

Anthony D. Stewart, Ph.D.

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Education & Training

Southern University and A&M College, Baton Rouge, LA	Master of Science, Physics, 2014
University of Florida, Gainesville, FL	Doctor of Philosophy, Materials Science & Engineering, 2008
University of Florida, Gainesville, FL	Master of Science, Materials Science & Engineering, 2002
Southern University and A&M College, Baton Rouge, LA	Bachelor of Science, Physics, 1999

Professional Experience

Associate Professor , Southern University and A&M College, Department of Physics	2023 – present
Assistant Professor , Southern University and A&M College, Department of Physics	2017 – 2023
Assistant Professor , Allen University, Department of Mathematics & Computer Science	2014 – 2017
Graduate Research Assistant , Southern University and A&M College, Department of Physics	2012 – 2014
Postdoctoral Research Associate , CUNY- Staten Island, Dept. of Engineering Science & Physics	2010 – 2011
Adjunct Faculty , Southern University & A&M College, Department of Physics	2009 – 2010

Professional Activities, Outreach, and Service

Applied Data Science Program - Massachusetts Institute of Technology (MIT) 2022
2018-2019 National Society of Black Engineers Region 2 Professionals College Initiatives Chair
2017-2018 National Society of Black Engineers Professionals Pre-College Initiatives Chair
Member, National Society of Black Engineers
Member, Electrochemical Society
Member, Materials Research Society
Lifetime Member, SU Alumni Federation
Reviewer, Applied Physics Letters, 2015
Reviewer, Modern Physics Letters B, 2014
STEM Liaison, Richland One School District (Columbia, SC), 2015
Keynote Speaker, Madison High School Graduation (Tallulah, LA), 2018
Guest Speaker, CECOR College and Career Awareness Fair – Low Country Tech Academy (Charleston, SC), 2016

Awards and Honors

Timbuktu Legacy Award for Outstanding Achievement in STEM outreach	2018
NSF-AGEP Postdoctoral Fellowship	2010
University of Florida College of Engineering Minority Fellowship	2000
NASA-Undergraduate Student Award for Research	1999

Publications

- Stewart, B. Gila, C. Abernathy, S. Pearton, (2022) "Growth of $(\text{Sm}_x\text{Ga}_{1-x})\text{O}_3$ by molecular beam epitaxy", J. Vac. Sci. Technol. A 40, 062701 (2022); <https://doi.org/10.1116/6.0002135>.
- Bamba, R. Inakpenu, Y. Diakite, L. Franklin, Y. Malozovsky, A. Stewart, and D. Bagayoko, (2017) "Accurate Electronic, Transport and Related Properties of Wurtzite Beryllium Oxide (w-BeO)", Journal of Modern Physics, 8, doi: [10.4236/jmp.2017.812116](https://doi.org/10.4236/jmp.2017.812116)
- Khamala, L. Franklin, Y. Malozovsky, A. Stewart, H. Saleem, and D. Bagayoko, "Calculated Electronic, Transport, and Bulk Properties of Zinc-Blende Zinc Sulfide", Computational Condensed Matter (2016) 1-6. <https://doi.org/10.1016/j.cocom.2015.12.001>
- Stewart, D. Hart, B. Khamala, Y. Malozovsky, and D. Bagayoko, "Ab-Initio Calculations of Electronic, Transport, Bulk Properties of Cubic Boron Nitride", Journal of Advances in Physics, 9 1pp 2277-2286, 2015.
- A.D. Stewart, "Growth and Characterization of Novel Thin Films on Gallium-V Semiconductors for Enhanced Functionality", PhD Dissertation, University of Florida, 2008.
- A.D. Stewart, A. Gerger, B. P. Gila, C.R. Abernathy and S.J. Pearton, "Determination of $\text{Sm}_2\text{O}_3/\text{GaAs}$ Heterojunction Band Offsets by X-ray Photoelectron Spectroscopy," Applied Physics Letters, 92 153511 pp 1-3, 2008.
- N. Shepherd, D. Morton, E. Forsythe, D. Chui, and A.D. Stewart, "Flexible Infrared Emitting ZnS:Er^{3+} Alternating Current Thin Film Electroluminescent Devices" SID Symposium Digest Technical Papers, 01/2005; 1(36).
- E.K. Hobbie and A.D. Stewart, "Internal Dynamics and Elasticity of Confined Entropic Gels", Physical Review E, 61, 5540 (2000)

Conferences, Meetings, and Research Symposia

- PILLARS OF SUCCESS: Ten (10) Strand Systemic Mentoring Model of LS-LAMP, Oral Presentation Science and Engineering for Social Good, Atlanta, GA February 2018

- MSCC 2017: Ab initio Modelling in Solid State Chemistry, Imperial College of London, London, UK, September 2017
- International Conference on Theoretical Physics: Industrial Physics in Emerging Economies II, Sao Paulo, Brazil, September 2014
- Investigating the Electronic Properties of Boron Nitride (BN), Poster Presentation, SUNCAT Summer Institute, Stanford, CA, August 2013
- Calculations of Electronic Properties of Cadmium Selenide (CdSe), Oral Presentation, 87th Louisiana Academy of Sciences (LAS) Meeting, Grambling, LA, March 2013
- The Effects of Oxygen Concentration on the Direct Current Magnetization of High Quality, Single-Crystal Bismuth Strontium Copper Oxide Superconductors Grown by the Floating Zone Technique, Poster Presentation, CUNY Science Fair, New York, NY. October 2011

Synergistic Activities

- SUSTAINABLE ENERGY THROUGH CATALYSIS (SUNCAT) SUMMER INSTITUTE CENTER FOR INTERFACE SCIENCE AND CATALYSIS - Stanford University Stanford, CA August 25- 26 2013
- FUEL CELL SHORT COURSE MATERIALS PHYSICS AND APPLICATIONS GROUP – Los Alamos National Laboratory Santa Fe, New Mexico January 22-24, 2013
- BEST SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) TEACHING PRACTICES LOUISIANA SIMULATION-GUIDED MATERIALS APPLICATIONS (La-SIGMA) LOUISIANA STATE UNIVERSITY, SHREVEPORT JULY 2012
- CLEAN ROOM USER MICROSYSTEMS TECHNOLOGY LABORATORY – MASSACHUSETTS INSTITUTE OF TECHNOLOGY BOSTON, MASSACHUSETTS DECEMBER 2010
- JOINT INSYNC-INCREASE WORKSHOP- NATIONAL SYNCHROTRON LIGHT SOURCE (NSLS) II AND CENTER FOR FUNCTIONAL NANOMATERIALS (CFN) BROOKHAVEN NATIONAL LABORATORY SUMMER 2010
- GENERAL EMPLOYEE RADIATION TRAINING (GERT) DEPARTMENT OF ENERGY – BNL UPTON, NY SUMMER 2010

Teaching Experience

College Physics (Algebra-based), Allen University, 2014-2017
 College Algebra, Allen University, 2014-2016
 Introduction to Engineering, Allen University, 2014-2017
 College Physics (Algebra-based), Southern University, 2017-present
 College Physics Laboratory (Calculus-based), Southern University, 2017-present

Research Mentoring

Raluchukwu Onwubuya, *The Study of Electrochemical Durability of Carbon supported Pt Catalysts for Fuel Cell Applications*, 2016
Tinom Shokfai, *Toxicity Assessment of Pt Nanoparticles in Brine Shrimp Larvae*, 2016
Jonalyn Fair, Investigating the Electrochemical Properties of Aged Carbon Supported Pt Catalysts for Proton Exchange Membrane (PEM) Fuel Cells, 2017
Jovante Hills, *Growth and Optimization of TiO₂ Nanotubes for Electrode Support Material for PEM Fuel Cells*, 2018
Karriem Upshaw, *Anodized Ti Nanostructures for Biomedical Applications*, 2018
Ashley Alfred, *Investigating the Mechanical Properties and Failure Characteristics of Alternative Dental Archwire Materials*, 2018

Thesis or Dissertation Committees

Master's Thesis Committee Member:
 Student: Montrey Freeman, Thesis Title: Development of a Large Area Neural Recording Device Using 3-D Printing and Laser Ablation, Department of Materials Science & Engineering, Norfolk State University, 2017

Grant Funding (ORCID ID: 0000-0001-7518-4383)

- Minority Serving Institutions Partnership Program (MSIPP) Consortium for Materials and Energy Security (CMaES) Department of Energy (DOE) National Nuclear Security Agency (2015-2017) \$200,000, **PI: Stewart**
- DOE Cooperative Agreement- Environmental Justice Institute (2015-2017) \$350,000, **Co-PI: Stewart**
- 2023 Space and Planetary Science at the Timbuktu Academy, Louisiana Space Consortium (LaSPACE) (2023-2024) \$25,000, **PI: Stewart**
- STEMMING the Pool of Future Minority Clinicians at the Timbuktu Academy (SP-FMCTA), Louisiana Department of Health (LDH), (2023-2024) \$500,000+, **PI: Stewart**
- RII Track-2 FEC: The IceCube EPSCoR Initiative (IEI) - IceCube and the Data Revolution, South Dakota School of Mines and Technology (SDSMT), (2023-2024) \$189,500+, **PI: Stewart**
- Reaching an Advanced Computing Technology through Quantum Information Sciences & Engineering (ReACT-QISE) 2023-2026 \$450,000, **PI: Stewart**