



global
impact



Integrated Photonics Institute *for Manufacturing Innovation*



Vision

Establish a technology, business and education framework for industry, government and academia to accelerate the transition of integrated photonic solutions from innovation to manufacturing-ready deployment in systems spanning commercial and defense applications

Mission

Seek to advance integrated photonic circuit manufacturing technology development while simultaneously providing access to state-of-the-art fabrication, packaging, and testing capabilities for small-to-medium enterprises, academia and the government; create an adaptive integrated photonic circuit workforce capable of meeting industry needs and thus further increasing domestic competitiveness; and meet participating commercial, defense and civilian agency needs in this burgeoning technology area

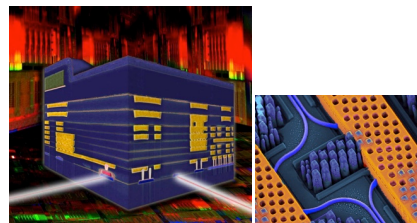
The Integrated Photonics Manufacturing Institute's Core Hub

- ❑ 1.3M ft² facility
- ❑ cutting edge 300/450mm toolset
- ❑ 135k ft² of class 1 capable cleanroom
- ❑ processing capability span 65nm - 7nm

Eventual Capability Range									
1	2	3	4	5	6	7	8	9	10
Mfg Basics / Concepts Identified	Prove of Concepts / Lab Production Environment	Component / System / Subsystem Prototypes – Production Environment			Pilot Line Capability – Low Rate Production		High Rate Production		

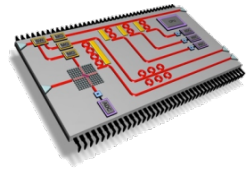
SUNY POLYTECHNIC INSTITUTE

- ❑ years of proven silicon photonics results – multiple DARPA & Industry projects
- ❑ 300mm tools provide unprecedented quality photonics
- ❑ partnerships drive continuous revitalization investments



Integrated Photonics...

... is about data and sensing



You can pack more information on to a light pipeline than to an electric cable, and this at a much lower power consumption

Nature has given us a lucky coincidence: the fingerprint of atoms, molecules and chemical bonds correspond to the colors of light, and light can travel through space to reflect and be read off objects

Photonic enabled sensing provides pathways to disruptive industry, environmental, and bio / medical solutions

Industry and environmental applications

Point-of-use molecular diagnostics, enabling on-sight diagnosis and treatment decisions

