The University of Kentucky
Center for Nanoscale Science and Engineering (CeNSE)

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Abstract

The Center for Nanoscale Science and Engineering (CeNSE) at the University of Kentucky (UK) is a shared-use facility located in UK's Advanced Science and Technology Commercialization Center (ASTeCC). The center forms part of the Kentucky node of the NSF-supported National Nanotechnology Coordinated Infrastructure (NNCI). CeNSE serves a multidisciplinary group of faculty, students, staff, and external researchers with a shared vision for studying and developing nanoscale materials and devices. Center participants hail from the several UK colleges, other universities, and various companies, including several startup companies housed in ASTeCC. Research supported by the center targets a number of nanoscience applications in energy, bioengineering, manufacturing, medicine, computation, communication, and data storage. The CeNSE nanofabrication facility includes a class 100 cleanroom with a number of lithography, deposition, etching, thermal processing, and characterization tools. Of particular note, CeNSE offers both electron-beam and 3D (two-photon) lithography systems. The center is open to all qualified users and provides both instrument training and process consulting.

Biography of Presenter

J. Todd Hastings is Reese S. Terry Professor of Electrical Engineering at the University of Kentucky where he also serves as Director of the Center for Nanoscale Science and Engineering. His research focuses on nano-scale electronic, photonic, and magnetic devices and their associated fabrication technologies. Prior to his current appointment he received the Ph.D. degree in Electrical Engineering from the Massachusetts Institute of Technology, the M.S. degree in electrical engineering from Purdue University, and the B.S. degree in physics from Centre College in Danville, Kentucky. He is the recipient of the NSF CAREER Award and the DARPA Young Faculty Award, and served as the chair of the 59th International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication.