Tuskegee University Center for Advanced Materials (T-CAM)

T-CAM formerly known as Material Research laboratory (MRL), started in 1977 with a modest research grant from the National Science Foundation (NSF) to study surface integrity in the machining of high strength steels and super alloys. Presently the Center represents the single largest multi-disciplinary research facility on Tuskegee University campus with support from various federal agencies, including the Army Research Office, Air Force Office of Scientific Research, Federal Aviation Administration, National Aeronautical and Space Administration, National Science Foundation and Office of Naval Research, and industries, including the Boeing Company, David and Lucile Packard Foundation, General Motors Corporation and Raytheon Missile Systems. The transition of MRL to T-CAM came about through a $9.4 million grant from Army Research Office (ARO) to establish a research consortium for design, manufacture, and characterization of advanced composites.

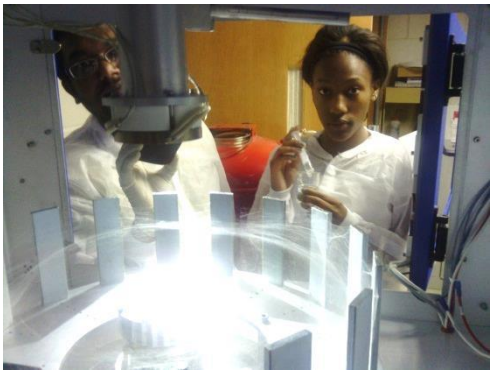
Mission of T-CAM is:

- To strive for fundamental understanding of the nature of advanced materials towards the goal of military, industrial, recreational and healthcare related applications.
- To motivate and educate minority students, undergraduate through Ph.D. levels, in the science and engineering of advanced materials.
- To offer outreach activities for K-12 students, and the community teachers.

Tuskegee University's first Ph.D. Program in Materials Science and Engineering (MSE) designed to serve the emerging multi-disciplinary challenges of science and technology, was also spearheaded by the Center. To date the program has produced 39 Ph.Ds thereby becoming largest producer of African-American Ph.Ds in MSE in the country. Department of Materials Science and Engineering was formally established in 2011 along with Master of Science degree program in MSE. To date 23 students have obtained M.S. degree.

T-CAM has well established research funding from the DoD – Army, Navy and Air Force, NASA, NSF, EPSCoR, Boeing, Lockheed, and the U. S. Army and Missile Aviation Command, and Alabama State. In the last 20 years, T-CAM researchers have received over $62M funding. The Center has been contributing to basic and applied research in materials science and engineering related areas and is acclaimed nationally and internationally for nearly four decades. T-CAM possesses state-of-the-art facilities in all aspects of materials research – synthesis and chemical analysis, processing/manufacturing, performance evaluation and modeling of advanced materials and structures. The faculty members are involved with both basic and applied research related to current interests to a variety of defense and commercial areas. T-CAM has also established partnership with various academic universities within and outside of the United States.

July 2017 PhD graduates: Dr. Chemar Huntley (left) and Dr. Vertonica Powell-Rose (right)



REU and graduate students working on ForceSpinning™ nanofibers

Shatori Meadows with first prize winning poster at Society for Plastic Engineers conference, 2015

International Collaborations with Brazil

Middle School Students at Science and Technology Open House

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