

CURRICULUM VITAE

Bryan D. James, Ph.D. (he/him)

Postdoctoral Investigator/Scholar

Marine Chemistry & Geochemistry/Biology

Woods Hole Oceanographic Institution

Woods Hole, MA 02543

Tel.: (352) 397-1665

E-mail: bjames@whoi.edu

ORCID: [0000-0002-6104-8310](https://orcid.org/0000-0002-6104-8310)

Twitter: [@bdbjames](https://twitter.com/bdbjames)

Website: bryandjames.com

EDUCATION

Ph.D. University of Florida Aug. 2017 - May 2021

Department of Materials Science and Engineering

Advisor: Assoc. Prof. Josephine B. Allen

Dissertation: *Engineering Complex Microenvironments & Their Applications to Sex-Specific Mechanobiology and Biomaterial Development*

B.A.Sc. University of Toronto Sept. 2012 - May 2017

Department of Materials Science and Engineering

Advisor: Prof. Eli D. Sone

Thesis: *Design and testing of anti-fouling SLIPS surfaces for prevention of zebra mussel adhesion*

RESEARCH EXPERIENCE

Woods Hole Oceanographic Institution Aug. 2021 – Present

Postdoctoral Investigator/Weston Howland Jr. Postdoctoral Scholar

Co-advisor: Senior Scientist Christopher M. Reddy, Department of Marine Chemistry and Geochemistry

Co-advisor: Senior Scientist Mark E. Hahn, Department of Biology

Projects

1. Characterizing pyroplastics (burnt plastic) from the M/V X-Press Pearl ship fire and plastic spill
2. Identifying chemical markers and forensic signatures of burning plastic
3. Evaluating the *in vivo* ecotoxicity of consumer plastics and plastic degradation products
4. Testing the marine microbial degradation of consumer and next-generation plastics to inform eco-design

University of Florida Aug. 2017 – May 2021

National Institutes of Health National Research Service Award (F31) Fellow

Advisor: Assoc. Prof. Josephine B. Allen, Department of Materials Science and Engineering

Projects

1. Resolving the sex-specific mechanobiology of vascular cells
2. Developing nucleic acid aptamer-collagen self-assemblies for hard and soft tissue engineering
3. Evaluating the biocompatibility of palm fibers as plant-derived scaffolds
4. Engineering dynamic *in vitro* bioreactor systems

University of Toronto Sept. 2016 – July. 2017

Post-graduate Research Assistant, Undergraduate Research Assistant

Advisor: Prof. Eli D. Sone, Institute of Biomedical Engineering, Department of Materials Science and Engineering

Projects

1. Evaluating infused silicone to prevent microbial and freshwater mussel fouling
2. Characterizing the bioadhesion of freshwater mussels

Air Liquide Laboratories, Research & Development, Tsukuba, Japan June 2015 – May 2016

Process Engineer

Advisor: Scientific Director Christian Dussarrat, Ph.D.

Projects

1. Measuring the physical and chemical properties of perfluorinated liquids

2. Designing systems to measure vapor pressure at reduced temperatures

Woods Hole Oceanographic Institution

Summers 2011-2014

Undergraduate Lab Manager, Guest Student, Volunteer

Advisor: Senior Scientist Christopher M. Reddy, Department of Marine Chemistry and Geochemistry
Projects

1. Determining the weathering of petroleum spilled during the *Deepwater Horizon* oil spill disaster

REFEREED PUBLICATIONS (* equal contribution) (^α mentee) ([Google Scholar](#))

Published

1. **James, B. D.***, Ludtka, C.*, Allen, J. B.* Sex as a Biological Variable in Tissue Engineering and Regenerative Medicine. *Annual Reviews in Biomedical Engineering*. (Accepted).
2. Landrigan, P. J., Raps, H., Cropper, M., Brunner, M., Canonizado, E. M., Charles, D., Chiles, T., Donohue, M. J., Enck, J., Fenichel, P., Fleming, L. E., Ferrier-Pages, C., Fordham, R., Gozt, A., Griffin, C., Hahn, M. E., Haryanto, Budi, Hixson, R., Ianelli, H., **James, B. D.**, Kumar, P., Laborde, A., Lavender-Law, K., Martin, K., Mu, J., Mulders, Y., Mustapha, A., Niu, J., Pahl, S., Park, Y., Pitt, J. A., Ruchirawat, M., Seewoo, B. J., Spring, M., Stegeman, J. J., Suk, W., Symeonides, C., Takada, H., Thompson, R., Vicini, A., Wang, Z., Whitman, E., Wirth, D., Wolff, M., Yousuf, A., Dunlop, S. The Minderoo Monaco Commission on Plastics and Human Health. *Annals of Global Health*. 89(1), 1-215 (2023).
3. **James, B. D.**, de Vos, A., Aluwihare, L., Youngs, S., Ward, C. P., Nelson, R. K., Michel, A. P. M., Hahn, M. E., Reddy, C. M. Divergent Forms of Pyroplastic: Lessons Learned from the M/V X-Press Pearl Ship Fire. *ACS Environmental Au*. **2**, 5, 467-479 (2022).
 - **Cover story of C&EN January 23, 2023**
 - **ACS Environmental Au Best Paper Award, 2021-2022**
4. de Vos, A., Aluwihare, L., DiBenedetto, M. H., Ward, C. P., Youngs, S., Michel, A. P. M., Colson, B. C., Mazzotta, M. G., Walsh, A. N., Nelson, R. K., Reddy, C. M., **James, B. D.** The M/V X-Press Pearl nurdle spill: Contamination of burnt plastic and unburnt nurdles along Sri Lanka's beaches. *ACS Environmental Au*. **2**, 2, 128-135 (2022).
 - **Featured by Advanced Science News**
5. **James, B. D.***, Kimmins, K. M.*, Nguyen, M.^α, Lausch, A. J., Sone, E. D. Attachment of zebra and quagga mussel adhesive plaques to diverse substrates. *Scientific Reports*. **11**, 23998 (2021).
6. **James, B. D.**, Allen, J. B. Sex-specific response to combinations of shear stress and substrate stiffness by endothelial cells *in vitro*. *Advanced Healthcare Materials*. **10**, 18, 2100735 (2021).
7. Roy, T., **James, B. D.**, Allen, J. B. Anti-VEGF-R2 Aptamer and RGD Peptide Synergize in a Bifunctional Hydrogel for Enhanced Angiogenic Potential. *Macromolecular Bioscience*. **21**, 2, 2000337 (2021).
8. **James, B. D.**, Allen, J. B. Self-assembled VEGF-R2 targeting DNA aptamer-collagen fibers stimulate an angiogenic-like endothelial cell phenotype. *Materials Science & Engineering: C*. **120**, 111683 (2021).
9. **James, B. D.**, Guerin, P.^α, Allen, J. B. Let's Talk About Sex– Biological Sex Is Underreported in Biomaterial Studies. *Advanced Healthcare Materials*. **10**, 1, 2001034 (2021).
 - **Featured by Advanced Science News**
10. **James, B. D.**, Guerin, P.^α, Iverson, Z.^α, Allen, J. B. Mineralized DNA-collagen complex-based biomaterials for bone tissue engineering. *International Journal of Biological Macromolecules*. **161**, 1127-1139 (2020).
11. **James, B. D.**, Montoya, N.^α, Allen, J. B. MechanoBioTester: A Decoupled Multi-Stimulus Cell Culture Device for Studying Complex Microenvironments In-Vitro. *ACS Biomaterials Science & Engineering*. **6**, 6, 3673-3689 (2020).
12. **James, B. D.**, Saenz, S.^α, van Gent, A.^α, J. B. Allen. Oligomer Length Defines the Self-Assembly of Single-Stranded DNA–Collagen Complex Fibers. *ACS Biomaterials Science & Engineering*. **6**, 1, 213-218 (2020).
13. **James, B. D.**, Ruddick, W. N., Vasisth, S. E., Dulany, K., Sulekar, S., Porras, A., Marañon, A., Nino, J. C., Allen, J. B. Palm Readings: *Manicaria saccifera* palm fibers are bioactive textiles with low immunogenicity. *Materials Science & Engineering: C*. **108**, 110484 (2019).

14. Kimmins, K., **James, B. D.**, Nguyen, M.^a, Hatton, B. D., Sone, E. D. Oil-infused polydimethylsiloxane prevents zebra mussel attachment. *ACS Applied Bio Materials*. **2**, 12, 5841-5847 (2019).
15. **James, B. D.**^{*}, Chen, M.^{*}, Savguira, Y.^{*}, MacInnis, J.^{*}, Thorpe, S. J. Power-to-Gas Design Project: Amphibious Yacht and Fueling Station. *International Journal of Hydrogen Energy*. **44**, 59, 31646-31669 (2019).
16. **James, B. D.**, Allen, J. B. Vascular Endothelial Cell Behavior in Complex Mechanical Microenvironments. *ACS Biomaterial Science & Engineering*. **4**, 11, 3818-3842 (2018).

Submitted/Revisions

1. **James, B. D.**, Karchner, S. I., Walsh, A. N., Aluru, N., Franks, D. G., Sullivan, K. R., Reddy, C. M., Ward, C. P., Hahn, M. E. Formulation controls the potential neuromuscular toxicity of polyethylene photoproducts in developing zebrafish. (*Environmental Science & Technology*).

In Preparation

1. **James, B. D.**, Reddy, C. M., Hahn, M. E., Nelson, R. K., de Vos, A., Aluwihare, L., Wade, T. L., Knap, A. H., Bera, G. Fire aboard the M/V X-Press Pearl led to complex distributions of PAHs in plastic pellets (nurdles) and pyroplastic.
2. Zhang, B., Lichlyter, D., **James, B. D.**, Poon, J., Major, S., Allen, J. B., Webb, A. Development of Carbon Monoxide Releasing Poly(diols-citrate) Biomaterials.

BOOK CHAPTERS

1. Sewwandi, M., Perera, K. I., Reddy, C. M., **James, B. D.**, Amarathunga, A. A. D., Wijerathna, I. H. K., Vithanage, M. Plastics, nurdles, and pyrogenic microplastics in the coastal marine environments: Implications of the X-Press Pearl maritime disaster. *Maritime Accidents and Environmental Pollution: the X-Press Pearl Disaster: Causes, Consequences, and Lessons Learned*. Edited by M. Vithanage. CRC Press. (Accepted).
2. **James, B. D.**^{*}, Ursino, H.^{*}, Ludtka, C.^{*}, Allen, J. B. Bone Tissue Engineering. *Tissue Engineering Using Ceramics and Polymers, 3rd Edition*. Edited by A. Boccaccini, P.X. Ma, L. Liverani. Woodhead Publishing. (2021). ISBN [9780128205082](#).
3. **James, B. D.**, Allen, J. B. Engineering Vascular Grafts with Multiphase Structures. *Vascular Tissue Engineering*. *Methods in Molecular Biology*. Edited by F. Zhao, K. W. Leong. Springer Nature. (2021). ISBN [978-1-0716-1707-6](#).

NON-REFEREED PUBLICATIONS

1. **James, B. D.**, Hahn, M. E., Reddy, C. M. (2022) Biomaterials Science Can Offer a Valuable Second Opinion on Nature's Plastic Malady. *Environmental Science & Technology*. **56**, 3, 1475-1477.
2. **James, B.D.** (2021). Choosing the right straw: when you get to think like a materials engineer. *Gainesville Sun*, posted on July 8.

AWARDS AND HONORS

Early Career

<u>Distinguished Young Scholars Seminar (DYSS) – Uni. of Washington</u>	2022
<u>ACS PMSE Future Faculty Scholar – ACS PMSE Division</u>	2022
<u>Early Career Editorial Advisory Board – ACS Biomaterials Science & Engineering</u>	2022-2025
<u>NextProf Nexus Workshop Alumni – Uni. of Michigan, Georgia Tech, UC Berkeley</u>	2020
<u>New England Future Faculty Workshop Alumni – New England Future Faculty Workshop</u>	2020

Academic

<u>Best Paper Award, 2021-2022 – ACS Environmental Au</u>	2023
<u>Attributes of a Gator Engineer – Leadership – Uni. of Florida</u>	2021
<u>Weston Howland Jr. Postdoctoral Scholar – WHOI</u>	2020
<u>Gridley McKim-Smith Women's Health Fellowship Award – Foundation for Women's Wellness</u>	2020
<u>Ruth L. Kirschstein Predoctoral Individual NRSA – NIH NHLBI</u>	2019

Iva and Norman Tuckett Institute for Computational Engineering Fellowship – Uni. of Florida	2017
Dow Chemical Graduate Fellowship – Uni. of Florida	2017
Graduate School Preeminence Award – Uni. of Florida	2017
U.S. Steel Canada Undergraduate Scholarship – Uni. of Toronto	2013-2015
Dean's List – Uni. of Toronto	2012-2017
Competition	
1 st Place, <u>Biomaterials Education Challenge</u> – Society For Biomaterials (SFB)	2019
1 st Place, <u>Hydrogen Student Design Contest</u> – Hydrogen Education Foundation	2018
Organization	
<u>Biomaterials Day Grant</u> – SFB	2020
<u>Local Section Science Café Mini-Grant</u> – ACS Florida Chapter	2018
Conference	
Student Abstract Award – SFB Tissue Engineering SIG	2020
SFB Chapter Travel Award – Uni. of Florida SFB Student Chapter	2018, 2019
GRANTS	
NIH NHLBI F31 Predoctoral Fellowship: 1 F31 HL147445-01 <u>Vascular cell sexual dimorphism in complex mechanical microenvironments</u> (awarded, \$117,615 over 3 years)	2019-2021
PATENT APPLICATIONS	
1. United States Patent application 17/423,303. Allen, J. B. and James, B. D. <u>Bioreactor chamber and systems thereof</u> . (Published July 28, 2022).	
2. United States Patent application 17/36,715. Allen, J. B. and James, B. D. <u>Aptamer assemblies for protein crosslinking</u> . (Published October 20, 2022).	
3. Patent pending. PCT/US2021/049833. Allen, J. B., James, B. D. , Andrew, J. S., Ferson, N. D. <u>DNA-Collagen Complexes and Magnetoelectric Janus Materials for Biomedical Applications</u> . (Filed September 10, 2021).	
4. Patent pending. PCT/US2021/072653. Allen, J. B., James, B. D. , <u>Aptamer assemblies for protein crosslinking</u> . (Filed December 1, 2021).	
SELECT LEADERSHIP, OUTREACH, AND TEACHING ACTIVITIES	
Leadership	
Secretary/Treasurer, SFB National Student Chapter	May 2021 – May 2022
Secretary/Treasurer - Elect, SFB National Student Chapter	Oct. 2020 – May 2021
President, Uni. of Florida SFB Student Chapter	Apr. 2019 – May 2021
Outreach Director, Uni. of Florida SFB Student Chapter	Apr. 2018 – Apr. 2019
4 th Year Class Representative, Uni. of Toronto Engineering Society	Sept. 2016 – Apr. 2017
Chair, MSE Discipline Club	Sept. 2016 – Apr. 2017
Vice-chair, MSE Discipline Club	Sept. 2014 – Apr. 2015
Communications Director, MSE Discipline Club	Sept. 2013 – Apr. 2014
Outreach	
Speaker, WEBiO, Uni. of Florida	Oct. 2022
Speaker, on Marine Plastic Pollution, Town of Hingham, MA	Oct. 2022
Speaker, Microplastics Survey, Ocean Science Journalism Fellowship, WHOI	May 2022
Speaker, Theater and Microplastics with the Boston Conservatory and WHOI	March 2022
Middle School Science Advisor, Ms. Dawna Garvin's Class, Pleasanton, TX	Mar. 2022 – Present
Speaker, Science Untapped, MIT Office of Graduate Education	Oct. 2021

Co-Organizer, Career Opportunities in Biomaterials for HBCU Students, SFB	Oct. 2021
Co-Organizer/Speaker, Biomaterials Day Virtual Workshop, SFB	Sept. 2021
Co-Organizer, "Hearing from Engineers – UF SFB Speaks with Industry" Webinar Series	July 2020 – Aug. 2020
Co-Organizer, Uni. of Florida 10 th Annual Biomaterials Day Symposium	Mar. 2021
Co-Organizer, Uni. of Florida 8 th Annual Biomaterials Day Symposium	Mar. 2019
Guest Instructor, Biomaterials Lesson, PK Yonge Developmental Research School	Mar. 2019
Co-Organizer, ACS Science Café	July 2018 – Nov. 2018

Teaching

Invited Speaker, EMA 3000L, Sophomore Materials Lab, Uni. of Florida (Virtual).	Winter 2022
<ul style="list-style-type: none"> Instructed on plastics and design for environment 	
Invited Speaker, IDH3931, FUNdamentals of Research Integrity, Uni. of Florida	Fall 2020
<ul style="list-style-type: none"> Spoke to students on Mentor/Mentee dynamics 	
Guest Instructor, EMA4061: Biomaterials: Structure and Properties, Uni. of Florida	Fall 2019
<ul style="list-style-type: none"> Senior level undergraduate course Covered topics related to blood-material and host-material interactions 	
Guest Instructor, EMA3010: Intro to MSE, Uni. of Florida	Summer 2019
<ul style="list-style-type: none"> Introductory undergraduate course Covered topics related to mechanical properties and phase transformations 	
Co-Instructor and Course Co-Creator, IDH2931: Honors Seminar, Uni. of Florida	Summer 2019
<ul style="list-style-type: none"> Designed an 8-week seminar on biomaterials for the UF Summer Science Training Program Instructed to a class of high school students 	
Teaching Assistant, EMA3011: Fundamental Principles of Materials, Uni. of Florida	Winter 2019
<ul style="list-style-type: none"> Sophomore level undergraduate course Covered topics related to quantum phenomena and organic chemistry 	
Teaching Assistant, EMA4061L: Biomaterials Laboratory, Uni. of Florida	Fall 2018
<ul style="list-style-type: none"> Senior level undergraduate laboratory course Guided students in biomaterials synthesis and characterization Taught mammalian cell culture, aseptic technique, and immunofluorescence microscopy 	

MENTORING

Graduate Students

1. Heather Ursino , University of Florida, MSE	Aug. 2019 – May 2021
---	----------------------

Undergraduate Students

1. Gantt Meredith , University of Florida, BME	Oct. 2019 – May 2020
2. Zion Iverson , University of Florida, Biology	Sept. 2019 – Dec. 2019
3. Sophia Saenz , University of Florida, BME	Jan. 2019 – May 2021
4. Paxton Guerin , University of Florida, BME	Jan. 2019 – May 2021
5. Nicolas Montoya , University of Florida, ECE	Sept. 2018 – May 2020
6. Kadeem Samuel , University of Florida, ECE	Sept. 2018 – Nov. 2018
7. Gabriela Alvarez , University of California, Riverside, REU student	June 2018 – Aug. 2018
8. Jeffrey Butler , Morehouse College, REU student	June 2018 – Aug. 2018
9. Chris Cotter , University of Florida, MSE	Sept. 2017 – Apr. 2018
10. Scott Parker , University of Florida, MSE	Sept. 2017 – Apr. 2018
11. Minh-Tam Nguyen , University of Toronto, MSE	Apr. 2017 – July 2017

12. Thomas Rugh , California State Polytechnic University-Pamona, MechE	May 2014 – Sept. 2014
13. Brian Forst , Harvard University, Government	May 2013 – Aug. 2013
14. Mike McNulty , Boston College, Chemistry	May 2013 – Aug. 2013
15. Ben Freiberg , Skidmore College, Environmental Science	May 2013 – Aug. 2013
High School Students	
1. Anastacia van Gent , University of Florida Student Science Training Program	June 2019 – July 2019

PROFESSIONAL RESPONSIBILITIES & SERVICE

Early Career Editorial Advisory Board

ACS Biomaterials Science & Engineering 2022-2025

Committees

WHOI [Committee for Diversity, Equity, and Inclusion](#) 2021-Present

Reviewed for Funding Agencies (# of grants)

Connecticut Sea Grant (1)

New York Sea Grant (1)

Reviewed for Journals (# of articles)

[Journal of Nanobiotechnology](#) (2)

[Bioengineering & Translational Medicine](#) (3)

[Science of the Total Environment](#) (1)

[Talanta](#) (1)

[Frontiers in Marine Science – Marine Pollution](#) (1)

Volunteering

TERMIS-AM Annual Conference & Exhibition, Orlando, FL Dec. 2019

Biomedical Engineering Society Annual Meeting, Philadelphia, PA Oct. 2019

Biomedical Engineering Society Annual Meeting, Atlanta, GA Oct. 2018

Society For Biomaterials Annual Meeting & Exhibition, Atlanta GA Apr. 2018

ORAL PRESENTATIONS (presenter underlined) (^α mentee)

1. James, B. D., *The Many Forms of Plastic Pollution: Lessons Learned from X-Press Pearl Nurdle Spill*. [American Chemical Society Fall Meeting](#). Chicago, IL. Aug. 21-25, 2022. (**Invited**).
2. James, B. D., *Burnt Plastic is a Complex Contaminant: Lessons Learned from X-Press Pearl Ship Fire*. [UMass Dartmouth](#). Dartmouth, MA. Aug. 12, 2022. (**Invited**).
3. James, B. D., *Engineering Complex Microenvironments and Their Applications to Sex-Specific Mechanobiology*. [9th World Congress of Biomechanics](#), Hybrid. Taipei, Taiwan. July 10-14, 2022 (**Invited**).
4. James, B. D., *Plastic Pollution and Its Many Forms: Lessons Learned from the M/V X-Press Pearl Ship Fire*. [UW Distinguished Young Scholars Seminar](#). Seattle, WA. June 29, 2022. (**Invited**).
5. James, B. D., *The M/V X-Press Pearl nurdle spill: Characterizing burnt and unburnt nurdles collected along Sri Lanka's beaches*. [UConn Marine Sciences Seminar](#), Hybrid. Groton, CT. Apr. 8, 2022. (**Invited**).
6. James, B. D., *Engineering Complex Microenvironments and Their Applications to Sex-Specific Mechanobiology and Biomaterial Development*. [WHOI, Biology Seminar](#), Virtual, Jan. 13, 2022.
7. James, B. D., *The M/V X-Press Pearl nurdle spill: Characterizing burnt and unburnt nurdles collected along Sri Lanka's beaches*. [WHOI, Marine Chemistry & Geochemistry Seminar](#), Hybrid. Woods Hole, MA. Oct. 19, 2021.
8. James, B. D., Saenz, S.^α, Guerin, P.^α, Allen, J. B. *Nucleic Acid-Collagen Complexes (NACC): Engineering Tunable Hard and Soft ECM Mimics*. [Society For Biomaterials Annual Meeting and Exposition](#), Virtual. Apr. 20-23, 2021.
9. Saenz, S.^α, James, B. D., Allen, J. B. *Nucleic Acid Elastin Collagen Complex (NAECC) Fibers and Gels Working Towards an ECM Mimic*. [Society For Biomaterials Annual Meeting and Exposition](#), Virtual. Apr. 20-23, 2021.
10. Guerin, P.^α, James, B. D., Allen, J. B. *Nucleic Acid-Collagen Complexes (NACCs) Stabilization via Physiological Ions*. [Society For Biomaterials Annual Meeting and Exposition](#), Virtual. Apr. 20-23, 2021.

11. [James, B. D.](#), Allen, J. B. *DNA aptamer-collagen complex-based biomaterials*. **11th World Biomaterials Congress**, Virtual. Dec. 11-16, 2020.
12. [James, B. D.](#), Montoya, N.^α, Allen, J. B. *The MechanoBioTester: A Decoupled Multi-Stimulus Device for Studying Complex Microenvironments In-Vitro*. **11th World Biomaterials Congress**, Virtual. Dec. 11-16, 2020.
13. [James, B. D.](#), Montoya, N.^α, Allen, J. B. *A Multi-Stimulus Culture Model for Studying Complex Chemo-Mechanical Microenvironments In Vitro*. **Biomedical Engineering Society Annual Meeting**, Virtual. Oct. 14-17, 2020.
14. Lichlyter, D., [James, B. D.](#), [Webb, A.](#) *Cellular Effects of Carbon Monoxide Releasing Poly(diol-citrate) Polymers*. **Society For Biomaterials Annual Meeting and Exposition**, Seattle, WA. April 3-6, 2019.
15. [James, B. D.](#), Zupanska, A., [Allen, J. B.](#) *Microgravity Effects on the Function of Vascular Endothelial Cells*. **American Society for Gravitational and Space Research Meeting**, Bethesda, MD. October 31 – Nov 3, 2018.
16. [James, B. D.](#), Chen, M., [Savguira, Y.](#), [MacInnis, J.](#), Thorpe, S. J. *Amphibious Yacht and Fueling Station*. **U.S. Department of Energy Hydrogen and Fuel Cells Program 2018 Annual Merit Review and Peer Evaluation Meeting**, Washington, D.C. June 13-15, 2018.

POSTER PRESENTATIONS

1. [Young, S.](#), Michel, A. P. M., de Vos, A., DiBenedetto, M. H., [James, B. D.](#), Reddy, C. M. *Chemical Analysis of Nurdles from the M/V X-Press Pearl Fire: A Study of Rapid Degradation, Weathering, and Metal Accumulation*. **Ocean Sciences Meeting**, Virtual, February 24 - March 4, 2022.
2. [James, B. D.](#), Allen, J. B. *VEGF-R2 Targeting DNA Aptamer-Collagen Fibers Stimulate an Angiogenic-Like Endothelial Cell Phenotype*. **Biomedical Engineering Society Annual Meeting**, Virtual. October 14-17, 2020.
3. [James, B. D.](#), [Wiggins, S.](#) *Development of a High School-Level Introduction to Biomaterials Science and Engineering Course*. **Biomedical Engineering Society Annual Meeting**, Virtual. October 14-17, 2020.
4. [James, B. D.](#), Guerin, P.^α, Iverson, Z.^α, Allen, J. B. *Mineralized DNA-Collagen Complex-Based Biomaterials for Bone Tissue Engineering*. **Biomedical Engineering Society Annual Meeting**, Virtual. October 14-17, 2020.
5. [James, B. D.](#), Montoya, N.^α, Ruddick, W., Allen, J. B. *A Decoupled Multi-Stimulus Bioreactor for Studying Complex Chemo-Mechanical Microenvironments In Vitro*. **TERMIS-AM Annual Conference & Exhibition**, Orlando, FL. December 2-5, 2019.
6. [James, B. D.](#), Montoya, N.^α, Ruddick, W., Allen, J. B. *A Decoupled Multi-Stimulus Bioreactor for Studying Complex Chemo-Mechanical Microenvironments In Vitro*. **Biomedical Engineering Society Annual Meeting**, Philadelphia, PA. October 16-19, 2019.
7. [James, B. D.](#), Murbach, J. Freeman, S. T. *Osseous biomaterials: When your bone needs help healing*. **Society For Biomaterials Annual Meeting and Exposition**, Seattle, WA. Apr. 3-6, 2019.
8. [James, B. D.](#), Montoya, N.^α, Ruddick, W., Allen, J. B. *A Decoupled Multi-Stimulus Bioreactor for Studying Complex Chemo-Mechanical Microenvironments In Vitro*. **Society For Biomaterials Annual Meeting and Exposition**, Seattle, WA. Apr. 3-6, 2019.
9. [James, B. D.](#), Allen, J. B. *Spatial command of PDMS optical and mechanical properties by controlled diffusion-reaction processes*. **Biomedical Engineering Society Annual Meeting**, Atlanta, GA, October 17-20, 2018.
10. Lichlyter, D., [James, B. D.](#), [Webb, A.](#) *Carbon monoxide releasing Poly(diol-nicotinamide-citrate) polymer to reduce oxidative stress*. **Biomedical Engineering Society Annual Meeting**, Atlanta, GA, October 17-20, 2018.

11. [James, B. D.](#), [Chen, M.](#), [Savguira, Y.](#), [MacInnis, J.](#), Thorpe, S. J. *Power-to-Gas Design Project: Amphibious Yacht and Fueling Station*. U.S. Department of Energy Hydrogen and Fuel Cells Program 2018 Annual Merit Review and Peer Evaluation Meeting, Washington, D.C., June 13-15, 2018.
 12. [James, B.D.](#), Reddy, C.M., Aeppli, C., [Carmichael, C.A.](#), Nelson, R.K. *Variability in the hydrocarbon composition of oil films on rocks along the Gulf coast post the Deepwater Horizon disaster*. Gulf of Mexico Oil Spill & Ecosystem Science Conference, Mobile, AL, January 27, 2014.
 13. [James, B.D.](#), Reddy, C.M., Aeppli, C., [Carmichael, C.A.](#), Nelson, R.K. *Variability in the hydrocarbon composition of oil films on rocks along the Gulf coast post the Deepwater Horizon disaster*. Deep-C Consortium "All-Hands" Meeting, Tallahassee, FL, September 10, 2013.
 14. [James, B.D.](#), [Carmichael, C. A.](#), Aeppli, C., Nelson, R.K., Murphy, E., Radovic, J., Reddy, C.M. *Variability in oiled sand-patties collected: How different are samples collected within meters on a beach?* Gulf of Mexico Oil Spill & Ecosystem Science Conference, New Orleans, LA, January 22, 2013.
 15. [James, B.D.](#), [Carmichael, C. A.](#), Aeppli, C., Nelson, R.K., Murphy, E., Radovic, J., Reddy, C.M. *Variability in oiled sand-patties collected: How different are samples collected within meters on a beach?* Deep-C Consortium "All-Hands" Meeting, Tallahassee, FL, August 22, 2012.
-