

Binghamton University launches microelectronics research center

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Binghamton University and partners to develop next-generation [flexible electronics](#)

With a \$10 million competitively bid contract from the U.S. Display Consortium (USDC), Binghamton University, State University of New York, has established the Center for Advanced Microelectronics Manufacturing (CAMM).

The USDC will initially provide \$10 million in equipment to establish CAMM, which will combine resources from the USDC, Binghamton University, Cornell University, Endicott Interconnect Technologies and other academic, government and industry partners to help speed microelectronics manufacturing research and development in a roll-to-roll (R2R) format.

To date, most advanced electronics components have been produced on silicon or quartz wafers, or on plates of specialized glass in a 'batch' process that has been the backbone of the integrated circuit (IC) and flat panel display (FPD) industries. The R2R process means that components can be produced more efficiently, at higher yields and at a lower cost. The expected R2R microelectronics manufacturing will be key to critical next-generation applications in areas such as medical diagnostics and treatment, military and homeland security, flexible displays and electronics, computer and telecommunications, and consumer products. Among the CAMM'S R2R research capabilities are flexible displays; 'foldable' radars; electronics 'by the yard'; integrated sensory patch systems; and protective clothing.

Directed by Bahgat Sammakia, professor of mechanical engineering and director of Binghamton University's Integrated Electronics Engineering Center and its Small Scale Systems Packaging Center, the CAMM will evaluate equipment and materials developed under the auspices of USDC, industry or its own R&D program that can be further developed in a fully-

integrated manufacturing line. Equipment will be accessible to both the University community and private industry, which will participate in the CAMM through paid membership fees and funded research programs. The CAMM will also provide large-scale testing whereby academic research groups can test their work for manufacturing applicability without the high costs and risks typically associated with such activities.

"This award acknowledges Binghamton University's stature as a leader in small scale systems integration and packaging research," said Binghamton University President Lois B. DeFleur. "Through the Center for Advanced Microelectronics Manufacturing, we will create a unique and unparalleled research and development capability that will strengthen partnerships between the University and the private sector. This will contribute to economic advancement in New York State and the nation. This Center is another example of the growing impact of Binghamton University's academic and scientific expertise."

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