We Are Pleased to Announce a Seminar
Presented by

Nicholas Godman
U.S. Airforce

Aerospace Materials & Manufacturing: From Basic Knowledge Generation to
Applied Research

Friday, February 21, 2020
4:00 pm
NWC 1313

This seminar will cover two main topics: (1) a top-level overview of the Air Force Research Laboratory's Materials and Manufacturing Directorate located at Wright-Patterson Air Force Base, Ohio, and (2) a technical overview of ongoing research efforts focused at electrically manipulating discrete colloidal droplets.

Part 2:
Digital microfluidics is a liquid-handling technology capable of rapidly and autonomously controlling multiple discrete droplets across an array of electrodes and has seen continual growth in the fields of chemistry, biology, and optics. This technology is enabled by rapidly switching the wettability of a surface through the application of an electric field: a phenomenon known as electrowetting-on-dielectric. The results reported here elucidate the wetting behavior of fluorescent quantum dot nanofluids by varying the aqueous-solubilizing polymers, changing the size of the nanocrystals, and the addition of surfactants. (Bio on back)

Refreshments will be served at 3:45 pm
REMINDER ~ WEAR YOUR ID
Dr. Nicholas Godman is a Research Chemist for AFRL at WPAFB where he currently leads the Optofluidics portfolio at the Materials & Manufacturing Directorate. Dr. Godman obtained his bachelor’s degree in chemistry from Oklahoma State University before completing his PhD in Organic Chemistry at the University of Oklahoma under the guidance of Dr. Daniel Glatzhofer. His current research efforts focus on understanding the wetting behavior of colloids under an applied electric field, incorporating biologically derived materials into optical platforms, the development of anisotropic chalcogenide polymers, and supporting new investments in high-throughput, autonomous synthesis.