

LYNNORA O. GRANT

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EDUCATION

Rice University 2017-present	Ph.D. in Materials Science and NanoEngineering <i>Advisors: Prof. Zachary C. Cordero, Prof. C. Fred Higgs III</i>	Houston, TX
West Virginia University 2017	B.Sc. in Mechanical Engineering	Morgantown, WV

AWARDS AND HONORS

- NIST NRC Postdoctoral Research Associateship (2022)
- Ford Foundation Predoctoral Fellow (2019-present)
- NSF Graduate Research Fellow (2017-present)
- TRIO - McNair Scholars Program Scholar (2016-2017)
- LSAMP Scholar (2015-2017)
- WVU Presidential Honors Student (2013)

REFERRED JOURNAL ARTICLES

- [J3] **Grant, L. O.**; Higgs III, C. F.; Cordero, Z.C; Effects of reactive binders on sintering mechanics in binder jet 3D printed ceramics (In Review)
- [J2] Torres Arango, M. A.; Cipollone, D. T.; **Grant, L. O.**; Korakakis, D.; Sierros, K. A. Continuous-Flow Direct Writing of Hybrid TiO₂ Flexible Photo-Electrodes: Processing, Microstructure and Functionality Interrelations. *MRS Advances* 2017, 2 (18), 1021–1028.
- [J1] Torres Arango, M. A.; Valença de Andrade, A. S.; Cipollone, D. T.; **Grant, L. O.**; Korakakis, D.; Sierros, K. A. Robotic Deposition of TiO₂ Films on Flexible Substrates from Hybrid Inks: Investigation of Synthesis–Processing–Microstructure–Photocatalytic Relationships. *ACS Applied Materials & Interfaces* 2016

CONFERENCE PROCEEDINGS

Colors denote **undergraduate students** mentored by L. Grant.

- [C3] **Grant, L. O.**; Higgs III, C. F.; Cordero, Z.C; Elucidating the effects of reactive binders on sintering binder jet 3D printed materials, *AMPM MPIF Proceedings*, 2021
- [C2] **Grant, L. O.**; **Alameen, M.B.**; **Herstein, B.S.**; Higgs III, C.F.; Cordero, Z.C.; The influence of precursor derived secondary structures on the sintering behavior of binder jet 3D printed titanium dioxide, *POWDERMET MPIF Proceedings*, 2019.
- [C1] **Grant, L. O.**; **Alameen, M. B.**; Carazzone, J. R.; Higgs, C. F.; Cordero, Z. C.; Mitigating Distortion During Sintering of Binder Jet Printed Ceramics. *Solid Freeform Fabrication Proceedings* 2018

INVITED TALKS

- [T4] “Effect of reactive binders on the mechanics of sintering ceramic powder aggregates”, Invited talk at the International Conference and Expo on Advanced Ceramics and Composites (ICACC), January 2022, virtual
- [T3] “Structure and mechanics of reactive precursors in sintering ceramic powder aggregates”, Invited Talk for the Manufacturing Science Division Seminar Series at Oak Ridge National Laboratory, September 2021, virtual
- [T2] “Structure and mechanics of reactive precursors in sintering ceramic powder aggregates”, Invited Talk for the Remote Ceramics R&P RT Meetings at Air Force Research Laboratory, May 2021, virtual
- [T1] “Reactive binder infiltration to mitigate distortion in sintering binder jet 3D printed ceramics”, Invited talk at the International Conference and Expo on Advanced Ceramics and Composites (ICACC), January 2021, virtual

CONFERENCE & SYMPOSIUM PRESENTATIONS

- [CP14] “Structure and high temperature mechanics of binder jet 3D printed ceramic compacts treated with reactive precursors”, Materials Science & Technology Annual Meeting; October 2021, virtual presentation for hybrid conference in Cleveland, Ohio
- [CP13]* “Elucidating the effects of reactive binders on sintering binder jet 3D printed materials”, Oral and Poster presentation, Additive Manufacturing with Powder Metallurgy Conference, June 2021, Orlando, FL
*NSF student travel grant recipient
- [CP12]* “Mitigating distortion in binder jet 3D printed ceramics”, Poster presentation, International Conference and Expo on Advanced Ceramics and Composites, January 2020; Daytona, FL
*ACerS travel grant recipient
- [CP11] “Preserving shape while sintering binder jet 3D printed ceramics”; Oral presentation, Ford Conference of Fellows, October 2019, San Juan, PR
- [CP10] “Mitigating distortion in binder jet 3D printed ceramics”, Poster presentation, Rice University AMPT Inaugural Symposium, August 2019, Houston, TX
- [CP9]* “The Influence of precursor derived secondary structures on the sintering behavior of binder Jet 3D printed Titanium Dioxide”, Oral and poster presentation, POWDERMET, June 2019, Phoenix, AZ
*NSF student travel grant recipient
- [CP8] “Mitigating distortion during sintering of binder-jet printed ceramics”, Oral presentation, 2019 TMS Annual Meeting & Exhibition, March 2019, San Antonio, TX
- [CP7] “Mitigating distortion during sintering of binder jet printed titanium dioxide”, Poster presentation, Materials Today Workshop, September 2018, Rice University, Houston, TX
- [CP6]* “Mitigating Distortion During Sintering of Binder Jet Printed Ceramics”, Oral presentation, 2018 Solid Freeform Fabrication Symposium, August 2018, Austin, TX
*NSF student travel grant recipient

L Grant - CV

- [CP5] “Direct Writing of TiO₂ Photoanodes for DSSCs”, Poster presentation at West Virginia University’s Undergraduate Spring Research Symposium, April 2017, Morgantown, WV
- [CP4] “Titanium Dioxide Foam for Direct Writing Thin Structures”, Oral presentation, National McNair Research Conference, March 2017, University of Maryland, College Park, MD
- [CP3] “Direct Writing of Functional Materials for Use in Flexible Optoelectronics”, Poster presentation, KY-WV LSAMP Annual Research Symposium, April 2016, Lexington, KY
- [CP2] “Direct Writing of TiO₂ Photoanodes for Perovskite/DSSCs”, Poster presentation, WV Annual Undergraduate Research Day at the Capitol, February 2016, Charleston, WV
- [CP1] “A look at Planetary Protection Implementation”, Poster presentation, NASA GSFC Summer Intern Poster Session, June 2014, Greenbelt, MD

MENTOR

Undergraduate Researchers

- | | | |
|-----------------|---------------------------|---------------------------|
| • Magdi Alameen | Houston Community College | Summer 2018 – Spring 2019 |
| • Ben Herstein | Rice University, PHYS | Spring- Summer 2019 |

LEADERSHIP

Cordero lab EHS Representative	2019-2021
Rice University Fellowship Coach	2019-2020
Rice University RCEL ELITE camp leader	Summer 2019
WVU National Society of Black Engineers (NSBE)	
• Programs Chair	2016-2017
• President	2015-2016
• Academic Excellence Chair	2014-2015

SERVICE

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| • Breakout session moderator at ACerS Winter Workshop | January 2021 |
| • Houston CCSC Food Pantry Volunteer | 2019 |
| • Cordero lab tour lead for middle and high school students | 2018 |
| • Rice graduate student recruiter at national conferences | 2018-2019 |
| • Rice hurricane Harvey relief efforts volunteer | 2017 |
| • WVU NSBE & Statler College of Engineering volunteer | 2013-2015 |
| • Ranson Elementary School Math & Reading volunteer | 2011-2013 |

PROFESSIONAL MEMBERSHIPS

National Society of Black Engineers (NSBE)
American Powder Metallurgy Institute (APMI International)
The American Ceramic Society Global Graduate Researcher Network (ACerS GGRN)