

The New York Innovation Economy and the Nanotechnology Cluster: The Role of SUNY

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SUNY is...

The **largest**
comprehensive
university system in
the United States

Nearly **\$1 billion**
in sponsored research

3.6 million
students, alumni
and employees

80 million
gross square footage

7,669 degree
and certificate
programs

\$19.8 billion
in economic impact

SUNY's Unmatched Assets



PEOPLE

468,000 Students
88,000 faculty and staff
3 million alumni

INFRASTRUCTURE

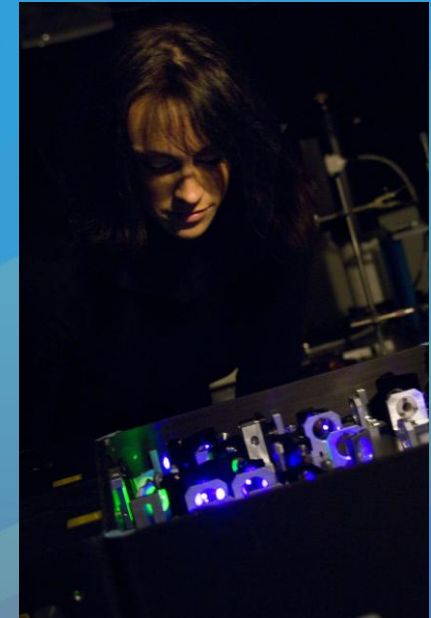
64 Campuses
6 Centers for Advanced Technology
8 Centers of Excellence
17 Incubators

TECHNOLOGY

Over 1,000 issued patents
Over 700 active licenses
72 active startups

SUNY University at Albany

The College of Nanoscale Science and Engineering (CNSE) of the University at Albany - State University of New York (SUNY) is a global education, research, development and technology deployment resource dedicated to preparing the next generation of scientists and researchers in nanotechnology.





“Pioneering Innovation to Drive an Educational and Economic Renaissance in New York State”



- 300+ industry partners (electronics, energy, IT, defense & biohealth)
- \$14.5B direct investments and \$28B nanotechnology investments statewide
- Over 3,100 R&D jobs currently on site, rising to 3,700 R&D jobs by 2015
- 2001 to Present: 12,500 jobs created/retained, \$1B wages statewide
- Projected by 2015: 25,000 jobs created/retained, \$2.25B wages statewide

CNSE and SUNY's Role

- Sponsored Program Administration
- Innovation Support Services
- Affiliated Corporation creation and support
- Infrastructure development & Facility Expansion
- Program Development & Strategic Partnerships
- Financial Support:
 - Lease of space
 - Loan guarantees
 - Cost modeling
 - Service Center Development

Centers of Excellence

- Leveraging existing research strengths
- Upgraded research and development facilities
- Long term research funding
- Job creation



Affiliated Corporations

- Achieving goals beyond the reach of SUNY or RF
- Increased flexibility
- Dedicated corporate structure
- Alignment with SUNY mission



Fuller Road Management Corporation (FRMC)

- Land Lease with SUNY
- Design and construction of facilities
- Financing of construction
- Debt issuance on facility construction- RF as credit tenant
- Provide access to research programs, facilities.
- Facility ownership and operation.
- Direct lease of office space to industry.



Milestones

Fuller Road
Management
Corporation
(FMRC)
Incorporated
– 1993

International
Venture for
Nanolithography
(INVENT)
Program
Established –
2002

NanoFab
South Facility
Completed –
2004

NanoFab
North Facility
Completed –
2005

Computer
Chip Hybrid
Integration
Partnership
(CHIP)
Program –
2009

Global 450
Consortium
Established –
2011

Center for
Environment
al Science a
& Technology
Management
(CESTM)
Facility
Completed –
1997

SEMATECH
North – 2003

Center for
Semiconductor
Research
(CSR) – 2005

Institute for
Nanoelectronics
Discovery &
Exploration
(Index) Program
– 2006

NanoFab
East and
Central
Facilities
Completed –
2009

NanoFab
Xtension
(NFX) – target
completion
2012

The Cluster Effect



COLLEGE OF NANOSCALE SCIENCE & ENGINEERING

UNIVERSITY AT ALBANY State University of New York



New Ground

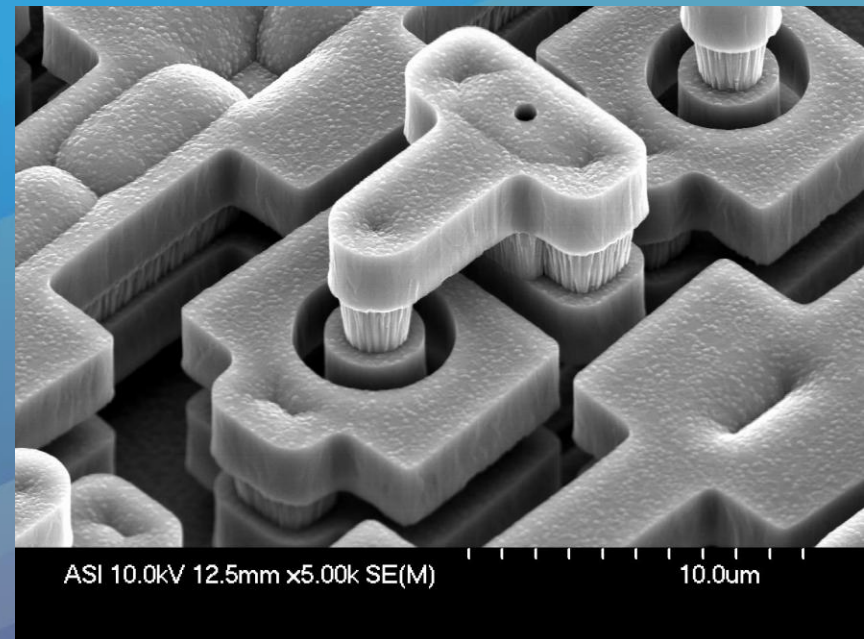
- Infotonics Consolidation
- Fort Schuyler Management Corporation
- Photovoltaic Manufacturing Consortium



Infotonics Consolidation

Smart Systems Technology and Commercialization Center (STC)

- Former Infotonics Center of Excellence in Rochester, NY focused on Microelectromechanical Systems (MEMS) technology
- Broad industry partnerships to develop commercialization pathways
- DOD contractor
- Secure facility



Fort Schuyler Management Corporation (FSMC)

FSMC – Marcy NanoCenter at SUNYIT

- Partnership with Mohawk Valley EDGE
- FSMC development – Center for Advanced Technology (CAT) and Computer Chip Commercialization Center (Quad C) on campus
- Continued industry partnership coupled with academic excellence



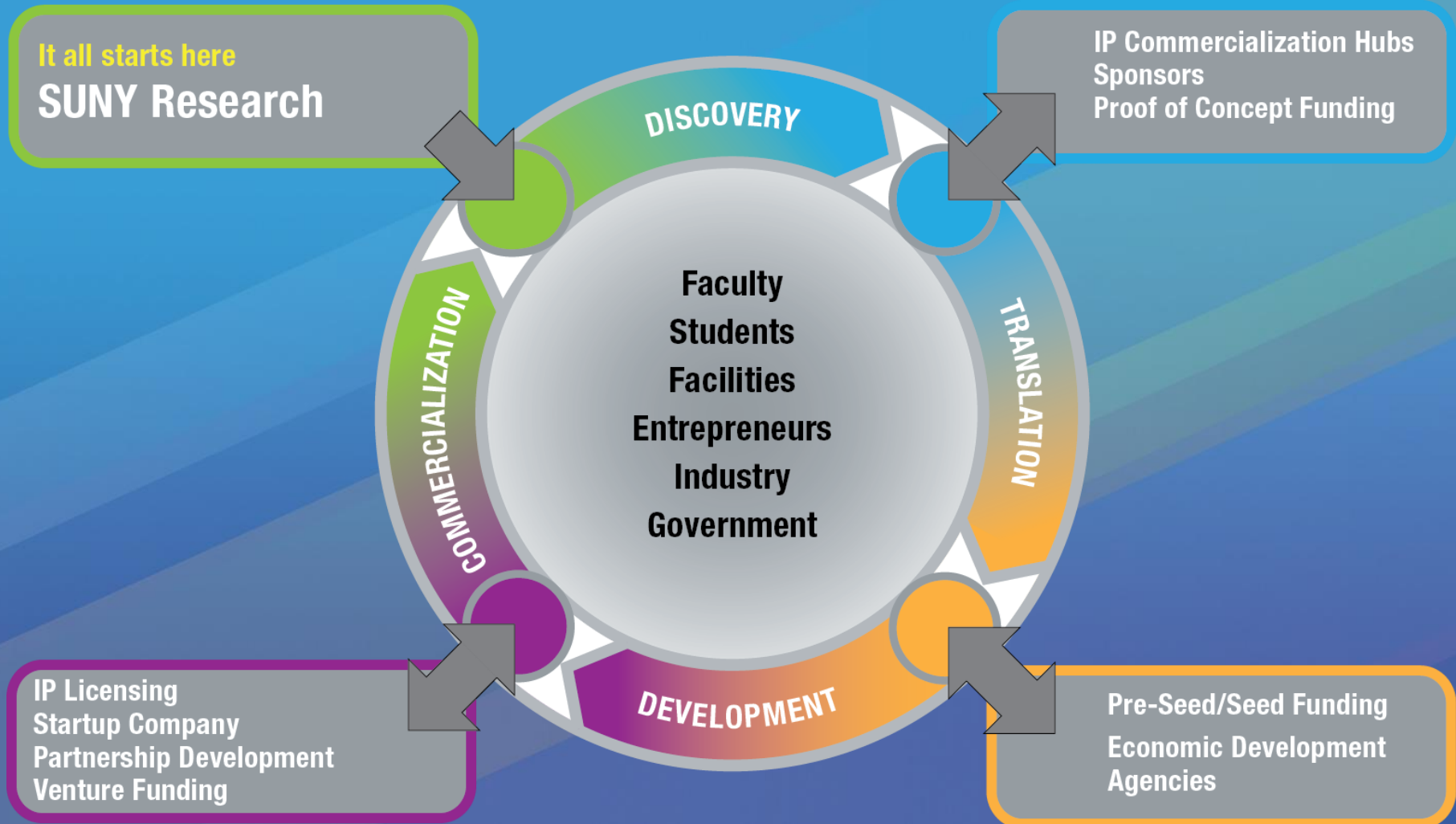
Photovoltaic Manufacturing Consortium (PVMC)

PVMC, Inc.

- Develop industry standards for solar industry
- Transition from crystal silicates to Copper-Indium-Gallium-Selenide (CIGS)
- Improve industrial efficiency
- Provide vehicle for property interest by Department of Energy



Innovation Ecosystem



People, Infrastructure, Technology

