



www.fablab.umd.edu

A cutting-edge complex for nano- and micro-fabrication

Supporting research, education, and technology development

Open to and serving the University of Maryland, industry, government labs, and external academic and nonprofit organizations

Potassium-ion batteries enhanced by coated microspheres



Nanotechnology starts and flourishes with making things at the nanoscale—from fabricating prototype materials and devices for R&D, to piloting the means to manufacture key nano components, microsystems, and products made from them. The FabLab provides the needed equipment and skilled personnel to support academic, corporate and government partners, as well as University of Maryland researchers.

The FabLab is part of the Maryland NanoCenter, a partnership of the A. James Clark School of Engineering and the College of Computer, Mathematical and Natural Sciences at the University of Maryland.

The FabLab supports the Maryland NanoCenter's mission of providing cutting-edge nanotechnologies and services for engineering and science researchers in academia, industry and government; developing future professionals who have hands-on experience in nanotechnology; and promoting a vibrant nanotech economy in the state of Maryland through interactions with established and emerging companies.

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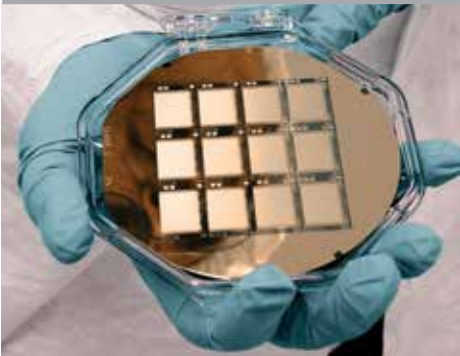
UNIVERSITY OF
MARYLAND



RESEARCH

- ULTRASMALL
- SEMICONDUCTOR DEVICES
- MOLECULAR ELECTRONICS
- THIN FILM TRANSISTORS
- DISPLAYS
- ENERGY STORAGE
- SOLAR CELLS
- SENSORS
- MEMS DEVICES
- CHEM-BIO SENSORS
- CELL-BASED MICROSYSTEMS
- QUANTUM DOTS
- NANO-ROBOTICS

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THE FABLAB IS PART OF THE MARYLAND NANOCENTER, A PARTNERSHIP OF:



A. JAMES CLARK
SCHOOL OF ENGINEERING



COLLEGE OF
COMPUTER, MATHEMATICAL,
& NATURAL SCIENCES



CAPABILITIES

FULL SERVICE MICRO- AND
NANOFABRICATION

OPEN TO INTERNAL AND
EXTERNAL USERS

FEATURED TOOLS

- Maskless aligner system
- Atomic layer deposition
- Ebeam lithography(<20 nm) and ICP etching
- Deep reactive ion etching
- XeF2 etching
- E-beam & sputter deposition
- Advanced plasma etching
- Wire bonding

CHARACTERIZATION TOOLS

- Environmental SEM with EDS
- Four point resistivity & Hall effect
- Raman & FTIR
- Stress measurement
- BET porosimetry
- Spectroscopic ellipsometry

SUPPORTED IN PART BY:

