

GEC09-2009-020064

Abstract for an Invited Paper
for the GEC09 Meeting of
the American Physical Society

The CNSE Public-Private Partnership Paradigm: A Driver for New York State and U.S. Educational, Research and Economic Excellence in the 21st Century

EDWARD M. CUPOLI, College of Nanoscale Science and Engineering, University at Albany - SUNY

The College of Nanoscale Science and Engineering (CNSE) of the University at Albany-SUNY is the first college in the world dedicated to education, research, development, and deployment in the emerging disciplines of nanoscience, nanoengineering, nanobioscience, and nanoeconomics. Envisioned and developed as a bold and unique educational, technological and business paradigm, the CNSE model has produced outcomes that are both significant and unparalleled: preparation of a highly educated, highly skilled workforce that is critical to driving opportunity and growth at all levels; acceleration of nanoscale research and development that is vital to advancing the commercialization of cutting-edge technologies and applications; and, generation of unmatched high-tech investment and job creation that are serving to foster a positive economic and societal impact throughout New York State, while also enhancing national competitiveness in the global innovation economy of the 21st century. In less than a decade of operation, CNSE has become a globally recognized entity. CNSE's Albany NanoTech Complex is the most advanced research enterprise of its kind at any university in the world: a \$5 billion, 800,000-square-foot complex that continuously attracts corporate partners from around the world, offers students a one-of-a-kind academic experience, and educates society on the implications of advances in nanotechnology. CNSE's Albany NanoTech houses the only fully-integrated 300mm wafer, computer chip pilot prototyping and demonstration line within 80,000 square feet of Class 1 capable cleanrooms. More than 2,500 scientists, researchers, engineers, students, and faculty work on site at CNSE's Albany NanoTech, with a network of global corporate partners that includes more than 250 leading nanotechnology companies, such as IBM, AMD, GlobalFoundries, SEMATECH, Toshiba, ASML, Applied Materials, Tokyo Electron, Vistec Lithography and Atotech, among many others.