

Mohammed Baalousha, Curriculum Vitae

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Work Address

University of South Carolina
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Profiles

Google Scholar: <https://scholar.google.com/citations?user=DPT8ChMAAAAJ&hl=en>
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Research ID: <http://www.researcherid.com/rid/F-6494-2011>
SCOPUS: <https://www.scopus.com/authid/detail.uri?authorId=8941790200>

Appointments

2018-Present: Associate Professor of Environmental Nanoscience, Department of Environmental Health Sciences, University of South Carolina
2014-2017: Assistant Professor of Environmental Nanoscience, Department of Environmental Health Sciences, University of South Carolina
2006-2013: Postdoctoral Fellow: University of Birmingham, College of Life and Environmental Sciences, United Kingdom
Summer 2013: Invited Professor, University of Bordeaux 1, France
Summer 2004: Invited Research Assistant, UFZ Environmental Research Centre, Germany.
Summer 2003: Invited Research Assistant, Hambourg-Harbourg Technical University, Germany.
Fall 2002: Invited Research Assistant, Birmingham University, Birmingham, United Kingdom.

Education

2002-2006: PhD in Environmental Biogeochemistry (Distinction with European accreditation)
University Bordeaux 1, Bordeaux, France
Title: Environmental role of natural colloids as carriers of trace Elements
2001-2002 MSc. Applied mechanics, University Bordeaux1. Grade: AB. 2nd out of 20 students
Dissertation project: Transport of Cd in sand column.
1996-2001: BSc. Civil engineering, Islamic University of Gaza, Gaza, Palestine.
Grade: Excellent. Average: 91.8%. 1st out of 80 students

Awards

2018: Breakthrough Star, University of South Carolina
2017: NSF-EPSCoR Fellowship
2016: CAREER: National Science Foundation
2014: Emerging Investigator. Journal of Environmental Science: Processes and Impacts

- 2008:** Chemodynamics Outstanding Young Scientist Award
2002-2005: French Foreign Ministry PhD Scholarship. Full funding: fees and maintenance (€40,000)
2001-2002: French Foreign Ministry MSc Scholarship. Full funding: fees and maintenance (€10,000)
1996-2001: UNESCO BSc Scholarship for Undergraduate Studies. Full fees and maintenance (\$5,000)

Affiliations

- 2020-Present:** Member of the Steering Board for Field Flow Fractionation International Symposium
2020-Present: Member of the Editorial Board of Molecules
2020-Present: Member of the Association of Environmental Engineering and Science Professors
2019-2020: President of the Carolinas Society of Environmental Toxicology and Chemistry (CSETAC)
2018-2019: Vice President of the Carolinas Society of Environmental Toxicology and Chemistry (CSETAC)
2016-Present: Board Member of the Carolinas Society of Environmental Toxicology and Chemistry
2012-Present: Member of the Geochemical Society
2010-Present: Member of the Society of Environmental Toxicology and Chemistry (SETAC)
2010-2014: Member of the NORMAN Network; WG4 - Engineered Nanomaterials (ENM) in the Environment

Supervision and Mentoring

Current Students and postdoctoral researchers

- | | | | |
|---------------------|---------|--------------|------------------------------|
| 1. Jingjing Wang | postdoc | 2017-present | University of South Carolina |
| 2. Talal Alshehri | PhD | 2020-present | University of South Carolina |
| 3. Md Mohammed Nabi | PhD | 2018-Present | University of South Carolina |
| 4. Ammar Al Rishm | PhD | 2016-Present | University of South Carolina |
| 5. Carson T Bowen | BSc | 2020-Present | University of South Carolina |

Former Students and postdoctoral researchers

- | | | | |
|---------------------------|----------------|------------|-------------------------------|
| 6. Madeleine Meyer | Research Assis | 2018-2020 | University of South Carolina |
| 7. Frederic Loosli | postdoc | 2016-2018 | University of South Carolina |
| 8. Yusuf Nur | postdoc | 2013-2014 | University of Birmingham, UK |
| 9. Mithun Sikder | PhD | 2015-2019 | University of South Carolina |
| 10. Kamelia Afshinnia | PhD | 2014-2018 | University of South Carolina |
| 11. Salahaddin Kamrani | PhD | 2015-2018 | Kharazmi University, Iran |
| 12. Zebang Yi | PhD | 2017-2018 | Sun Yat-Sen University, China |
| 13. Samantha McNeal | Research Assis | 2015-2016 | University of South Carolina |
| 14. Raza Ghulam | PhD | 2010- 2015 | University of Birmingham |
| 15. Ashwini Prasad | PhD | 2010- 2015 | University of Birmingham |
| 16. Laura-Jayne Ellis | PhD | 2010-2014 | University of Birmingham |
| 17. Adam Davis | MS | 2011-2012 | University of Birmingham |
| 18. Braden Schar | BSc | 2019-2020 | University of South Carolina |
| 19. Madeleine Terpilowski | BSc | 2017-2019 | University of South Carolina |

Dr. Mohammed Baalousha, PhD, MSc

20. Josette Gauthier	BSc	2017-2018	University of South Carolina
21. Katlin Thomas	BSc	Fall 2017	University of South Carolina
22. Madeline Pearce	BSc	Fall 2016	University of South Carolina
23. Nicholas M Gray	BSc	Fall 2015	University of South Carolina
24. Ross F Lordo	BSc	Fall 2015	University of South Carolina
25. Brittany Haynes	BSc	Summer 2015	University of South Carolina
26. Imani Gibson	BSc	Summer 2014	University of South Carolina
27. Anne Mcelvenny	High School	Summer 2017	University of South Carolina
28. Brandon Marrone	High School	Summer 2016	University of South Carolina
29. Avery Graham	High school	Summer 2015	University of South Carolina
30. Jack Runge	High school	Summer 2014*	University of South Carolina

* 2015 Intel Talent Science Search Semi-finalist

University Wide Training

2019-Present: Entering Mentoring Training: train faculty across the University of South Carolina on mentoring graduate students

Conference Organization

1. Scientific organizing committee. 21st International Symposium on Field- and Flow-Based Separations (FFF 2021), CA, USA, May 2021
2. Session co-organizer. 257th American Chemical Society National Meeting, Orlando, March 31 to April 4th 2019
3. Chair. 19th International Symposium on Field- and Flow-Based Separations (FFF2018). Columbia, SC, USA, May 2018. <http://web.asph.sc.edu/fff2018/>
4. Scientific organizing committee. 18th International Symposium on Field- and Flow-Based Separations (FFF 2016), Dresden, Germany, May 2016
5. Local organizing committee. International Conference on the Environmental Effects of Nanoparticles and Nanomaterials (ICENN 2014), Columbia, SC, USA, August 2014.

Reviewer

- Expert on the EPA/CESER Technical Qualification Board (TQB), 2020
- Reviewer, AEESP SSC Academic Job Application Review 2020
- Panellist for NSF, CBET, Nano-EHS, 2015
- Ad hoc reviewer for several national and international funding agencies including National Science Foundation (USA) and cost action proposal (EU), UK National Research Council, and others.
- Peer reviewer for several scientific journals such as Environmental Science and Technology, Water Research, Journal of Hazardous Materials, Journal of Environmental Monitoring, Environmental Toxicology and Chemistry, Environmental Chemistry, Fibre and Particle Toxicology, Journal of Chromatography
- Member of the United Kingdom natural environmental research council Peer Review College

Funded Research Grants (Total funding \$ 3,653,406; Baalousha group share \$ 2,619,453)

2020 Title: Rapid Collaborative Proposal: Characterization, Quantification, and Transport of Incidental Nanoparticles from Wildland-Urban Fires in Surface Waters.

Role: PI

Dates: December 2020 to November 2021

Funder: NSF

Award: \$ 200,000 (share \$180,016)

2019 Title: CC* Networking Infrastructure: Building a Science DMZ for Data-intensive Research and Computation at the University of South Carolina

Role: SP

Dates: July 2019 to June 2022

Funder: NSF

Award: \$498,525

Title: Extremely durable graphene oxide nanoribbon reinforced concrete

Role: Co-PI

Dates: Dec 2019 to Nov 2021

Funder: Savannah River National Laboratory/DOE

Award: \$160,000

Title: ASPIRE - III- Acquisition of a Microwave System to Support Multidisciplinary Research in Material, Environmental, and Geological Sciences

Role: PI

Dates: July 2019 to June 2021

Funder: VPR for research

Award: \$68,779

Title: ASPIRE - II- Impact of Sewer Overflows on Environmental and Human Health: Columbia, SC as a Model for the United States

Role: Co-PI

Dates: July 2019 to June 2021

Funder: VPR for research

Award: \$100,000

2018 Title: MRI: Acquisition of Time of Flight-Inductively Coupled Plasma-Mass Spectrometer to Support Multi-disciplinary Research and Training in South Carolina and Nationwide

Role: PI

Dates: July 2018 to June 2021

Funder: NSF

Award: \$909,128

Title: Fate and Transport of Silver Nanoparticles in Treatment Wetlands

Role: Co-PI

Dates: Oct 2018 to September 2021

Funder: USGS

Award: \$248,201 (share \$38,601)

Title: ASPIR I-Cement Composites with Advanced Graphitic Nano-amendments for Nuclear Waste Storage

Role: Co-PI (PI: Fabio Matta, Department of Civil Engineering)

Dates: July 2018 to September 2019

Funder: USC VPR Office of Research

Award: \$15,000

Title: Rapid Access: Molecular understanding of salt-induced selective aggregation and selective sorption of dissolved organic matter to natural and engineered particles

Role: PI

Dates: May 2018 to September 2018

Funder: Environmental Molecular Science Laboratory (DOE/National Laboratory)

Award: \$60,000

2017 Title: RII Track-4: Molecular understanding of salt-induced selective aggregation and selective sorption of dissolved organic matter to natural particles

Role: PI

Dates: Sep 2017 to August 2021

Funder: NSF

Award: \$286,370

Title: 19th International Symposium on Field- and Flow-based Separations (FFF2018)

Role: PI

Dates: Feb 2017 to Feb 2019

Funder: NSF

Award: \$4,000

2016 Title: CAREER: Detection and quantification of metal-based engineered nanoparticles in surface waters

Role: PI

Dates: Aug 2016 to July 2021

Funder: NSF (CBET 1553909)

Award: \$510,000

Title: A rotating annular flume to perform interdisciplinary research on transport, erosion and resuspension of fine sediment, natural tracers and contaminants

Role: Co-PI

Dates: July 2016 to October 2017

Funder: VPR for research, University of South Carolina

Award: \$97,125

2015 Title: Non-point source contamination in stormwater system in South Carolina

Role: PI

Dates: March 2015 to November 2016

Funder: SC Sea Grant Consortium

Award: \$24,999

Title: REU supplement for “Evaluation of the role of size dispersity on nanoparticle uptake and ecotoxicity”

Role: PI

Dates: Aug 2015 to July 2016

Funder: NSF

Award: \$5,000

Title: Sewage overflows from the 1000-year event and their impacts on the cycling of carbon and toxic metals in the Congaree river watershed

Role: Co-PI

Dates: November 2015 to May 2016

Funder: SC Sea Grant Consortium

Award: \$30,000

2014 Title: Evaluation of the role of size dispersity on nanoparticle uptake and ecotoxicity

Role: PI

Dates: July 2014 to July 2018

Funder: NSF (CBET 1437307)

Award: \$299,929

2012 Title: The transfer of engineered nanomaterials from wastewater and stormwater to rivers

Role: Co-I (PI: Lars Duester)

Dates: July 2012 to June 2017

Funder: ESSEM COST Action ES1205, EU

Award: £151,960 = \$179,000

2008 Title: Quantifying the structure of very small natural aquatic colloids

Role: Co-I (PI: Jamie Lead)

Dates: July 2008 to July 2013

Funder: Natural Environmental Research Council, UK

Award: £561,965 = \$750,000

Research Impact

Peer reviewed journal publications (* corresponding author, student)

	ID/link	Citations	h-index	# articles cited > 100 times
Google Scholar		> 7200	41	20
SCOPUS	8941790200	> 5200	37	14
Web of Science	Researcher ID: F-6494-2011	> 4700	35	14

Publications

In press/In print Peer-reviewed journal articles

1. Sikder M, Barasch D, Croteau M, Poulin B A, and **Baalousha M**. Effect of nanoparticle size and natural organic matter composition on the bioavailability of polyvinylpyrrolidone coated platinum nanoparticles to a model freshwater invertebrate. *Environ. Sci. Technol.* **2021 (Under Revision)**
2. Kamrani S, Amiri V, Kamrani M, and **Baalousha M**. Transport of N-CDs and released Pb in the porous

- media: effect of pH, ionic strength and cation type. *Molecules*. 2020 (**Under Revision**)
3. Nabi Md M, Wang J, Meyer M, Croteau M, Ismail N, and **Baalousha M***. Concentrations and size distribution of TiO₂ and Ag engineered particles in five wastewater treatment plants in the United States. *Sci. Tot. Environ.* 753 (2021) 142017
 4. Nabi Md M, Wang J, Meyer M, Croteau M, Ismail N, and **Baalousha M***. Concentrations and size distribution of TiO₂ and Ag engineered particles in five wastewater treatment plants in the United States. *Sci. Tot. Environ.* 753 (2021) 142017
 5. Sikder M, Wang J, Poulin B A, Tfaily M.M., and **Baalousha M***. Nanoparticle size and natural organic matter composition determine aggregation behavior of platinum nanoparticles. *Environ. Sci. Nano*. 2020 (**Cover Articles**). Selected based on Editor invitation of high impact articles
 6. **Baalousha M***, Wang J, Nabi Md M, Loosli F, Valenca R., Mohanty S K, Afrooz N, Cantando E, Aich N. Stormwater green infrastructure retain high concentrations of TiO₂ engineered (nano)-particles. *J. Hazard. Mat.* 392 (2020) 122335.
 7. Wang J, Nabi MD M, Mohanty S K, Afrooz ARM N, Contado E, Aich N, and **Baalousha M***. Detection and quantification of engineered particles in urban runoff. *Chemosphere*. 248 (2020) 126070.
 8. Loosli F, Sikder M, Wang J, Afshinnia J, and **Baalousha M***. Analysis of Ag and CeO₂ engineered nanomaterials in surface waters and soils at environmentally relevant concentrations. *Sci. Tot. Environ.* 716 (2020) 136927.
 9. Yi Z, Loosli F, Wang J, Berti D, and **Baalousha M***. How to distinguish natural versus engineered nanomaterials: insights from analysis of TiO₂ and CeO₂ in soils. *Environ. Chem. Lett.* 18 (2020) 215-227
 10. Hall E R, Wickes L, Burnett L E, Scott G I, Hernandez D, Yates K K, Barbero L, Reimer J J, **Baalousha M**, Bennett-Mintzm J, Cai W, Craig K, DeVoe M R, Fisher W S, Hathaway T K, Jewett E B, Johnson Z, Keener P, Mordecai R S, Noakes S, Phillips C, Sandifer P A, Schnetzer A, and Styron J. Acidification in the U.S. Southeast: causes, potential consequences and the role of the Southeast Ocean and Coastal Acidification Network. *Frontiers in Marine Science*. 7 (2020) 548:1-11.
 11. Saharia A, Zhu Z, Aich N, **Baalousha M**, Atkinson J F. Modeling the transport of titanium dioxide nanoparticles from combined sewer overflows in an urban river. *Sci. Tot. Environ.* 696 (2019) 133904
 12. Loosli F, Yi Z, Wang J, and **Baalousha M***. Dispersion and analysis of natural nanomaterials in surface waters as new step towards quantification of engineered nanomaterial in environmental systems. *Sci.Tot.Environ.* 682 (2019) 663-672.
 13. Loosli F, Yi Z, Wang J, Berti D, and **Baalousha M***. Improved extraction efficiency of natural nanomaterials to facilitate their characterization using a multimethod approach. *Sci. Tot. Environ.* 677 (2019) 34-36
 14. Loosli F, Wang J, Rothenberg S, Bizimis M, Winkler C, Borovinskaya O, Flamingni L, and **Baalousha M***. Sewage spills are a major source of engineered titanium dioxide release into the environment. *Environ. Sci. Nano*. 6 (2019) 763-777.
 15. **Baalousha M***, Motelica-Heino M, Guiges N, Braibant G and Le Coustumer P. Suspended particulate matter determines physical speciation of Fe, Mn, and trace metals in surface waters of the Loire watershed. *Environ.Sci.Pollut.Res.* 26 (2019) 5251-5266.
 16. Sikder M, Wang J, Chandler G.T., Berti D and **Baalousha M***. Synthesis, Characterization, and Environmental Behaviors of Monodispersed Platinum Nanoparticles. *J.Colloid.Surf.Sci.* 540 (2019) 330-341.
 17. Saeed H, Hartland A, Lehto N, **Baalousha M**, Sikder M, Sandwell D, Mucalo M, and Hamilton DP. Dynamic redox cycling of nano-scale iron and phosphorus in a monomictic lake: a combined DGT and ultrafiltration approach. *Sci.Rep.* 8 (2018) 17736
 18. Emmons A M, Bizimis M, Lang S Q, Stangler W, Geidel G, Wanamaker E, **Baalousha M**, Rothenberg S E. Enrichments of metals, including methylmercury, in sewage spills in South Carolina, USA. *J.Environ.Monit.* 47 (2018) 1258-1266.

19. Loosli F, Yi Z, Berti D, and Baalousha M*. Toward a better extraction of titanium dioxide engineered nanomaterials from complex environmental matrices. *Nanoimpact*. 11 (2018) 119-127.
20. Sikder M, Eudy E, Chandler D T, and Baalousha M*. Comparative study of dissolved and nanoparticulate Ag effects on the life cycle effect of an estuarine meiobenthic copepode, *Amphiascus tenuiremis*. *Nanotoxicol*. 12 (2018) 375-389.
21. Yan C, Liu H, Huang X, Sheng Y, Nie M, Baalousha M*. Fluorescence characterization of fractionated colloidal organic matter in the five tributaries of Poyang Lake, China. *Sci.Tot.Environ*. 637-638 (2018) 1311-1320.
22. Baalousha M*, Afshinnia K, and Guo L. Natural organic matter composition determines the molecular nature of nanomaterial NOM-corona. *Environ. Sci. Nano*. 5 (2018) 868-881. **Cover article**
23. Kamrani S, Rezaei M, Kord M, and Baalousha M*. Co-transport and remobilization of Cu and Pb in quartz column by carbon dots. *Sci.Tot.Environ*. 626 (2018) 995-1004.
24. Kamrani S, Rezaei M, Kord M, and Baalousha M*. Transport and Retention of Carbon dots (CDs) in Saturated and Unsaturated Porous Media: role of ionic strength, pH, and collector grain size. *Wat. Res*. 133 (2018) 338-347.
25. Afshinnia A, Marrone B, and Baalousha M*. Potential impact of natural organic ligands structure on the colloidal stability of silver nanoparticles. *Sci. Tot. Environ*. 625 (2018) 1518-1526.
26. Sikder M, Lead J R, Chandler G T, and Baalousha M*. A rapid approach for measuring silver nanoparticle concentration and dissolution in seawater by UV-Vis. *Sci. Tot. Environ*. 618 (2018) 597-607.
27. Ellis L-J, Baalousha M*, Valsami-Jones E, and Lead J R. Seasonal Variability of Natural Water Chemistry affects the Fate and Behaviour of Silver Nanoparticles. *Chemosphere*. 191 (2018) 616-625.
28. Mirzaei Aminiyan M, Mirzaei Aminiyan F, Baalousha M. Evaluation of human health risk based on EPA modeling for adults and children and pollution level of potentially toxic metals in Rafsanjan road dust: a case study in a semi-arid region, Iran. *Environ. Sci. Pollut. Res* 2017 25 (2018) 19767-19778.
29. Mirzaei Aminiyan M, Baalousha M, Mousavi R, Mirzaei Aminiyan F, Hosseini H and Heydariyan A. The ecological risk, source identification, and pollution assessment of heavy metals in road dust: a case study in Rafsanjan, SE Iran. *Environ.Sci.Pollut.Res*. 25 (2018) 13382-13395.
30. Mitra C, Gummadidala P, Afshinnia K, Merrifield R, Baalousha M, Lead, J, and Chanda, A. Citrate-coated silver nanoparticles growth- independently inhibit aflatoxin synthesis in "Aspergillus parasiticus". *Environ. Sci. Technol*. 51 (2017) 8085-8093.
31. Park C M, Chu K H, Herb N, Jang M, Baalousha M, Heo J, Yoon Y. Occurrence and removal of engineered nanoparticles in drinking water treatment and wastewater treatment processes. *Separ. Purif. Rev*. 46 (2017) 255-272.
32. Afshinnia K and Baalousha M*. Effect of phosphate buffer on aggregation kinetics of citrate-coated silver nanoparticles induced by monovalent and divalent electrolytes. *Sci.Tot.Environ*. 581-582 (2017) 268-276.
33. Afshinnia K, Sikder M, Cai B and Baalousha M*. Effect of nanomaterial and media physicochemical properties on Ag NM aggregation kinetics. *J. Colloid Interf. Sci*. 487 (2017) 192-200.
34. Baalousha M*. Effect of nanomaterial and media physicochemical properties on nanomaterial aggregation kinetics. *Nanoimpact*. 6 (2017) 55-68
35. Ghulam R, Amjad M, Kaur I, Baalousha M, Lead J R and Wen D. Stability and aggregation kinetics of titania nanoparticles under environmentally realistic conditions. *Environ. Sci. Technol*. 50 (2016) 8462-8472.
36. Ellis L A, Valsami-Jones E, Lead J R, and Baalousha M*. Impact of Surface Coating and Environmental Conditions on the Fate and transport of Silver Nanoparticles in the Aquatic Environment. *Sci. Tot. Environ*. 568 (2016) 95-106.
37. Baalousha M*, Yang Y, Vance M E, Coleman B, McNeal S, Xu J, Blaszcak J, Steele M, Bernhardt E, and

- Hochella M F. Outdoor Urban Nanomaterials: The Immersion of a New, Integrated, and Critical Field of Study. *Sci.Tot.Environ.* 557-558 (2016)740-753.
38. Afshinnia K, Gibson J, and Merrifield R and **Baalousha M***. The concentration-dependent aggregation of Ag NPs induced by cysteine. *Sci.Tot.Environ.* 557 (2016) 395-403.
 39. **Baalousha M***, Cornelis G, Kuhlbusch TAJ, Lynch I, Nickel C, Peijnenburg W, and van den Brink NW. Modeling Nanomaterial Fate and Uptake in the Environment: Current Knowledge and Future Trends. *Environ. Sci. Nano.* 3 (2016) 323-345.
 40. Yan C, Nie M, Yang Y, Zhou J, Merrifield R, Lead J R, and **Baalousha M***. Application of multi-method approach in characterization of natural aquatic colloids from different sources along Huangpu River in Shanghai, China. *Sci.Tot.Environ.* 554 (2016) 228-236.
 41. **Baalousha M***, Sikder M, Prasad A, Lead J R, Merrifield R, Chandler G T. The concentration-dependent behavior of nanoparticles. *Environ. Chem.* 13 (2016) 1-3.
 42. Hartland A, Larsen J R, Andersen M, Baalousha M, O'Carroll D M. Arsenic and phosphorus association with iron nanoparticles between streams and aquifers: implications for arsenic mobility. *Environ.Sci.Technol.* (2015) 14101-14109.
 43. Nowack B, **Baalousha M**, Bornhöft N, Chaudhry Q, Cornelis G, Cotterill J, Gondikas A, Hassellöv M, Lead J R, Mitrano D M, von der Kammer F, Wontner-Smith T. Progress toward validation of modeled environmental concentrations of engineered nanomaterials by analytical measurements. *Environ. Sci. Nano.* 5 (2015) 421-428.
 44. Rhys M, Goodhead R M, Johnston B D, Cole P A, **Baalousha M**, Hodgson D, Iguchi T, Lead J R, Tyler C R. Does Natural Organic Matter Increase Bioavailability of Cerium Dioxide Nanoparticles to Fish? *Environ. Chem.* 12 (2015) 673-682.
 45. Prasad A, Lead J R, and **Baalousha M***. An electron microscopy based method for the detection and quantification of nanomaterial number concentration in environmentally relevant media. *Sci. Tot. Environ.* 537 (2015) 479-486.
 46. Nur Y, Lead J R and **Baalousha M***. Evaluation of charge and agglomeration behavior of TiO₂ nanoparticles in ecotoxicologicval media. *Sci. Tot. Environ.* 535 (2015) 45-53.
 47. Yan C, Nie M, Yang Y, Zhou J, Liu M, **Baalousha M** and Lead J R. Effect of colloids on the occurrence, distribution and photolysis of emerging organic contaminants in wastewaters. *J.Hazard. Mater.* 15 (2015) 241-248.
 48. Peijnenburg W J G M, **Baalousha M**, Chen J, Chaudry Q, Von Der Kammer F, Kuhlbusch T A J, Lead J, Nickel C, Quik J T K, Renker M, Wang Z, Koelmans A A. A review of the properties and processes determining the fate of engineered nanomaterials in the aquatic environment. *Crit. Rev. Environ. Sci. Technol.* 45 (2015) 2048-2134.
 49. Dale A, Casman E, Lowery G, Lead J R, Viparelli E and **Baalousha M***. Modeling nanomaterial environmental fate in aquatic systems. *Environ. Sci. Technol.* 49 (2015) 2587-2593. **Cover article**
 50. **Baalousha M***, Arkill K P, Romer I, Palmer R E and Lead J R. Transformations of Citrate and Tween coated Silver Nanoparticles reacted with Na₂S: *Sci.Tot.Environ.* 502 (2015) 344-353.
 51. **Baalousha M***, Prasad A, and Lead J R. Quantitative measurement of the nanoparticle size and number concentration from liquid suspensions by atomic force microscopy: *Environ.Sci.Process.Impact.* 16 (2014) 1338-1347.
 52. **Baalousha M*** and Lead J R. Nanoparticle dispersity in toxicology. *Nat. Nanotechnol.* 5 (2013) 308-309.
 53. **Baalousha M***, Nur Y, Römer I, Tejamaya M and Lead J R. Effect of monovalent and divalent cations, anions and fulvic acid on aggregation of citrate-coated silver nanoparticles. *Sci. Tot. Environ.* 454-455 (2013) 119.
 54. **Baalousha M*** and Lead J R. Characterisation of natural and manufactured nanoparticles by atomic force microscopy: effect of analysis mode, environment and sample preparation. *Colloid Surf.A.* 419

- (2013) 238-247.
55. Osborne O J, Johnston B D, Moger J, Baalousha M, Lead J R, Kudoh T and Tyler C R. Effects of particle size and coating on nanoscale Ag and TiO₂ exposure in zebrafish (*Danio rerio*) embryos. *Nanotoxicol.* (2013) 1315-1324.
 56. **Baalousha M*** and Lead J R. Rationalising nanomaterial sizes measured by AFM, FIFFF and DLS: sample preparation, polydispersity and particle structure. *Environ.Sci.Technol.* 46 (2012).6134-6142.
 57. **Baalousha M***, Ju-Nam Y, Cole P, Tyler C R, Stone V, Fernandes T, Jepson M A and Lead J R. Characterization of cerium oxide nanoparticles: part I: size measurement. *Environ.Toxicol.Chem.* 31 (2012) 983-993.
 58. **Baalousha M***, Ju-Nam Y, Cole P, Tyler C R, Stone V, Fernandes T, Jepson M A and Lead J R. Characterization of cerium oxide nanoparticles: part II: nonsize measurements. *Environ.Toxicol.Chem.* 31 (2012) 994-1004.
 59. Hartland A, Fairchild I J, Lead, J R, Borsato A, Baker A, Frisia S and **Baalousha M**. From soil to cave: Colloid-facilitated transport of trace metals in speleothem-forming groundwaters. *Chem. Geol.* 304 (2012) 68-82.
 60. Gaiser B K, Fernandes T F, Jepson M A, Lead J R, Tyler C R, **Baalousha M**, Biswas A, Britton G, Cole P, Johnston B, Ju-Nam Y, Rosenkranz P, Scown T and Stone V. Interspecies comparisons on the uptake and toxicity of silver and cerium dioxide nanoparticles. *Environ.Toxicol.Chem.* 31 (2012) 144-154.
 61. **Baalousha M***, Stolpe B and Lead J R. Field flow fractionation analysis for the characterization of natural and manufactured nanoparticles: critical review. *J.Chromatogr.A.* 27 (2011) 4078-4103.
 62. Romer I, White T A, **Baalousha M**, Chipman K, Viant M R and Lead J R. Aggregation and dispersion of silver nanoparticles in exposure media for aquatic toxicity tests. *J. Chromatogr.A.* 27 (2011) 4226-4233.
 63. Hartland A, Fairchild I J, Lead J R, Zhang H, **Baalousha M** and Phillips L. Size-speciation and lability of NOM-metal complexes in hyperalkaline cave dripwater. *Geochim. Cosmochim. Acta.* 75 (2011) 7533-7551.
 64. Johnston B D, Scown T M, Moger J, Cumberland S, **Baalousha M**, Linge K, van Aerle R, Jarvis K, Lead J R and Tyler C R. Limited bioavailability of nanoscale metal oxides, TiO₂, CeO₂, and ZnO to fish. *Environ.Sci.Technol.* 44 (2010) 1144-1151.
 65. **Baalousha M***, Le Coustumer P, Jones I and Lead J.R. Characterization of structural and surface speciation of representative commercially available cerium oxide nanoparticles. *Environ. Chem.* 7 (2010) 377-385.
 66. Scown T M, Santos E, Johnston B D, Gaiser B, **Baalousha M**, Mitov S, Lead J R, Stone V, Fernandes T, Jepson M, van Aerle R and Tyler C R. Effects of Aqueous Exposure to Silver Nanoparticles of Different Sizes in Rainbow Trout. *Toxicol. Sci.* 115 (2010) 521-534.
 67. Scown T M, Goodhead R, Johnston B D, Moger J, **Baalousha M**, Lead J R, van Aerle R, Iguchi T and Tyler C R. Assessment of cultured fish hepatocytes for studying cellular uptake and (eco)toxicity of nanoparticles. *Environ. Chem.* 7 (2010) 36-49.
 68. Rogers N J, Franklin N M, Apte S C, Batley G E, Lead J R and **Baalousha M**. Physico-chemical behaviour and toxicity to algae of nanoparticulate CeO₂ in freshwater. *Environ.Chem.* 7 (2010) 50-60.
 69. Hartmann N B, Von der Kammer F, **Baalousha M**, Ottofuelling S and Baun A. Algal testing of titanium dioxide nanoparticles – testing considerations, inhibitory effects and modification of cadmium bioavailability. *Toxicol.* 269 (2010) 190-197.
 70. Hartland A, Fairchild I F, Lead J R, Dominguez-Villar D, Baker A, Gunn J, **Baalousha M** and Ju-Nam Y. The dripwaters and speleothems of Poole's Cavern: a review of recent and ongoing research. *Cave Karst Sci.* 36 (2010) 37-46.
 71. **Baalousha M***. Aggregation and disaggregation of iron oxide nanoparticles; influence of particles concentration, pH and natural organic matter. *Sci.Tot.Environ.* 407 (2009) 2093-2101.
 72. Batchelli S, Muller F L L, **Baalousha M** and Lead J R. Size fractionation and optical properties of colloids

- in an organic-rich estuary (Thurso, UK). *Marine Chem.* 113 (2009) 227-237.
73. Domingos R F, **Baalousha M**, Ju-Nam Y, Reid M, Tufenkji N, Lead J R, Leppard G G and Wilkinson K J. Characterizing manufactured nanoparticles in the environment- multimethod determination of particle sizes. *Environ.Sci.Technol.* 43 (2009) 7277-7284.
 74. **Baalousha M**, Manciu A, Cumberland S, Kendall K and Lead J R. Aggregation and surface properties of iron oxide nanoparticles; influence of pH and natural organic matter. *Environ. Toxicol. Chem.* 27 (2008) 1875-1882.
 75. Christian P. von der Kammer F, **Baalousha M** and Hofmann Th. Nanoparticles: preparation, properties and behaviour in environmental media. *Ecotoxicol.* 17 (2008) 326-343.
 76. **Baalousha M** and Lead J R. Characterization of natural aquatic colloids (< 5 nm) by flow field flow fractionation and atomic force microscopy. *Environ. Sci. Technol.* 41 (2007) 1111-1117.
 77. **Baalousha M** and Lead J R. Characterization and Size fractionation and characterization of natural aquatic colloids and nanoparticles. *Sci. Tot. Environ.* 386 (2007)93-102.
 78. **Baalousha M***, Motelica-Heino M, Baborowski M, Hofmeister C and Le Coustumer P. Size based speciation of natural colloidal particles by Flow Field Flow Fractionation-Inductively Coupled Plasma-Mass Spectroscopy- Transmission Electron Microscopy/X-Energy Dispersive Spectroscopy: colloids-trace element interaction. *Environ.Sci.Technol.* 40 (2006) 2156-2162.
 79. **Baalousha M***, v.d.Kammer F, Motelica-Heino M, Hilal H and Le Coustumer P. Size fractionation and characterization of natural colloids by Flow-Field Flow Fractionation coupled to Multi-Angle Laser Light Scattering. *J.Chromatogr.* 1104 (2006) 272-281.
 80. **Baalousha M***, Motelica-Heino M and Le Coustumer P. Conformation and size of humic substances: Effects of major cation concentration and type, pH, salinity and residence time. *J.Colloids. Surf. A. Phys. Engin.Asp.* 272 (2006) 48-55.
 81. **Baalousha M***, v.d.Kammer F, Motelica-Heino M and Le Coustumer P. Natural sample fractionation by FIFFF-MALLS-TEM: sample stabilization, preparation, pre-Concentration and Fractionation. *J.Chromatogr.* 1093 (2005) 156-166.
 82. **Baalousha M***, v.d.Kammer F, Motelica-Heino M and Le Coustumer P. 3D characterization of natural colloids by FIFFF-MALLS -TEM. *Anal.Bioanal.Chem.* 383 (2005) 549-560.
 83. **Baalousha M***, Motelica-Heino M, Galaup S and Le Coustumer P. Supramolecular structure of humic acids by TEM with improved sample preparation and staining. *Res.Microsc.Tech.* 66 (2005) 299-306.

Submitted Peer reviewed journal publications (* corresponding author, student)

84. Borovinskaya O, Meier F, Drexel R, **Baalousha M**, Flamigni L, Hegetschweiler A, Kraus T. Analysis of complex particle systems with the asymmetric flow field-flow fractionation coupled to single particle ICP-TOFMS. *J. Chromatogr.* 2020 (**Submitted**)
85. Qian X, Gu Z, Tang Q, Hong A, Xu Z, Zhou B, Dai Y, Mortimer M, Baalousha M, and Li L. Chemical transformations of nanoscale zinc oxide in simulated sweat and its impact on the antibacterial efficacy. *J.Haz.Mat.* 2020 (**Submitted**)
86. Wu J, Tou F, Yang Y, Hower J C, Baalousha M, Liu M, and Hochella M F, Jr. Metal-containing Nanoparticles in Low-rank Coal-derived Fly Ash from China: Characterization and Implications towards Human Lung Toxicity. *Environ. Sci. Technol.* 2020 (**Submitted**)

Refereed Conference Articles

1. Iffat S, Matta F, Gaillard J, Levington M, Sikder M, **Baalousha M**, and Tinkey S. Partially Unzipped Multiwalled Carbon Nanotubes as Low-Concentration Amendment of Cement Paste. *7th Int. Symposium on Nanotechnology in Construction (NICOM7)*, July 11-14, 2021, Melbourne, Australia [[abstract accepted](#)].
2. Iffat S, Matta F, Gaillard J, Levington M, Sikder M, **Baalousha M**, and Tinkey S. Feasibility Study of

Partially-Unzipped Carbon Nanotube-Amended Cement Paste. *2nd International Conference on Nanotechnology of Cement and Concrete (2NCC20)*, The National Academies of Sciences, Engineering, and Medicine, May 20-22, 2020, Irvine, CA, 10 p. [accepted, conference rescheduled due to COVID-19].

3. Matta F, Cuéllar-Azcárate M C, Wylie E M, Mejia Y, Iffat S, **Sikder M**, Powell B, Serkiz S, Caicedo J, and **Baalousha M**. "Nano-Amended Cement Waste Forms for Nuclear Waste Storage," *Proc. 6th Int. Symposium on Nanotechnology in Construction (NICOM6)*, December 2-5, 2018, Hong Kong, China, S.P. Shah, D. Yu and C.S. Poon (Eds.), Paper N6T05057, 9 p. [invited].

Edited Books

1. **Baalousha M** and Lead J R. Characterization of nanomaterials in complex environmental and biological media. Elsevier, *Frontiers of Nanoscience*. June 2015.

Peer reviewed book chapters

1. Palchoudhury S, **Baalousha M** and Lead J R. Methods for measuring concentration (mass, surface area and number) of nanoparticles. In Baalousha M and Lead J R. Characterization of nanomaterials in complex environmental and biological media. Elsevier, *Frontiers of Nanoscience*. 2015.
2. **Baalousha, M.**, W. How, E. Valsami-Jones, and J. R. Lead. Overview of environmental nanoscience, in E Valsami-Jones and JR Lead eds., *Nanoscience and the Environment: Elsevier, Frontiers of Nanoscience*. 2014
3. **Baalousha M**, Ju-Nam Y and Lead J R. Natural colloids and engineered nanoparticles. In Frimmel F. *Treatise on Water Science, Volume III, Aquatic Chemistry and Microbiology*. 2011.
4. **Baalousha M**, Lead J R, Von der Kammer, F and Hofmann, Th. Natural colloids and nanoparticles in aquatic and terrestrial environments. In Lead, J.R, *Environmental and human health effects of nanoparticles*. Blackwell publisher, 2009.
5. **Baalousha M** and Lead J R. Introduction into environmental and human health nanoparticles. In Lead, J.R, *Environmental and human health effects of nanoparticles*. Blackwell publisher, 2009.

Patents

Matta F, Powell B, **Baalousha M**, Serkiz S, Flora J R V, Caicedo J, Ziehl P, Cuéllar-Azcárate M C, Wylie E M, Iffat S, Mejia Y, Sikder M, Xie Y (2019), "Nano-amended cement composites for nuclear waste storage", Invention Disclosure CURF Tech ID#2019-029, University of South Carolina, Columbia, SC.

Edited special issues

Guest editor. Themed issue on Modeling in Environmental Nanotechnology in *Environmental Science: Nano*. 2015

Keynote and Invited presentations

1. **Baalousha M**. Analysis of natural and engineered nanomaterials in environmental systems by AF4-ICP-MS. 20th International Symposium on Field- and Flow-Based Separations. February 2020, Vienna, Austria (Oral presentation).
2. **Baalousha M**. Analysis of engineered nanomaterials in environmental systems. 14th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. September 2019, Vienna, Austria (Oral presentation).
3. **Baalousha M**, Loosli F, Yi Z. Widespread occurrence of titanium dioxide engineered nanoparticles in the environment. American Chemical Society. Boston, MA, USA. August. 2018.

4. **Baalousha M**, Loosli E, Yi Z, and Yang J. Detection and quantification of engineered nanomaterials in surface waters in South Carolina. International Conference on Heavy Metals in the Environment. Athens, GA, USA. July 2018
5. **Baalousha M**. Quantification and characterization of engineered nanomaterials in surface waters. University at Buffalo, NY, USA. November 2017
6. **Baalousha M**. Fate and behaviour of engineered nanomaterials in the environment. School of Freshwater Sciences. University of Wisconsin-Milwaukee. Milwaukee, WI, USA. Fall 2016
7. **Baalousha M**. Development and application of fully quantitative sampling approach for engineered nanomaterial analysis by microscopy techniques. International Workshop, Engineered Nanoparticles in Environmental Systems: Fate, Transport, Effects and Analytics. Landau in der Pfalz, Germany. October, 2016 (**Keynote speaker**)
8. **Baalousha M**. Behavior of silver nanoparticles in marine environment and toxicity to estuarine copepod, *Amphiascus tenuiremis*. Southeaster Society of Toxicology, GA, USA. October, 2016 (**Keynote speaker**)
9. **Baalousha M**. Effect of nanomaterial and media physicochemical properties on nanomaterial aggregation kinetics. 10th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. Golden, CO, August, 2016. (**Keynote speaker**)
10. **Baalousha M**. Environmental characterization, fate, and behavior of engineered nanomaterials at environmentally relevant concentrations. Department of Civil and Environmental Engineering. University of South Carolina. April, 2016.
11. **Baalousha M**. Does concentration matter? Centre for the Environmental Implications of Nano Technology. Duke University. Durham, NC. December, 2015.
12. **Baalousha M**. The concentration-dependent behaviour of engineered nanomaterials. Virginia Tech. Blacksburg, VA. USA. December, 2015.
13. **Baalousha M**. Characterization of nanomaterial properties and environmental behaviour: a multi method approach. East China Normal University. November, 2015.
14. **Baalousha M**. Fate, behaviour and transport of engineered nanomaterials in aquatic systems. Beijing Conference and Exhibition on Instrumental Analysis (BCEIA). Beijing, China. October, 2015.
15. **Baalousha M**. Environmental Fate and Behaviour of NMs. What does it mean for Nano(eco)toxicology? Centre for Environmental Nanoscience and Risk. University of South Carolina. March, 2014.
16. **Baalousha M**. Environmental Nanoscience and Risk. King Abdullah University of Science and Technology, Saudi Arabia, November, 2013.
17. **Baalousha M**. Nanoparticle properties and behaviour: fundamental consideration in nanotoxicology. Rimouski University, University of Quebec at Rimouski, Quebec, Canada, September, 2013
18. **Baalousha M**. Characterization and behaviour of nanomaterials in ecotoxicological media: impact on nanomaterial toxicity. Technical University of Denmark, Denmark. September, 2013
19. **Baalousha M**. Comparison of nanomaterial sizes measured by different analytical tools. CPD training course. University of Leeds, UK. September, 2012.
20. **Baalousha M**. Rationalising nanoparticle sizes measured by AFM, FIFFF and DLS: sample preparation, polydispersity and particle structure. Goldschmidt, June, 2012. Montreal, Canada.
21. **Baalousha M**. QNTR modelling relevant to species in the natural environment. COST explanatory workshop on quantitative nanostructure activity relationships (QNTR). April, 2011. Maastricht. Netherlands.
22. **Baalousha M**. Characterization of nanoparticles in complex media. CPD training course. University of Birmingham, UK. September, 2010.

23. **Baalousha M** and Lead J R. Quantifying the structure of natural aquatic colloids (<5 nm) by Flow-Field Flow Fractionation and Atomic Force Microscopy. *Chemodynamics*, October, 2008, Monte Verita, Switzerland.
24. **Baalousha M**. Characterization of natural colloidal particles by field flow fractionation coupled to ICPMS and TEM. University of Geneva. November 2005.

Conference presentations (student and postdoctoral fellow presentation underlined)

25. Iffat S, Matta F, Gaillard J, Levingston M, Sikder M, Baalousha M, and Tinkey S. Feasibility study of partially-unzipped carbon nanotube-amended cement paste. 2nd International Conference on Nanotechnology Cement and Concrete. May, 2020. Irvine, CA, USA.
26. Yasser A, Wang J, and Baalousha M. Toxicological effects induced by free-ionic silver and engineered silver nanoparticles toward the juvenile Clams (*Mercenaria Mercenaria*). Annual Carolina Society of Environmental Toxicology and Chemistry (CSETAC). May, 2020. Boone, NC, USA.
27. Iffat S, Matta F, Gaillard J, Levingston M, Sikder M, **Baalousha M**, and Tinkey S. Feasibility study of partially unzipped carbon nanotube-amended cement paste. 2nd International Conference on Nanotechnology Cement and Concrete. May, 2020. Irvine, CA, USA.
28. Frédéric Loosli, Zebang Yi, Jingjing Wang, and **Baalousha M**. Dispersion of natural nanomaterials in surface waters for better characterization of their physicochemical properties by AF4-ICP-MS-TEM. 14th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. September 2009, Vienna, Austria (Poster).
29. Sider M, Chandler G T, Wang J, and **Baalousha M**. Size-dependent bioaccumulation of platinum nanoparticles in estuarine amphipod, *Leptoceros plumulosus*, using single particle ICP-MS. 20th International Symposium on Pollutant Responses in Marine Organisms. May, 2019. Charleston, SC, USA.
30. Iffat S, Matta F, Sikder M, **Baalousha M**, Gaillard J, Levington M, Tinkey S. 2nd International Conference on Nanotechnology of Cement and Concrete (2NCC20). May 23-25 2019, Irvine, CA.
31. **Baalousha M**. Environmental exposure to titanium dioxide engineered nanomaterials. American Chemical Society National Meeting & Expo. Orlando, FL, USA. April 2019. (Oral)
32. **Baalousha M**. Monitoring titanium dioxide engineered nanoparticles in environmental systems. American Chemical Society National Meeting & Expo. Orlando, FL, USA. April 2019. (Poster)
33. Wang J, Loosli F, Afrooz N, Mohanty S K, and **Baalousha M**. Quantification of TiO₂ engineered nanoparticles in biosoils. American Chemical Society National Meeting & Expo. Orlando, FL, USA. April 2019. (Poster)
34. Sikder M, G T Chandler, and **Baalousha M**. Size-dependent bioaccumulation of platinum nanoparticles in the estuarine amphipod, *Leptocheirus Plumulosus* using single particle-inductively coupled plasma-mass spectrometer. Pollutant Responses in Marine Organisms (PRIMO20). Charleston, SC, USA. May. 2019. (Oral)
35. **Baalousha M**. Engineered nanomaterials in surface waters impacted by sewage spills in Columbia, South Carolina. SC Water Resources Conference. Columbia, SC, USA. October. 2018. (Oral)
36. **Baalousha M**, Loosli F, Wang J. Detection and quantification of engineered nanoparticles in surface waters impacted by sewage spills in Columbia, South Carolina. QUEEN Workshop: Quantifying Exposure to Engineered Nanomaterials (QEEN) from Manufactured Products. Arlington, VA, USA. October. 2018. (poster)
37. **Baalousha M**, Loosli F, Yi Z, Wang J. Environmental concentrations of engineered nanoparticles in surface waters impacted by sewage spills in Columbia, South Carolina. International Conference on the Environmental Effects of Nanoparticles and Nanomaterials (ICEENN). Durham, NC, USA. September 2018. (Oral)

38. Borovinskaya O, Flamigni L, **Baalousha M**, Meier F. Extending dimensions of multi-element single particle analysis by ICP-time-of-flight MS. International Conference on the Environmental Effects of Nanoparticles and Nanomaterials (ICEENN). Durham, NC, USA. September 2018. (Oral)
39. Borovinskaya O, Flamigni L, Meier F and **Baalousha M**. Synergy of multi-element single particle ICP-Tofms and field-flow fractionation for analysis of complex samples. Goldschmidt. Boston, MS, USA. August 2018. (Oral)
40. Sikder M, Barasch D, Croteau M-N, Poulin B, **Baalousha M**. Effect of size and natural organic material on the uptake of platinum nanoparticles in freshwater snail, *Lymnaea stagnalis*. International Conference on Heavy Metals in the Environment. Athens, GA, USA. July 2018. (Oral)
41. **Baalousha M**, Loosli F, Yi Z. Detection and quantification of engineered nanomaterials in surface waters in South Carolina. Annual Carolina Society of Environmental Toxicology and Chemistry. Durham, NC, USA. April. 2018. (Oral)
42. Afshinnia K, and **Baalousha M**. Impact of natural organic ligands on the colloidal stability of silver nanoparticles. South Carolina Environmental Conference, American Chemical Society National Meeting & Expo. New Orleans, LA, March 2018. (Oral)
43. Afshinnia K, and **Baalousha M**. Impact of natural organic ligands on the colloidal stability of silver nanoparticles. South Carolina Environmental Conference, American Water Work Association, Myrtle Beach, SC, 2018. (Poster)
44. **Baalousha M**. Environmental concentrations and Interactions of engineered nanoparticles. Environmental Molecular Science Laboratory. Pacific Northwest National Laboratory. March, WA, USA. 2018.
45. **Baalousha M**. Characterization of Nanomaterial Natural Organic Matter-Corona (NOM-corona) by Ultrahigh Resolution Fourier Transform-Ion Cyclotron-Mass spectroscopy. 12th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. Birmingham, UK, September, 2017.
46. Afshinnia K, and **Baalousha M**. Impact of Organic Ligands on the Colloidal Stability and Dissolution Behavior of Silver Nanoparticles. 1st Annual Discover USC Showcase, April 21, 2017, Columbia, SC (Poster)
47. Yi Z, and **Baalousha M**. Using the H- and O- isotopic data and Br/Cl ratio as a tracer to identify the origin of salinity in shallow groundwater in Guangzhou region, China. 1st Annual Discover USC Showcase, April 21, 2017, Columbia, SC (Poster)
48. Sikder M, Stewart E, Losavio M, Chandler G T, **Baalousha M**. Size Dependent Toxicity of Polyvinylpyrrolidone Coated Platinum Nanoparticles. 1st Annual Discover USC Showcase, April 21, 2017, Columbia, SC (Poster)
49. Matta F, Cuéllar-Azcárate M, Wylie E, Mejia Y, Iffat S, Sikder M, Yuyu Xie, Brian Powell, Steven Serkiz, Juan Caicedo, **Mohammed Baalousha**, Joseph Flora, Linkel Boateng, Paul Ziehl. Nano-amended cement waste forms for nuclear waste storage. Sixth International Symposium on Nanotechnology in Construction (NICOM6). December 2-5, 2017, Hong Kong, China.
50. Flora J R V, **Baalousha M**, Boateng L, Caicedo J M, Cuéllar-Azcárate M C, Matta F, Mejia Y, Powell B, Serkiz S, Sikder M, Wylie E M, Ziehl P, Zohhadi N. Cement composites with graphitic nano-amendments for low-level nuclear waste storage, 5th Sustainable Nanotechnology Organization Conference, November 10-12, 2016, Orlando, FL. (oral presentation)
51. Chandler G T, **Baalousha M**, Sikder M, and Lead J R. Mediation of metal toxicity to meiobenthic copepods by Polyvinylpyrrolidone coating of silver nanoparticles. SETAC North America 37th Annual Meeting. November, 2016. Orlando, FL, USA. (Poster)
52. **Baalousha M**, Boateng L, Caicedo J, Cuéllar-Azcárate M, Flora J, Iffat S, Matta F, Mejia Y, Powell B, Serkiz S, Sikder S, Wylie E, Ziehl P. Cement composites with graphitic nano-amendments for low-level

- nuclear waste storage. Fifth Sustainable Nanotechnology Organizational Conference. November, 2016. Orlando, FL, USA. (oral presentation)
53. Matta F, **Baalousha M**, Boateng L, Caicedo JM, Cuéllar-Azcárate MC, Flora JRV, Mejia Y, Powell B, Serkiz S, Sikder M, Wylie EM, Ziehl P, Zohhadi N (2016), "Nano-Amended Cement Composites for Nuclear Waste Storage", *Nanotechnology for Improved Concrete Performance (ACI Committee 241), ACI Fall 2016 Convention*, October. 2016, Philadelphia, PA. (oral presentation)
 54. Afshinnia K, **Baalousha M**. Effect of media physicochemical properties on the aggregation kinetics of citrate-coated silver nanomaterials. The 68th South-eastern Regional Meeting of the American Chemical Society. Columbia, SC, USA, October. 2016. (oral presentation)
 55. **Baalousha M**. Characterization of physicochemical and toxicological properties of ceria nanoparticles. 252 American Chemical Society National Meeting and Exposition. August, 2016. Philadelphia, PA, USA. (oral presentation)
 56. Afshinnia K, Gibson I, Merrifield R, **Baalousha M**. Concentration-dependent aggregation of citrate-coated silver nanoparticles: role of cystine. 10th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. Golden, CO, August, 2016 (Poster)
 57. Sikder M, Graham A, Merrifield R, Lead J R, Chandler G T, **Baalousha M**. Concentration-dependent dissolution of PVP-coated silver nanoparticles in seawater. 10th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. Golden, CO, August, 2016 (Poster)
 58. Afshinnia K, Gibson I, Merrifield E C and **Baalousha M**. Concentration-dependent aggregation of citrate coated Ag NPs induced by cystine. 251 American Chemical Society National Meeting and Exposition. March, 2016. San Diego, Ca, USA.
 59. **Baalousha M**. Detection and quantification of nanomaterial number concentration in environmentally relevant media by atomic force and electron microscopy. 251 American Chemical Society National Meeting and Exposition. March, 2016. San Diego, Ca, USA.
 60. **Baalousha M**. Urban nanomaterials. South Carolina Environmental Conference. March 2016. Myrtle Beach, SC, USA.
 61. **Baalousha M**. Beyond particle size: coupling field flow fractionation to microscopy techniques. The 17th International Symposium on Field- and Flow- based Separations. October 2014 Salt Lake City. UT. USA
 62. **Baalousha M**. Aggregation and sulfidation of AgNPs. The 9th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. September, 2014. Columbia, SC. USA
 63. **Baalousha M**. Dimensional Nanometrology. Nanotech Dubai 2013, October, 2013. Dubai. United Arab Emirates.
 64. **Baalousha M** and Lead J R. Rationalising nanoparticle sizes measured by different techniques: sample preparation, polydispersity and particle structure. 7th ICEENN, September, 2012. Banff. Canada.
 65. **Baalousha M**. Rationalising nanoparticle sizes measured by AFM, FIFFF and DLS: sample preparation, polydispersity and particle structure. Goldschmidt, June, 2012. Montreal, Canada.
 66. **Baalousha M**. QNTR modeling relevant to species in the natural environment. COST explanatory workshop on quantitative nanostructure activity relationships (QNTR). April, 2011. Maastricht. Netherlands.
 67. **Baalousha M**, Ju-Nam Y, Cole P and Lead J R. Characterization of nanoparticles: size, shape, morphology, oxidation state and crystallinity: a multimethod approach. Goldschmidt, August, 2010, Knoxville, Tennessee, USA (Oral presentation).
 68. **Baalousha M**, Ju-Nam Y and Lead J R. Characterization of nanoparticles: size, shape, morphology, oxidation state and crystallinity. Nanomaterials in the environment, September, 2009, Vienna, Austria (Oral presentation).

69. **Baalousha M** and Lead J R. Quantifying the structure of natural aquatic colloids (<5 nm) by flow-field flow fractionation and atomic force microscopy. Chemodynamics, October, 2008, Monte Verita, Switzerland (oral presentation and poster).
70. **Baalousha M** and Lead J R. Environmental behaviour of engineered nanoparticles. nanoECO, March, 2008, Monte Verita, Switzerland (poster).
71. **Baalousha M** and Lead J R. Aggregation, disaggregation and surface properties of iron oxide nanoparticles; influence of pH and natural organic matter. SETAC UK, September, 2007, London, United Kingdom (oral presentation).
72. **Baalousha M** and Lead J R. Fractionation and structural analysis of natural aquatic colloids (< 25 nm) by flow field flow fractionation and atomic force microscopy. SETAC North America 27 annual meeting, November, 2006, Montreal, Canada (poster).
73. **Baalousha M**, Manuciulea A L and Lead J R. Interaction of engineered nanoparticles (iron hydroxide) with humic substances. Environmental effects of nanoparticles and nanomaterials. SETAC UK, September 2006, London, United Kingdom (oral presentation).
74. Lead J R, Manciuulea A L and **Baalousha M**. Interaction of natural and manufactured nanoparticles in aquatic systems. 2nd international conference on aquatic colloids and nanoparticles. September 2006, Plymouth, United Kingdom (oral presentation).
75. **Baalousha M** and Lead J R. Nanoparticles structure in the natural aquatic environment. September 2006, 2nd international conference on aquatic colloids and nanoparticles, September 2006, Plymouth, United Kingdom (oral presentation).
76. **Baalousha M** and Lead J R. Fractionation and characterization of natural and engineered nanoparticles by FIFFF, ICPMS and TEM. May, 2006. Haag, Netherlands (poster).
77. Manuciulea A L, **Baalousha M** and Lead J R. Interaction time and pH dependent study on gold nanoparticles and carbon nanotubes: the role of natural nanoparticles. Informa Learning conference, courses and e-learning. April 2006. Boston, MA, USA (Poster).
78. **Baalousha M**, Baborowski M, Hoffmeister Ch, Motelica M and Le Coustumer P. Determination of size and chemical composition of colloids and trace element speciation in the Loire river and its tributaries using FFF-UV-FLD-ICP/MS and TEM, 8th ICOBTE, April 2005, Adelaide, Australia, (oral presentation).
79. **Baalousha M**, Motelica M and Le Coustumer P. Colloids and SPM size based speciation using FIFFF multi detection system (ICPMS-STEM), 12th international symposium on Field Flow Fractionation. August, 2005, Brno Czech republic (oral presentation).
80. **Baalousha M**, v.d. Kammer F, Motelica M and Le Coustumer P. Characterization of river colloids by FFF-MALLS-TEM, 9th FECS Conference on Chemistry and Environment, August, 2004, Bordeaux, France, (poster).
81. **Baalousha M**, Guigues N, Motelica M, and Le Coustumer P. Fractionation and characterization of aquatic colloids in the nano-metric scale, 5th Conference of the French group of the International Humic Substances Society, Mars 2003, Clermont-Ferrand, France (poster).
82. **Baalousha M**, v.d. Kammer F, Motelica M and Le Coustumer P. Three dimensional description of colloids and particles FFF-MALLS-TEM, 17 ECIS Conference, September 2003, Florence, Italie, (Poster).

Taught Courses

ENHS 321: Environmental Pollution and Health

ENHS 740: Environmental Nanoscience

ENHS 793: Environmental Nanoscience Lab