

UT-33. Zheng, X., Bisesi Jr., J. H., Chen, H., Afrooz, A. R. M. N., Ferguson, P. L., Lednický, J., Saleh, N. B., Sabo-Attwood, T. (2019). Modulation of toll-like receptor activity by single-walled carbon nanotubes with distinct electronic structures. *Journal of Nanobiotechnology (in review)*.

UT-34. Chambers, B. A., Sabaraya, I. V., Saleh, N. B., Kirisits, M. J. (2019). Cohort adoption: The effect of a four-year pre-college STEM outreach program. *Journal of STEM Education Research (in review)*.

UT-35. Abtahi, S. M. H., Trevisan, R., Giulio, R. D., Murphy, C. J., Saleh, N. B., Vikesland, P. J. (2018). Implications of Aspect Ratio on the Uptake and Nanotoxicity of Gold Nanomaterials to *Corbicula fluminea*. *NanoImpact (in revision)*.

UT-36. Nicholas, J., Chen, H., Liu, K., Sabaraya, I., Bolser, D., Saleh, N. B., Bisesi, J., Castleman, W., Ferguson, P. L., Sabo-Attwood, T. (2019). Utilization of Near Infrared Fluorescence Imaging to Track and Quantify the Pulmonary Retention of Single-Walled Carbon Nanotubes in Mice. *NanoImpact (in revision)*.

UT-37. Grundy, J. S., Saleh, N. B., Katz, L. E. (2019). A novel method for estimating critical coagulation concentration: The case of tin-doped indium oxide nanocrystals. *Environmental Science: Nano (in review)*.

UT-38. Chen, H., Humes, S. T., Robinson, S. E., Loeb, J. C., Sabaraya, I. V., Saleh, N. B., Khattri, R., Merritt, M. E., Martyniuk, C., Lednický, J. A., Sabo-Attwood, T. (2019). Single-walled Carbon Nanotubes Repress Viral-Induced Defense Pathways through Oxidative Stress. *Nanotoxicology (in review)*.

UT-39. Zhang, T., Lowry, G. V., Capiro, N. L., Chen, J., Chen, W., Chen, Y., Dionysiou, D. D., Elliott, D. W., Ghoshal, S., Hofmann, T., Hsu-Kim, H., Hughes, J., Jiang, C., Jiang, G., Jing, C., Kavanaugh, M., Li, Q., Liu, S., Ma, J., Pan, B., Phenrat, T., Qu, X., Quan, X., Saleh, N. B., Vikesland, P. J., Wang, Q., Westerhoff, P., Wong, M. S., Xia, T., Xing, B., Yan, B., Zhang, L., Zhou, D., Alvarez, P. J. J. In situ remediation of subsurface contamination: Opportunities and challenges for nanotechnology and advanced materials. (2019). *Environmental Science: Nano (in review)*.

UT-40. Wang, D., Saleh, N. B., Sun, W., Park, C. M., Shen, C., Aich, N., Peijnenburg, Willie J. G. M., Zhang, W., Jin, Y., Su, C. Next-Generation Multifunctional Carbon-Metal Nanohybrids for Energy and Environmental Applications. (2019). *Environmental Science & Technology (in review)*.

#### University of South Carolina:

SC-1. Brady-Estevez, A. S., Schnoor, M. H., Vecitis, C. D., Saleh, N. B., Elimelech, M. (2010). Multiwalled Carbon Nanotube Filter: Improving Viral Removal at Low Pressure. *Langmuir*. 26 (18), 14975-14982. DOI: 10.1021/la102783v.

- SC-2. Saleh, N. B., Pfefferle, L. D., Elimelech, M. (2010). Influence of Biomacromolecules and Humic Acid on the Aggregation Kinetics of Single-Walled Carbon Nanotubes. *Environmental Science & Technology*. 44 (7), 2412-2418. DOI: 10.1021/es903059t.
- SC-3. Surdo, E. M., Khan, I. A., Choudhury, A. A., Saleh, N. B., Arnold, W. A. (2011). Barrier Properties of poly(vinyl alcohol) Membranes Containing Carbon Nanotubes or Activated Carbon. *Journal of Hazardous Materials*. 188 (1-3), 334-340. DOI: 10.1016/j.jhazmat.2011.01.130.
- SC-4. Joseph, L., Zaib, Q., Khan, I. A., Berge, N. D., Park, Y.-G., Saleh, N. B., Yoon, Y. (2011). Removal of Bisphenol A and 17 $\alpha$ -Ethinyl Estradiol from Landfill Leachate Using Single-Walled Carbon Nanotubes. *Water Research*. 45 (13), 4056-4068. DOI: 10.1016/j.watres.2011.05.015.
- SC-5. Philbrook, N. A., Walker, V. K., Afrooz, A. R. M. N., Saleh, N. B., Winn, L. M. (2011). Investigating the Effects of Functionalized Carbon Nanotubes on Reproduction and Development in Drosophila Melanogaster and CD-1 Mice. *Reproductive Toxicology*. 32 (4), 442-448. DOI: 10.1016/j.reprotox.2011.09.002.
- SC-6. Philbrook, N. A., Winn, L. M., Afrooz, A. R. M. N., Saleh, N. B., Walker, V. K. (2011). The Effect of TiO<sub>2</sub> and Ag Nanoparticles on Reproduction and Development of Drosophila Melanogaster and CD-1 mice. *Toxicology and Applied Pharmacology*. 257 (3), 429-436. DOI: 10.1016/j.taap.2011.09.027.
- SC-7. Aich, N., Flora, J. R. V., Saleh, N. B. (2012). Preparation and Characterization of Stable Aqueous Higher Order Fullerene. *Nanotechnology*. 23 (5), 055705, 1-9. DOI: 10.1088/0957-4484/23/5/055705.
- SC-8. Schaeublin, N. M., Braydich-Stolle, L. K., Maurer, E. I., Park, K., MacCuspie, R. I., Afrooz, A. R. M. N., Vaia, R. A., Saleh, N. B., Hussain, S. M. (2012). Does Shape Matter? Bioeffects of Gold Nanomaterials in a Human Skin Cell Model. *Langmuir*. 28 (6), 3248-3258. DOI: 10.1021/la204081m.
- SC-9. Zaib, Q., Khan, I. A., Saleh, N. B., Flora, J. R. V., Park, Y.-G., Yoon, Y. (2012). Removal of Bisphenol A and 17-beta-Estradiol by Single-Walled Carbon Nanotubes in Aqueous Solution: Adsorption and Molecular Modeling. *Water, Air, and Soil Pollution*. 223 (6), 3281-3293. DOI: 10.1007/s11270-012-1109-5.
- SC-10. Zaib, Q., Khan, I. A., Yoon, Y., Flora, J. R. V., Park, Y.-G., Saleh, N. B. (2012). Ultrasonication Study for Suspending Single-Walled Carbon Nanotubes in Water. *Journal of Nanoscience and Nanotechnology*. 12 (5), 3909-3917. DOI: 10.1166/jnn.2012.6212.
- SC-11. Mukhopadhyay, A., Grabinski, C., Afrooz, A. R. M. N., Saleh, N. B., Hussain, S. M. (2012). Effect of Gold Nanosphere Surface Chemistry on Protein Adsorption and Cell Uptake in vitro. *Applied Biochemistry and Biotechnology*. 167 (2), 327-337. DOI: 10.1007/s12010-012-9666-z.
- SC-12. Aich, N., Zohhadi, N., Khan, I. A., Matta, F., Ziehl, P., Saleh, N. B., (2012). Applied TEM Approach for Micro/Nanostructural Characterization of Carbon Nanotube Reinforced Cementitious Composites. *Journal of Research Updates in Polymer Science*. 1 (1), 14-23. ISSN: 1929-5995.
- SC-13. Zhang, W., Zhao, S., Rao, W., Snyder, J., Choi, J. K., Wang, J., Khan, I. A., Saleh, N. B., Mohler, P. J., Yu, J., Hund, T. J., Tang, C., and He, X. (2013). A Novel Core-Shell Microcapsule for Encapsulation and 3D Culture of Embryonic Stem Cells. *Journal of Materials Chemistry B*. 1, 1002-1009. DOI: 10.1039/C2TB00058J.



- SC-14. Afrooz, A. R. M. N., Sivalapalan, S. T., Murphy, C. J., Hussain, S. M., Schlager, J. J., Saleh, N. B. (2013). Spheres vs. Rods: The Shape of Gold Nanoparticles Influences Aggregation and Deposition Behavior. *Chemosphere*. 91 (1), 93-98. DOI: 10.1016/j.chemosphere.2012.11.031.
- SC-15. Afrooz, A. R. M. N., Khan, I. A., Hussain, S. M., Saleh, N. B. (2013). Mechanistic Heteroaggregation of Gold Nanoparticles in a Wide Range of Solution Chemistry. *Environmental Science & Technology*. 47 (4), 1853-1860. DOI: 10.1021/es3032709.
- SC-16. Khan, I. A., Afrooz, A. R. M. N., Flora, J. R. V., Schierz, P. A., Ferguson, P. L., Sabo-Attwood, T., Saleh, N. B. (2013). Chirality Affects Aggregation Kinetics of Single-Walled Carbon Nanotubes. *Environmental Science & Technology*. 47 (4), 1844-1852. DOI: 10.1021/es3030337.
- SC-17. Aich, N., Appalla, A., Saleh, N. B., Ziehl, P. (2013). Triboluminescence for Distributed Damage Assessment in Cement-Based Materials. *Journal of Intelligent Material Systems and Structures*. 24 (14), 1714-1721. DOI: 10.1177/1045389X13484100.
- SC-18. Schrand, A. M., Lin, J. B., Garrett, C. M., Brownheim, S. V., Hussain, S. M., Cubadda, F., Afrooz, A. R. M. N., Saleh, N. B. (2013). Nanoparticle Dynamics in the Presence and Absence of a Cellular Uptake Altering Chemical. *Il Nuovo Cimento C*, 36 (2), 117-129. DOI: 10.1393/ncc/i2013-11516-4.
- SC-19. Khan, I. A., Berge, N. D., Sabo-Attwood, T., Ferguson, P. L., Saleh, N. B. (2013). Single-Walled Carbon Nanotube Transport in Representative Municipal Solid Waste Landfill Conditions. *Environmental Science & Technology*. 47 (15), 8425-8433. DOI: 10.1021/es401748f.
- SC-20. Khan, I. A., Aich, N., Afrooz, A. R. M. N., Flora, J. R. V., Schierz, P. A., Ferguson, P. L., Sabo-Attwood, T., Saleh, N. B. (2013). Fractal Structures of Single-Walled Carbon Nanotubes in Biologically Relevant Conditions: Role of Chirality vs. Media Conditions. *Chemosphere*. 93 (9), 1997-2003. DOI: 10.1016/j.chemosphere.2013.07.019.
- SC-21. Aich, N., Boateng, L. K., Flora, J. R. V., Saleh, N. B. (2013). Preparation of Non-Aggregating Aqueous Fullerenes in Highly Saline Solutions with A Biocompatible Non-Ionic Polymer. *Nanotechnology*. 24 (39), 395602, 1-10. DOI: 10.1088/0957-4484/24/39/395602.
- SC-22. Saleh, N. B., Caicedo, J. M., Johnson, A., Afrooz, A. R. M. N., Khan, I. A. (2014). Nano in a Global Context: Modular Course Design with Integrated Ethics Improves Core Knowledge in Nanotechnology. *Journal of Nano Education*. 6 (2), 124-131. DOI: 10.1166/jne.2014.1057.
- SC-23. Chambers, B. A., Afrooz, A. R. M. N., Bae, S., Aich, N., Katz, L., Saleh, N. B., Kirisits, M. J. (2014). Effects of Chloride and Ionic Strength on Physical Morphology, Dissolution, and Bacterial Toxicity of Silver Nanoparticles. *Environmental Science and Technology*. 48 (1), 761-769. DOI: 10.1021/es403969x.

### **Graduate and Postdoctoral Training:**

- GP-1. Saleh, N., Phenrat, T., Sirk, K., Dufour, B., Ok, J., Sarbu, T., Matyjaszewski, K., Tilton, R. D., Lowry, G. V. (2005). Adsorbed Triblock Copolymers Deliver Reactive Iron Nanoparticles to the Oil/Water Interface. *Nano Letters*. 5 (12), 2489-2494. DOI: 10.1021/nl0518268.
- GP-2. Saleh, N., Sarbu, T., Sirk, K., Lowry, G. V., Matyjaszewski, K., Tilton, R. D. (2005). Oil-in-Water Emulsions Stabilized by Highly Charged Polyelectrolyte-Grafted Silica Nanoparticles. *Langmuir*. 21 (22), 9873-9878. DOI: 10.1021/la050654r.

- GP-3. Long, T. C., Saleh, N., Tilton, R. D., Lowry, G. V., Veronesi, B. (2006). Titanium Dioxide (P25) Produces Reactive Oxygen Species in Immortalized Brain Microglia (BV2): Implications for Nanoparticle Neurotoxicity. *Environmental Science & Technology*. 40 (14), 4346-4352. DOI: 10.1021/es060589n.
- GP-4. Long, T. C., Tajuba, J., Sama, P., Saleh, N., Swartz, C., Parker, J., Hester, S., Lowry, G. V., Veronesi, B. (2007). Nanosize Titanium Dioxide Stimulates Reactive Oxygen Species in Brain Microglia and Damages Neurons in vitro. *Environmental Health Perspectives*. 115 (11), 1631-1637. DOI: 10.1289/ehp.10216.
- GP-5. Phenrat, T., Saleh, N., Sirk, K., Tilton, R. D., Lowry, G. V. (2007). Aggregation and Sedimentation of Aqueous Nanoscale Zerovalent Iron Dispersions. *Environmental Science & Technology*. 41 (1), 284-290. DOI: 10.1021/es061349a.
- GP-6. Saleh, N., Sirk, K., Liu, Y., Phenrat, T., Dufour, B., Matyjaszewski, K., Tilton, R. D., Lowry, G. V. (2007). Surface Modifications Enhance Nanoiron Transport and NAPL Targeting in Saturated Porous Media. *Environmental Engineering Science*. 24 (1), 45-57. DOI: 10.1089/ees.2007.24.45.
- GP-7. Jaisi, D. P., Saleh, N. B., Blake, R. E., Elimelech, M. (2008). Transport of Single-Walled Carbon Nanotubes in Porous Media: Filtration Mechanisms and Reversibility. *Environmental Science & Technology*. 42 (22), 8317-8323. DOI: 10.1021/es801641v.
- GP-8. Phenrat, T., Saleh, N., Sirk, K., Kim, H.-J., Tilton, R. D., Lowry, G. V. (2008). Stabilization of Aqueous Nanoscale Zerovalent Iron Dispersions by Anionic Polyelectrolytes: Adsorbed Anionic Polyelectrolyte Layer Properties and Their Effect on Aggregation and Sedimentation. *Journal of Nanoparticle Research*. 10 (5), 795-814. DOI: 10.1007/s11051-007-9315-6.
- GP-9. Saleh, N., Kim, H.-J., Phenrat, T., Matyjaszewski, K., Tilton, R. D., Lowry, G. V. (2008). Ionic Strength and Composition Affect the Mobility of Surface-Modified Fe-0 Nanoparticles in Water-Saturated Sand Columns. *Environmental Science & Technology*. 42 (9), 3349-3355. DOI: 10.1021/es071936b.
- GP-10. Saleh, N. B., Pfefferle, L. D., Elimelech, M. (2008). Aggregation Kinetics of Multiwalled Carbon Nanotubes in Aquatic Systems: Measurements and Environmental Implications. *Environmental Science & Technology*. 42 (21), 7963-7969. DOI: 10.1021/es801251c.
- GP-11. Veronesi, B., Tajuba, J., Saleh, N., Ward, W., Hester, S., Carter, J., Lowry, G. V. (2008). Functionally Charged Polystyrene Particles Activate Immortalized Mouse Microglia (BV2): Cellular and Genomic Response. *Nanotoxicology*. 2 (3), 130-143. DOI: 10.1080/17435390802296347.
- GP-12. Sirk, K. M., Saleh, N. B., Phenrat, T., Kim, H.-J., Dufour, B., Ok, J., Golas, P. L., Matyjaszewski, K., Lowry, G. V., Tilton, R. D. (2009). Effect of Adsorbed Polyelectrolytes on Nanoscale Zero Valent Iron Particle Attachment to Soil Surface Models. *Environmental Science & Technology*. 43 (10), 3803-3808. DOI: 10.1021/es803589t.

## **B. Books, Chapters of Books; Editor of Books**

### **Book (1):**

- UT-1. Saleh, N. B., Vicki Grassian (2019). Introduction to the Environmental Implications of Nanomaterials. John Wiley and Sons Inc. (book proposal accepted).

### **Book Chapters Authored (in print or accepted, 7):**

*Underlining indicates supervised student(s); italicized items are accepted chapters*

### **University of Texas:**

UTB-1. Saleh, N. B., Lead, J. R., Aich, N., Das, D., Khan, I. A. (2014). Roles of Geo- and Bio-Macromolecules on Environmental Interactions of Nanomaterials. *Bio-inspired Nanotechnology-From Surface Analysis to Applications*. 257-290.

UTB-2. Aich, N., Plazas-Tuttle, J., Saleh, N. B. (2015). Fullerenes, Higher Fullerenes, and their Hybrids: Synthesis, Characterization, and Environmental Considerations. *Carbon Nanomaterials for Advanced Energy Systems: Advances in Materials Synthesis and Device Applications*. 3-46.

UTB-3. Zohhadi, N., Aich, N., Matta, F., Saleh, N. B., Ziehl, P. (2015). Graphene Nanoreinforcement for Cement Composites. *Nanotechnology in Construction*. 265-270.

UTB-4. Aich, N., Sabo-Attwood, T., Masud, A., Bisesi Jr., J. H., Saleh, N. B. (2017). Dimensional variations in nanohybrids: Property alterations, applications, and considerations for toxicological implications. *Anisotropic and Shape-Selective Nanomaterials – Structure-Property Relationships*. 271-291.

UTB-5. Saleh, N. B., Afrooz, A. R. M. N., Aich, N., Plazas-Tuttle, J. (2017). Aggregation Kinetics and Fractal Dimension of Nanomaterials in Environmental Systems. *Engineered Nanoparticles and the Environment: Biophysicochemical Processes and Biototoxicity*. 139-159.

UTB-6. Sabo-Attwood, T., Ngan, C., Lavelle, C., Plazas-Tuttle, J., Saleh, N. B. (2017). *Carbon nanotubes: Sublethal effects and unique mechanisms of toxicity in aquatic species. (In Press)*.

UTB-7. Saleh, N. B., Afrooz, A. R. M. N., Plazas-Tuttle, J., Khan, I. A., Hussain, S. M. (2017). *Aggregation Rate and Aggregate Structure Determination of Nanomaterials under Biological Exposure Conditions. Advances in Characterization Techniques for Nanotoxicology. (In press)*.

### **C. Non-Peer Reviewed Publications (op-eds and viewpoints)**

#### **University of Texas:**

UT-1. Saleh, N. B. (July 14, 2018). Safe drinking water for millions of Americans is threatened by majority rule, *The Hill*, Washington, DC (op-ed).

UT-2. Saleh, N. B., Apul, O. G., Karanfil, T. (January, 2019). The Genesis of a New Environmental Concern: Cannabinoids in our Water Systems. *Environ Sci Technol*. 53, 1746-1747. (viewpoint) DOI: 10.1021/acs.est.8b06999.

#### **D. Reports**

UT-3. Filonzi, A., Sabaraya, I. V., Hajj, R., Das, D., Saleh, N. B., Bhasin, A, Mahmud, E. (December, 2016). Evaluating the use of nanomaterials to enhance properties of asphalt binders and mixtures. TX Department of Transportation, Final Report, Project#6854.

### **E. Refereed Conference Proceedings**

*Poster presentations are noted. Underlining indicates supervised student(s) and \*indicates presenter.*

#### **University of Texas:**

- UT-1. \*Das, D., Aich, N., Irin, F., Boateng, L., Flora, J., Green, M.J., Saleh, N.B., "Surface Coating Dependent Aggregation Kinetics of Graphene Suspensions", 247th ACS National Meeting, March 16-20, 2014, Dallas, TX (*poster*).
- UT-2. \*Aich, N., Rigdon, W.A., Das, D., Plazas-Tuttle, J., Huang, X., Saleh, N.B., "Hybridization with titania change aggregation kinetics of carbon nanotubes", 247th ACS National Meeting, March 16-20, 2014, Dallas, TX (*poster*).
- UT-3. Saleh, N.B., \*Aich, N., Chambers, B.A., Afrooz, A. R. M. N., Kirisits, M.J., "Influence of Tin Doping on Environmental Interactions of Nano Indium Oxides in Aqueous Systems", 247th ACS National Meeting, March 16-20, 2014, Dallas, TX (*poster*).
- UT-4. \*Saleh, N. B., Rowles III, L. S., Aich, N., "Synthesis and characterization of carbonaceous nanomaterial-multimetallic hybrids for simultaneous removal of radioactive and organic contaminants: A case study on Navajo Nation", 247th ACS National Meeting, March 16-20, 2014, Dallas, TX.
- UT-5. \*Abtahi, S. M. H., Jones, J., Vikesland, P. J., Murphy, C. J., Saleh, N. B., "Colloidal stability of elongated shaped gold nanoparticles in aquatic environment", 248<sup>th</sup> ACS National Meeting, Aug 10-14, 2014, San Francisco, CA.
- UT-6. \*Saleh, N. B., Sabo-Attwood, Huang, X., "Emergent properties of nanohybrids and their potential environmental implications", 248<sup>th</sup> ACS National Meeting, Aug 10-14, 2014, San Francisco, CA.
- UT-7. \*Saleh, N. B., Sabo-Attwood, T., Huang, X., "Metallic Nanoparticles when Hybridized to Multiwalled Carbon Nanotubes Alter Aggregation Kinetics in Aqueous Environment", 3<sup>rd</sup> Sustainable Nanotechnology Organization Conference, November 02-04, 2014 Boston, MA.
- UT-8. \*Saleh, N. B., Lawler, D. F., Youn, S., Mikelonis, A., "State of fate and transport research: System and material complexities", 89<sup>th</sup> ACS Colloid and Surface Science Symposium, June 14-16, 2015, Pittsburgh, PA (*Keynote Lecture*).
- UT-9. \*Saleh, N. B., Rowles III, S. L., Lawler, D. F., "Pottery inspired nano-enabled ceramic filters for point-of-use water treatment", International WaTER Conference, University of Oklahoma, September 21-23, 2015, Norman, OK.
- UT-10. \*Das, D., Afrooz, A. R. M. N., Lednicky, J., Sabo-Attwood, T., Saleh, N. B., "Nano-bio interaction: Influence of carbon nanotubes on virus like particle (VLP) transport through saturated porous media", 250<sup>th</sup> ACS National Meeting, August 16-20, 2015, Boston, MA.
- UT-11. Das, D., Sabaraya, I. V., Aich, N., \*Saleh, N. B., "Aggregation kinetics of carbon nanotube and metal or metal oxide nanohybrids in aquatic environment", 250th ACS National Meeting, August 16-20, 2015, Boston, MA.
- UT-12. Afrooz, A. R. M. N., \*Das, D., Murphy, C. J., Vikesland, P. J., Saleh, N. B., "Co-transport of gold nanospheres with single-walled carbon nanotubes in saturated porous media", 250th ACS National Meeting, August 16-20, 2015, Boston, MA.
- UT-13. \*Saleh, N. B., Das, D., Aich, N., "Aggregation and transport of metal-carbonaceous nanotube nanohybrids in environmentally relevant conditions", 4<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 08-10, 2015, Portland, OR.

- UT-14. \*Saleh, N. B., Kirisits, M. J., Gorman, M. “Integrating nanoscale principles with social and ethical aspects of nanotechnology”, 4<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 08-10, 2015, Portland, OR.
- UT-15. Saleh, N. B. “Aggregation and transport of metal-carbonaceous nanotube nanohybrids under environmentally relevant conditions”, Emerging Contaminants Summit, March 1-2, 2016, Westminster, CO.
- UT-16. \*Saleh, N. B., Rowles III, S. L., Lawler, D. F., “Pottery inspired nano-enabled ceramic filters for point-of-use water treatment”, Texas Water 2016, April 22, 2016, Fort Worth, TX.
- UT-17. \*Saleh, N. B., Plazas-Tuttle, J., “Novel Nanoscale Hetero-structures Enabling Microwave Radiation to Disinfect Aquaculture-Relevant Water”, IWA Nano and Water Specialist Conference, May 16-18, 2016, Rice University, Houston, TX.
- UT-18. \*Saleh, N. B. Das, D., Sabaraya, I. V., “Role of Metal-oxides on Titania-Multiwalled Carbon Nanotube Heterostructure Aggregation and Transport in Aqueous Environment”, 90<sup>th</sup> ACS Colloid and Surface Science Symposium, June 05-08, 2016, Cambridge, MA.
- UT-19. \*Sabaraya, I. V., Das, D., Saleh, N. B., “Photo-transformation of titanium dioxide- and zinc oxide-multiwalled carbon nanotube heterostructures in aqueous environment”, 252<sup>nd</sup> ACS National Meeting, August 21-25, 2016, Philadelphia, PA.
- UT-20. \*Plazas-Tuttle, J., Das, D., Saleh, N. B., “Power of Novel Metal Oxide-Carbon Nanotube Heterostructures: Enabling Microwave to Disinfect Water for Aquaculture”, 252<sup>nd</sup> ACS National Meeting, August 21-25, 2016, Philadelphia, PA.
- UT-21. Saleh, N. B., \*Plazas-Tuttle, J., Das, D., Sabaraya, I. V., “Harnessing the Power of Microwave for Disinfection with Nanohybrids”, 5<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 10-12, 2016, Orlando, FL.
- UT-22. Saleh, N. B., \*Sabaraya, I. V., Das, D., “Chemical Identity of the Metal Oxides on Carbon-Metal Heterostructures Control Photo-transformation of These Nanohybrids”, 5<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 10-12, 2016, Orlando, FL.
- UT-23. Kirisits, M. J., Saleh, N. B., Gorman, M., \*Sabaraya, I. V., “Studying Life-cycle of a Nanomaterial Through a Laboratory Course”. 5<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 10-12, 2016, Orlando, FL.
- UT-24. \*Saleh, N. B., Plazas-Tuttle, J., Das, D., Sabaraya, I. V. “Novel nanohybrids enables microwave radiation to disinfect water”. 253<sup>rd</sup> American Chemical Society National Meeting, April 2-6, 2017, San Francisco, CA.
- UT-25. \*Grundy, J. S., Ngan, C. K., Saleh, N. B., Katz, L. E., Kirisits, M. J., Saez, C. A. C., Milliron, D. J., “Potential of indium tin oxide nanoparticles to produce reactive oxygen species in environmental systems as a result of Sn level and location”. 253<sup>rd</sup> American Chemical Society National Meeting, April 2-6, 2017, San Francisco, CA.
- UT-26. \*Ngan, C. K., Saleh, N. B., Kirisits, M. J., Katz, L. E., Milliron, D., “Unlocking the Role of Dopant Concentration of Interfacial Stability of Indium Tin Oxide Nanoparticles in Aquatic Environments”, Texas Water 2017, April 11, 2017, Austin, TX.

- UT-27. \*Saleh, N. B., Plazas-Tuttle, J., Faust, K., Sabo-Attwood, T., Katz, L. E., “Harnessing the Power of Microwave with Novel Metal Oxide-Carbon Nanotube Heterostructures at the Food-Energy-Water (FEW) Nexus”. International Symposium on Emerging Contaminants and Environmental Nanotechnology (ISECEN), May 23-27, 2017, Tianjin, China (*Keynote lecture*).
- UT-28. \*Saleh, N. B., Das, D., Sabo-Attwood, T., “Aggregation Behavior of Multiwalled Carbon Nanotube-Titanium Dioxide Nanohybrids: Role of Titanium Dioxide Loading”. 6<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 05-07, 2017, Los Angeles, CA.
- UT-29. \*Saleh, N. B., Merryman, A., Sabaraya, I. V., Sabo-Attwood, T., “Preferential interaction between functionalized multiwalled carbon nanotubes and bacteriophage MS2 in water”. 6<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 05-07, 2017, Los Angeles, CA.
- UT-30. \*Saleh, N. B., Kirisits, M. J., Gorman, M., “An Active Learning Based Theory and Laboratory Course for Nano Education”. 6<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 05-07, 2017, Los Angeles, CA.
- UT-31. \*Almasri, D., Hussien, M. A., Ahzi, S., Saleh, N. B., “Adsorption of phosphate on iron oxide modified halloysite nanotubes”. 6<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 05-07, 2017, Los Angeles, CA.
- UT-32. \*Rowles III, L. S., Lawler, D. F., Saleh, N. B., “Sustained Ionic Release from Nano-Silver: Integrating Navajo Pottery Techniques into Ceramic Water Filters”. 6<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 05-07, 2017, Los Angeles, CA.
- UT-33. \*Kirisits, M. J., Saleh, N. B., Gorman, M., “An Undergraduate Laboratory Course to Study Nanomaterials from Synthesis through Environmental Impacts”. 1<sup>st</sup> Pan American Congress of Nanotechnology: Fundamentals and Applications to Shape the Future, November 27-30, 2017, Guarujá, SP, Brazil.
- UT-34. \*Khalid, A., Rowles III, L. S., Apul, O. G., Saleh, N. B., “Readily Deployable Electrospun Polymer/Nanocomposite Cartridge for Lead Removal from Drinking Water Distribution Pipelines”, University of Massachusetts, Lowell, Francis College of Engineering Prototyping Competition, December 04, 2017, Lowell, MA.
- UT-35. Filonzi, A., \*Hajj, R., Sabaraya, I. V., Das, D., Saleh, N. B., Bhasin, A., “Investigating the Ability of Nanomaterials to Effectively Disperse in Asphalt Binders for Use as a Modifier”. Transportation Research Board Annual Research Meeting, January 07-11, 2018, Washington, DC.
- UT-36. \*Gordon, V., Kovach, K., Sabaraya, I. V., Patel, P., Saleh, N. B., Kirisits, M. J., “Free-floating Carbon Nanotubes Can Promote “Nucleation” of Pathogenic Bacterial Aggregates”. American Physical Society Meeting, March 05-09, 2018.
- UT-37. \*Saleh, N. B. “Unanswered Questions at the Nano-Scale: Materials Properties and Environmental Implications”. 4<sup>th</sup> International Conference on Environmental Pollution and Health, May 19-22, 2018, Tianjin, China (*Keynote lecture*).
- UT-38. Sabaraya, I. V., Saleh, N. B., Kirisits, M. J., Incorvia, J. A. C., \*Rowles III, L. S., \*Ayres, C. “The role of pH on Heteroaggregation of 2-D MoS<sub>2</sub> and Kaolinite”. 7<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 08-10, 2018, Washington, DC.

UT-39. \*Ayres, C. Saleh, N. B. “Disinfection Potency of Silver Nanoparticles can be Enhanced by Harnessing Microwave Radiation”. 7<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 08-10, 2018, Washington, DC.

UT-40. Saleh, N. B., \*Rowles III, L. S., Kirisits, M. J. “Project Based Learning for Outreach Events can Engage Community into Citizen Science”. 7<sup>th</sup> Sustainable Nanotechnology Organization Conference, November 08-10, 2018, Washington, DC.

#### **University of South Carolina:**

SC-1. \*Saleh, N. B., Pfefferle, L. D., Elimelech, M. “Aggregation Kinetics of Carbon Nanotubes in the Presence of Biomacromolecules” American Chemical Society 237<sup>th</sup> National Meeting, March 22-26, 2009, Salt Lake City, UT.

SC-2. \*Saleh, N. B., Pfefferle, L. D., Elimelech, M. “Influence of Natural Organic Matter on Deposition Rate of Single-walled Carbon Nanotubes” American Chemical Society 237<sup>th</sup> National Meeting, March 22-26, 2009, Salt lake City, UT.

SC-3. \*Saleh, N. B. “Aggregation and Deposition Behavior of Carbon Nanotubes in Aquatic Environments” Clemson Carbon Conference, July 11-16, 2010, Clemson, SC.

SC-4. \*Afrooz, A. R. M. N., Zaib, Q., Decho, A. W., Saleh, N. B. “Role of Nanoparticle Geometry on Nano-bio Interaction: A Quest to Separate Physics from Chemistry”, ACS National Meeting, Aug 22-26, 2010, Boston, MA.

SC-5. \*Aich, N., Saleh, N. B. “Aggregation Kinetics of Fullerene-Single-walled Carbon Nanotube Hybrids”, ACS National Meeting, Aug 22-26, 2010, Boston, MA.

SC-6. \*Khan, I. A., Ferguson, P. L., Sabo-Attwood, T., Saleh, N. B. “Systematic Change in Chirality Affects Aggregation Kinetics of Single-Walled Carbon Nanotubes”, ACS National Meeting, Aug 22-26, 2010, Boston, MA.

SC-7. \*Saleh, N. B., Afrooz, A. R. M. N., Aich, N., Khan, I. A., “Filtration of anisotropic and hybrid nanomaterials”, 240<sup>th</sup> ACS National Meeting, August, 22-26, 2010, Boston, MA.

SC-8. \*Aich, N., Saleh, N. B. "Aggregation kinetics of higher order fullerenes in aquatic environment", ACS National Meeting, Mar 27-31, 2011, Anaheim, CA.

SC-9. \*Aich, N., Saleh, N. B. "Aggregation kinetics of endohedral metallofullerene-single-walled carbon nanohorn and nanotube peapods", ACS National Meeting, Mar 27-31, 2011, Anaheim, CA.

SC-10. \*Afrooz, A. R. M. N., Saleh, N. B. " Aggregation kinetics of gold nanorods in aquatic systems: Role of aspect ratio ", ACS National Meeting, Mar 27-31, 2011, Anaheim, CA.

SC-11. \*Khan, I. A., Ferguson, P. L., Sabo-Attwood, T., Saleh, N. B. " Fractal structures of single-walled carbon nanotubes in environmental and biologically relevant aqueous conditions: Role of chirality", ACS National Meeting, Mar 27-31, 2011, Anaheim, CA.

SC-12. \*Khan, I. A., Ferguson, P. L., Sabo-Attwood, T., Saleh, N. B. "Chirality affects aggregation kinetics of single-walled carbon nanotubes", ACS National Meeting, Mar 27-31, 2011, Anaheim, CA.

SC-13. \*Joseph, L., Zaib, Q., Khan, I. A., Berge, N., Park, Y.-G., Saleh, N. B., Yoon, Y. “Removal of Bisphenol A and 17a-Ethinyl Estradiol from Landfill Leachate Using Carbon Nanotubes”, American Water Works Association ACE, June 12-16, 2011, Washington, DC.

- SC-14. \*Saleh, N. B., Caicedo, J., Johnson, A. “Nano in a Global Context”, Biennial Conference on Chemical Education, July 29-Aug 02, 2012, The Pennsylvania State University, University Park, PA.
- SC-15. \*Sabo-Attwood, T. Bisesi, J. H., Saleh, N. B., Afrooz, A. R. M. N., Parks, A. N., Ferguson, P. L., Merten, J. "Dynamics of SWNT distribution and aggregate structure during aquatic exposures", 1<sup>st</sup> Sustainable Nanotechnology Organization Conference, Nov 04-06, 2012, Arlington, VA (*poster*).
- SC-16. \*Saleh, N. B., Afrooz, A. R. M. N., Khan, I. A., Hussain, S. M. "Mechanistic Hetero-Aggregation of Gold Nanoparticles for a Wide Range of Solution Chemistries", 1<sup>st</sup> Sustainable Nanotechnology Organization Conference, Nov 04-06, 2012, Arlington, VA (*poster*).
- SC-17. \*Aich, N., Flora, J. R. V., Boatang, L., Saleh, N. B. “Size tuned aqueous nC60s and nC70s stabilized with biocompatible surface coatings”, 245<sup>th</sup> ACS National Meeting, April 7-11, 2013, New Orleans, LA.
- SC-18. \*Afrooz, A. R. M. N., Khan, I. A., Hussain, S. M., Saleh, N. B. “Mechanistic heteroaggregation of gold nanoparticles in presence of nonionic polymer modified single-walled carbon nanotubes”, 245<sup>th</sup> ACS National Meeting, April 7-11, 2013, New Orleans, LA.
- SC-19. \*Saleh, N. B., Hussain, S. M., Afrooz, A. R. M. N. “Dynamic aggregation and fractal structure determination of gold nanoparticles in biological media conditions”, 245<sup>th</sup> ACS National Meeting, New Orleans, LA, April 7-11, 2013.

#### **Graduate and Postdoctoral Training:**

- GP-1. \*Saleh, N. B., Sirk, K., Sarbu, T., Lowry, G. V., Tilton, R.D., Matyjaszewski, K., Redden, G., “Targeted Delivery of Nanoiron to the NAPL-water Interface”, 79<sup>th</sup> ACS Colloid And Surface Science Symposium, Potsdam, NY. July 12-15, 2005.
- GP-2. \*Saleh, N. B., Sirk, K., Sarbu, T., Tilton, R.D., Matyjaszewski, K., Lowry, G. V., “Transport and DNAPL Targeting of Polyelectrolyte- and Surfactant-modified Nanoiron”, 230<sup>th</sup> ACS Meeting and Exposition. Washington, DC. August 28-September 1, 2005.
- GP-3. \*Saleh, N. B., Kim, H. J., Phenrat, T., Sirk, K., Dufour, B., Matyjaszewski, K., Tilton, R. D., Lowry, G. V. “Long-range transport of polymer-modified nanoiron in saturated porous sand and real aquifer media”, 80<sup>th</sup> ACS Colloid And Surface Science Symposium, Boulder, CO. June 18-21, 2006.
- GP-4. \*Saleh, N. B., Sirk, K., Liu, Y., Phenrat, T., Dufour, B., Matyjaszewski, K., Tilton, R. D., Lowry, G. V., “Surface modifications enhance colloidal iron transport and deliver them to the NAPL/water interface”, 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14, 2006.
- GP-5. \*Saleh, N. B., Phenrat, T., Tilton, R. D., Lowry, G. V. “Porewater velocity and collector grain size affects the mobility of surface-modified nanoiron in water-saturated porous media.” Division of Colloid and Surface Chemistry for the 233<sup>rd</sup> ACS National Meeting, Chicago, IL March 25-29, 2007.
- GP-6. \*Saleh, N. B., Pfefferle, L., Elimelech, M. “Aggregation Kinetics of Multi-walled Carbon Nanotubes in Aquatic Systems.” The 235<sup>th</sup> ACS National Meeting, New Orleans, LA, April 6-10, 2008.



GP-7. \*Jaisi, P. D., Saleh, N. B., Blake, R. E., Elimelech, M. “Filtration Mechanisms of Single-walled Carbon Nanotubes in Porous Media” AIChE Annual Meeting, Philadelphia, PA, November 16-21, 2008.

GP-8. \*Saleh, N. B., Pfefferle, L., Elimelech, M. “Aggregation Kinetics of Multi-walled Carbon Nanotubes in Aquatic Systems” AIChE Annual Meeting, Philadelphia, PA, November 16-21, 2008.

GP-9. Saleh, N. B., Pfefferle, L., Elimelech, M. “Aggregation Kinetics of Carbon Nanotubes in the Presence of Biomacromolecules” AIChE Annual Meeting, Philadelphia, PA, November 16-21, 2008.

## **F. ORAL PRESENTATIONS:**

### **Invited Seminars or Conference Presentations:**

#### **University of Texas:**

UT-1. “Nanomaterial Implications: Controlled and Complex Systems”, Civil and Environmental Engineering, Temple University, August 01, 2014, Philadelphia, PA.

UT-2. “Environmental Behavior of Nanomaterials: Implications of Material and Environmental Complexities”, Civil and Environmental Engineering, Rice University, September 19, 2014, Houston, TX.

UT-3. “Environmental Behavior of Nanomaterials: Implications of Material and Environmental Complexities”, Civil and Environmental Engineering, Cornell University, October 02, 2014, Ithaca, NY.

UT-4. “Environmental Behavior of Nanomaterials: Implications of Material and Environmental Complexities”, Civil and Environmental Engineering, University of Illinois-Urbana Champaign, October 16, 2014, Urbana, IL.

UT-5. “Environmental Behavior of Nanomaterials: Implications of Material and Environmental Complexities”, College of Public Health and Health Professions, University of Florida, March 13, 2015, Gainesville, FL.

UT-6. “Sustainable use of Nanomaterials for Environmental Applications”, Civil and Environmental Engineering, Manhattan College, July 24, 2015, New York, NY.

UT-7. “Nanomaterials for Environmental Applications: Sustainable Use”, Civil and Environmental Engineering, University of New Orleans, July 01, 2016, New Orleans, LA.

UT-8. “Pottery inspired nano-enabled ceramic filters for point-of-use water treatment”, Navajo Technical University, September 29, 2016, Crownpoint, NM.

UT-9. “Pottery inspired nano-enabled ceramic filters for point-of-use water treatment”, Interdisciplinary Research Center for Regional Integral Development Unit Oaxaca, Instituto Politécnico Nacional, October 24, 2016, Oaxaca, Mexico.

UT-10. “Harnessing the Power of Microwave: A Nano-Enabled Breakthrough Technology for Inactivating Waterborne Bacteria”, Civil and Environmental Engineering, Stanford University, April 03, 2017, Stanford, CA.

UT-11. “Harnessing the Power of Microwave: A Nano-Enabled Breakthrough Technology for Inactivating Waterborne Bacteria”, Civil and Environmental Engineering, University of South Carolina, April 21, 2017, Columbia, SC.

UT-12. “Harnessing the Power of Microwave: A Nano-Enabled Breakthrough Technology for Inactivating Waterborne Bacteria”, Arnold School of Public Health, University of South Carolina, April 21, 2017, Columbia, SC.

UT-13. “Harnessing the Power of Microwave with Novel Metal Oxide-Carbon Nanotube Heterostructures at the Food-Energy-Water (FEW) Nexus”, School of Civil and Environmental Engineering, Georgia Institute of Technology, October 04, 2017, Atlanta, GA.

#### **University of South Carolina:**

SC-1. “Application and Implication of Nanomaterials”, University of South Carolina, Mechanical Engineering, Columbia, SC, April 2009.

SC-2. “Application and Implication of Nanomaterials”, Allen University, Columbia, SC, September, 2009.

SC-3. “Fundamental Aggregation and Surface Interactions of Carbon Nanotubes in Aquatic Systems”, Institute of Environmental Toxicology, Clemson University, Columbia, SC, February 2010.

SC-4. “Fundamental Aggregation and Surface Interactions of Carbon Nanotubes in Aquatic Systems”, University of South Carolina, Mechanical Engineering, Columbia, SC, March 2010.

SC-5. “Aggregation and Surface Interactions of Carbon Nanotubes in Aquatic Systems”, Virginia Tech, Mechanical Engineering, April 2010, Blacksburg, VA.

SC-6. “Aggregation and Surface Interaction of Carbonaceous and Metallic Nanomaterials: Environmental and Biologically Relevant Conditions”, Wright Patterson Airforce Base, February 10, 2011, Dayton, OH.

SC-7. “Aggregation and Interfacial interaction of Nanomaterials: Environmental and Biologically Relevant Conditions”, Savannah River National Laboratory (SRNL), February 17, 2012, Aiken, SC.

SC-8. “Carbonaceous Nanomaterials: Application for Environmental Remediation”, University of Arab Emirates University, April 2012, Al-Ain, United Arab Emirates.

SC-9. “Aggregation Behavior of Nanomaterials in Singular and Binary Systems”, Environmental Engineering and Earth Sciences, Clemson University, November 02, 2012, Anderson, SC.

SC-10. “Aggregation Behavior of Nanomaterials in Environmental and Biological Conditions”, Material Science and Engineering and Civil Engineering, University of Texas-Arlington, November 09, 2012, Arlington, TX.

SC-11. “Aggregation Kinetics and Structure of Nanomaterials in Singular and Binary Systems”, Pathology and Psychology Research Branch, National Institute for Occupational Safety and Health (NIOSH), December 04, 2012, Morgantown, PA.

SC-12. Saleh, N. B. “Accurate aggregate size and structure determination in physiological conditions-Ignored fact in nanotoxicology?”, 52<sup>nd</sup> Annual Meeting of Society of Toxicology, March 10-14, 2013, San Antonio, TX (*roundtable lecture*).

SC-13. “Aggregation and deposition of nanomaterials in controlled and complex natural systems”, Arnold School of Public Health, University of South Carolina, September 04, 2013, Columbia, SC.

SC-14. “Fate and Transport of Carbonaceous Nanomaterials: Progress and Data Gaps”, 2013 NSF-EPA-USDA Nanoscale Science and Engineering Grantees Conference, Dec 04-06, 2013, Washington, DC.

### Graduate and Postdoctoral Training:

GP-1. “Developing Metallic Nanoparticles for In Situ Remediation of Subsurface DNAPL”, Chatham University, October 2004, Pittsburgh, PA.

### G. PATENTS:

#### University of Texas:

*Underlining indicates supervised student(s)*

UT-1. Saleh, N. B. and Plazas-Tuttle, J. (February, 2018). Microwave Absorbing Carbon-Metal Oxides and Modes of Using, Including Water Disinfection. Publication number: US 20180037474 A1.

#### University of South Carolina:

*Underlining indicates supervised student(s)*

SC-1. Saleh, N. B., Matta, F., Ziehl, P., Aich, N., Zohhadi, N., Khan, I. A. (2014). Polymeric Additive for Strength, Deformability, and Toughness Enhancement of Cementitious Materials and Composites. Publication number: US 8907050 B2.

### H. GRANTS AND CONTRACTS:

*Amounts indicated parenthetically (for joint proposals) are Saleh shares.*

#### University of Texas:

Co-Investigators	Title	Agency	Grant Total	Grant Period
N. B. Saleh (PI)	Collaborative Research: Fate, Transport, and Organismal Uptake of Rod-Shaped Nanomaterials	National Science Foundation	\$119,016	01/01/14-09/30/16
N. B. Saleh (PI)	Contribution of Toll-Like Receptors in the Pulmonary Response to Nanoparticles and Pathogens	National Institute of Health	\$173,016	05/01/14-04/30/17
N. B. Saleh (PI) M. J. Kirisits H. Hart B. Korgel	NUE: Sustainable Nanotechnology Education for Undergraduate Engineering Students	National Science Foundation	\$199,997 (\$120,000)	10/01/14-09/30/17

D. Lawler (PI) L. Katz M. J. Kirisits K. Kinney N. B. Saleh G. Speitel	Water Innovation Network for Sustainable Small Systems (WINSSS)	Environmental Protection Agency	\$1,456,225 (\$100,000)	09/01/14- 08/31/17
N. B. Saleh (PI) Amit Bhasin	Effectively Dispersed Carbon Nanotube Enhanced Asphalt: Novel Foamed Delivery and Traditional Mixing Techniques	Texas Department of Transportation	\$265,438 (\$110,000)	01/01/15- 12/31/16
N. B. Saleh (PI) M. J. Kirisits D. Milliron L. Katz	UNS: Role of dopant concentration and distribution in the environmental behavior of indium tin oxide nanoparticles	National Science Foundation	\$299,917 (\$100,000)	06/01/15- 05/30/17
N. B. Saleh (PI) M. J. Kirisits	Development of nanomaterial use, transport, and disposal guidelines for laboratories at UT Austin and other THWRC Consortium Universities	Texas Hazardous Waste Research Center	\$6,000 (\$3,000)	09/01/15- 07/15/17
N. B. Saleh (PI)	Collaborative Research: EAGER: Interaction of Carbon-Metal Nanohybrids at Environmental Interfaces	National Science Foundation	\$80,135	05/20/16- 04/30/18
N. B. Saleh (PI) D. Lawler	A Nano-Silver and Zeolite Solution: Ceramic Water Filters for Disinfection and Hardness Removal	Environmental Protection Agency	\$14,999 (\$10,000)	08/15/16- 08/14/17
N. B. Saleh (PI)	Develop modified montmorillonite for the selective removal of heavy metals and organic contaminants from water	CRDF Global	\$15,000	09/28/17- 12/31/17
M. J. Kirisits (PI) N. B. Saleh (Co-PI)	Using Problem-Based Learning to Build Water Quality Stewardship with Girl Scouts in the Gulf of Mexico Watershed	Environmental Protection Agency, Gulf of Mexico Program	\$150,000 (75,000)	05/01/18- 04/31/20

N. B. Saleh (PI)	Harnessing the Power of Microwave to Inactivate Pathogens	UT VPR Creative Research Grant	\$10,000	09/01/17-08/31/18
N. B. Saleh (PI) M.J. Kirisits, D. Lawler, and L. Katz	Assessing the efficacy of a novel nano-enabled microbial inactivation technique for drinking water in the Texas Colonias	Texas Hazardous Waste Research Center	\$16,325 (\$10,000)	04/01/18-06/30/19
N. B. Saleh (PI) M.J. Kirisits and D. Lawler	Inactivation of <i>Legionella pneumophila</i> harbored by amoebae using a nano-enabled alternative technology: Application and outreach to the <i>colonias</i> in Texas	National Science Foundation	\$327,903 (\$200,000)	07/15/2018-07/14/2021
N. B. Saleh (PI), Jorge Zornberg, Onur Apul, Pradeep Kurup, David Hanigan	Innovation for detection and containment of PFAS at the landfill liner-leachate interface	Environmental Protection Agency, STAR grant	\$900,000 (\$300,000)	05/01/2019-04/30/2022
M. N. Rylander (PI) and N. B. Saleh (Co-PI)	<i>In Vitro</i> Skin and Liver Organ-on-a-Chip Platforms as Animal Alternatives to Pesticide Safety Assessment in a Dynamic and High-Throughput Manner	Environmental Protection Agency, STAR grant	\$850,000 (\$349,856)	06/01/2019-05/31/2022
<b>Grand total</b>			<b>\$4,883,971</b>	
<b>Saleh share</b>			<b>\$1,775,023</b>	

**University of South Carolina:**

<b>Co-Investigators</b>	<b>Title</b>	<b>Agency</b>	<b>Grant Total</b>	<b>Grant Period</b>
N. B. Saleh (PI) T. Sabo-Attwood P. L. Ferguson	Influence of diameter and chirality of single-walled carbon nanotubes on their fate and effects in the aquatic environment	National Science Foundation	\$436,013 (\$160,108)	10/01/09-09/30/13
N. B. Saleh (PI) J. Caicedo A. Johnson	NUE: Nano in a Global Context for Engineering Students	National Science Foundation	\$200,000 (\$180,000)	10/01/10-09/30/14
Y. Yoon (PI) N. B. Saleh J. R. V. Flora	Applications of Carbon Nanotubes in UF and MF Membranes: Pretreatment in Seawater Desalination	Gold Star Engineering and Construction Co., South Korea	\$220,000 (\$73,000)	05/01/10-04/30/13

N. B. Saleh (PI)	Mechanistic Understanding of Nanomaterial Toxicity: Aggregation and Surface Interaction in Biologically Relevant Conditions	US Air Force Research Lab	\$60,000	10/15/11-04/30/13
J. Goodall (PI) N. B. Saleh M. Meadows	A GIS-based Mitigation Forecasting Tool and Study on Advanced Mitigation Processes used by DOTs	SC DOT	\$413,837 (\$200,000)	01/01/13-12/31/15
Grand total			\$1,329,850	
<b>Saleh Share</b>			<b>\$673,108</b>	

*Total career external research funding raised \$6,213,821; candidate’s share is \$2,448,131.*

**I. PH.D. SUPERVISION COMPLETED (5.5):**

**University of Texas (4.5):**

Afrooz, A. R. M. Nabiul	2015	Civil, Architectural and Environmental Engineering	University of Texas
Aich, Nirupam	2015	Civil, Architectural and Environmental Engineering	University of Texas
Das, Dipesh	2017	Civil, Architectural and Environmental Engineering	University of Texas
Plazas-Tuttle, J.	2017	Civil, Architectural and Environmental Engineering	University of Texas
Grundy, J.	2018	Civil, Architectural and Environmental Engineering	University of Texas

**University of South Carolina (1):**

Khan, Ifthecker A.	2012	Civil and Environmental Engineering	University of South Carolina
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**J. M.S. SUPERVISION COMPLETED (7.5):**

**University of Texas (5):**

Sabaraya, Indu V.	2016	Civil, Architectural and Environmental Engineering	University of Texas
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Rowles III, Stetson (co-advised)	2016	Civil, Architectural and Environmental Engineering	University of Texas
Hornstra, Allison V.	2017	Civil, Architectural and Environmental Engineering	University of Texas
Merryman, Anna E.	2017	Civil, Architectural and Environmental Engineering	University of Texas
Ngan, Christine K. (co-advised)	2017	Civil, Architectural and Environmental Engineering	University of Texas
Craig Ayres	2018	Civil, Architectural and Environmental Engineering	University of Texas

**University of South Carolina (2.5):**

Zaib, Qammer (co-advised)	2011	Civil and Environmental Engineering	University of South Carolina
Nirupam Aich	2012	Civil and Environmental Engineering	University of South Carolina
A. R. M. Nabiul Afrooz	2012	Civil and Environmental Engineering	University of South Carolina

**K. UNDERGRADUATE THESIS ADVISEES COMPLETED (2):**

Mason, Erica; graduated with B.S. in Chemical Engineering in May 2018; Thesis title: “Synthesis and Photocatalytic Performance of TiO<sub>2</sub>-CNTs and Magnetized Fe<sub>3</sub>O<sub>4</sub>-TiO<sub>2</sub>-CNT Multifunctional Hybrids: A Pickering Emulsion Platform for Organic Degradation”

Jain, Sneha; completed thesis for B.S. in Chemical Engineering in May 2018; Thesis title: “A Study Toward Device Development for Nano-Enabled Microwave Water Treatment”

**L. POST DOCTORAL SCHOLAR IN PROGRESS (1):****University of Texas:**

Rmirez, Irwing Moses; funded by the ConTEX program; joined my lab on Sept., 2018

**M. PH.D. IN PROGRESS (2.5):****University of Texas:**

A. Students admitted to candidacy:

Rowles III, Lewis Stetson (co-advised); expected to graduate in December 2019

B. Post M.S. students preparing to take Ph.D. qualifying exam:

Sabaraya, Indu Venu; expected to graduate in December 2019

Ayres, Craig; expected to graduate in December 2021

**N. M.S. IN PROGRESS (2):****University of Texas:**

Naik, Rahul A. and Nguyen, David; both expected to graduate in May 2019

**O. UNDERGRADUATE ADVISEES (16):****University of Texas (12):**

Gregory Latimer\*, \*\*Erica Mason, Kelsey Turpin, Sneha Jain, Rachel Piner, Sarah Hordern, Manjula Andukuri\*, Aleesha Toteja, Sofia I Carrillo, Isac Ramirez, Areeb Hossain\*, and Jenny Hui.

*\*Awarded Undergraduate Research Grant at University of Texas at Austin, May 2014.*

*\*\*Won poster awards in the Cockrell School of Engineering, May 2016.*

**University of South Carolina (4):**

Samuel Rollings, Tyler Clark, and Atif A. Choudhury, Lewis Stetson Rowles III

**P. STUDENT AWARDS:****University of Texas:**

Indu V. Sabaraya (Ph.D. student), 2018-2019 Environmental Research & Education Foundation (EREF) Scholarship

Nirupam Aich (Ph.D. student), American Chemical Society Environmental Chemistry Graduate Student Award 2014

Erica Mason (undergraduate student), 1<sup>st</sup> place in Women in Engineering poster competition and 3<sup>rd</sup> place at the annual Poster Exhibition on Engineering Research (PEER) contest at Cockrell School of Engineering

**University of South Carolina:**

A. R. M. Nabiul Afrooz (Ph.D. student), American Chemical Society Environmental Chemistry Graduate Student Award 2013

Iftheker A. Khan (Ph.D. student), American Chemical Society Environmental Chemistry Graduate Student Award 2011

**Q. VITA:**

Navid Saleh's research focuses on environmental implications and applications of nanomaterials. His lab studies nanomaterial fate and transport and evaluates mechanisms of nano-bio interaction on the implication aspects, while develops novel nano-enabled technologies for water treatment applications. Recent projects include: studying fundamental aggregation and deposition behavior of carbon nanotubes, anisotropic gold-nano particles, indium tin oxide, and conjugated nanohybrids; development of nano-enabled disinfection technology that harness the power of microwave irradiation; dispersion control of nanotubes for construction materials (cement and asphalt); and nano-education. His research has produced 61 publications in refereed journals and 7 book chapters. At the undergraduate level, Saleh teaches the "Introduction to Environmental Engineering" and two newly developed courses on nanotechnology: "Designing Sustainable Nanomaterials" and "Nanotechnology Laboratory" (co-taught with Dr. Kirisits). At the graduate level, he teaches a newly developed course, titled: "Environmental Implications of Nanotechnology".