

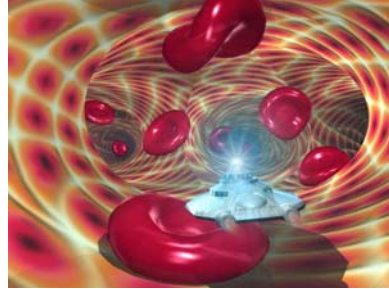
The New BRB Core Facility: An Opportunity for Interdisciplinary Research in Micro/nanoTechnology

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ABSTRACT

The University of Louisville recently invested \$50M in a new interdisciplinary research building on its Belknap Campus that opened in the summer of 2006. The signature laboratory in the new Belknap Research Building is a state-of-the-art \$10M cleanroom facility. This multi-user core facility provides researchers and educators at UofL and throughout Kentucky the ability to fabricate a wide variety of micro and nano devices. Many disciplines utilize this class 100 facility, including medicine, chemistry, physics, engineering, biology, and engineering. This talk will present an overview of micro/nanotechnology, describe UofL's new facilities and discuss applications areas such as the artificial eye, glaucoma sensors, implantable micro-devices, lab-on-a-chip diagnostics, explosive detectors, etc. The most promising areas for micro/nanotechnology lie in the medical field. Your homework assignment prior to the talk is to Google the movie "Fantastic Voyage".



BIO

Kevin M. Walsh received the B.S. and M.Eng. degrees in electrical engineering from the University of Louisville, Louisville, Kentucky, and the Ph.D. degree in electrical engineering (microelectronics) from the University of Cincinnati, Cincinnati, Ohio in 1978, 1985, and 1992, respectively. He is a full professor with the Electrical and Computer Engineering Department at the University of Louisville, where he also serves as the director of the UofL Micro/NanoTechnology Center and its associated 10,000 sq. ft. class 100 cleanroom facility. Dr. Walsh is on the editorial board of Sensor Letters, has several patents and is co-founder of 3 technical start-up companies. He has taught over 20 different courses, advised over 25 completed theses, and published over 100 technical papers in the areas of micro/nanotechnology, MEMS, microfabrication, packaging, sensors, actuators, cleanroom design/operation, and micro/nanotechnology course development. In 2000, Prof. Walsh was inducted into the Trinity High School Hall of Fame, 2001 into the UofL Athletic Hall of Fame, and in 2005 the Kentucky Tennis Hall of Fame.

