NEF17-2017-000047

Abstract for an Invited Paper
for the NEF17 Meeting of
the American Physical Society

Physics, industry, and electronic materials at NIST NSLS beamlines

JOSEPH WOICIK, NIST

“NIST’s mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.” In this lecture I will discuss three industrial collaborations that highlight this paradigm: Local-structure determination in strained-layer semiconductors, ferroelectric strontium-titanate thin films on silicon, and hard x-ray photoelectron-spectroscopy measurements of semiconductor gate stacks. A common theme to each is the strain engineering of atomic and electronic structure and synchrotron measurement science.