



# BIOGRAPHY



UNITED STATES AIR FORCE

## DR. TIMOTHY J. BUNNING

Dr. Timothy J. Bunning, a member of the Scientific and Professional Cadre of Senior Executives, is the Chief Technology Officer for Air Force Research Laboratory, Air Force Materiel Command, headquartered at Wright-Patterson Air Force Base, Ohio. As the primary science and technology advisor to the AFRL Commander, he is responsible for assisting with the planning and execution of an annual \$2.8 billion Air Force science and technology program and considerable resources executed on behalf of a variety of customers. He serves as the corporate-level science and technology interface for a government workforce of nearly 6,000 people in the laboratory's nine technology directorates and 711th Human Performance Wing.



Dr. Bunning joined AFRL in 1990 in the Materials and Manufacturing Directorate as a Ph.D. student. His research was funded through an Air Force Office of Scientific Research doctoral fellowship and conducted on-site within the directorate. After earning his doctorate and conducting post-doctoral studies at Cornell University, Ithaca, New York, he spent six years as an on-site contractor in the directorate before transitioning to civil service there in 1998. He has served in numerous positions including as a bench scientist/engineer, first- and second-level supervisor and research leadership positions within the directorate between 1998 and 2015 when he was selected to be the directorate's Chief Scientist. He served in that position until his appointment as the AFRL Chief Technology Officer.

Dr. Bunning is active in numerous technical communities and is a Fellow of AFRL, the Optical Society of America, the Society of Optical Engineering, the American Physical Society, the American Chemical Society, the Royal Society of Chemistry, the Materials Research Society and the Polymeric Materials Science and Engineering Division of ACS. His research interests center on responsive optical, electro-optical and photo-optical structured organic and hybrid materials and approaches for utility in optical sensing, laser beam control and filtering (modulation) applications. He has co-authored more than 300 referred papers and more than 130 proceedings, has provided editorial in several books and holds 18 patents. He is currently an adjunct professor in the Department of Materials Science and Engineering, Georgia Institute of Technology and is on the editorial boards of several materials-centric journals.

### EDUCATION

1987 Bachelor of Science, Chemical Engineering, University of Connecticut, Storrs

1988 Master of Science, Chemical Engineering, University of Connecticut, Storrs  
 1992 Doctor of Philosophy Chemical Engineering, University of Connecticut, Storrs  
 2008 Air War College, Maxwell Air Force Base, Ala.

#### **CAREER CHRONOLOGY**

1. 1992–1998, Visiting Scientist/Contractor (SAIC), Air Force Materials Laboratory, Wright-Patterson Air Force Base, Ohio
2. 1998–2007, Senior/Principal Materials Research Engineer, Hardened Materials Branch, Air Force Research Laboratory, Wright-Patterson AFB, Ohio
3. 2002–2007, Research Group Leader, Hardened Materials Branch, Air Force Research Laboratory, Wright-Patterson AFB, Ohio
4. 2005–2006, Acting Chief, Hardened Materials Branch, Air Force Research Laboratory, Wright-Patterson AFB, Ohio
5. 2007–2010, Division Technical Director, Survivability and Sensor Materials Division, Air Force Research Laboratory, Wright-Patterson AFB, Ohio
6. 2011, Developmental Sabbatical, Materials Science and Engineering Department, Georgia Institute of Technology, Atlanta
7. 2012–2015, Chief, Functional Materials Division, Air Force Research Laboratory, Wright-Patterson AFB, Ohio
8. 2015–2020, Chief Scientist, Materials and Manufacturing Directorate, Air Force Research Laboratory, Wright-Patterson AFB, Ohio
9. 2020–present, Chief Technology Officer, Air Force Research Laboratory, Wright-Patterson AFB, Ohio

#### **AWARDS AND HONORS**

2001 Federal Laboratory Consortium Award for Excellence in Technology Transfer  
 2002 John H. Dillon Medal from the Division of Polymer Physics, American Physical Society  
 2004 Affiliate Society Council (Dayton) Outstanding Engineer and Scientist Award  
 2007 Fellow, American Physical Society  
 2007 Fellow, International Society for Optics and Photonics  
 2007 Fellow, Air Force Research Laboratory  
 2011 62nd Arthur S. Flemming Award, Department of Defense  
 2010 John L. McLucas Basic Science Air Force Science, Technology, Engineering and Mathematics Award  
 2013 Fellow, Polymeric Materials Science and Engineering, American Chemical Society  
 2013 Fellow, Optical Society of America  
 2013 American Chemical Society Polymeric Materials: Science and Engineering Co-Operative Research Award  
 2016 Fellow, Materials Research Society  
 2017 Fellow, Royal Society of Chemistry  
 2017 Fellow, American Chemical Society  
 2017-2018 Class Induction, University of Connecticut's Academy of Distinguished Engineers

#### **PROFESSIONAL MEMBERSHIP**

American Physical Society  
 Materials Research Society  
 American Chemical Society  
 Optical Society of America  
 Society of Optical Engineering  
 International Liquid Crystal Society

(Current as of March 2020)

