

Research & Development in Solar Technologies

CIGS Thin-Film Solar Cells

The Energy & Environmental Technology Applications Center's (E2TAC) projects include the development of deposition processes for the CIGS itself, low-cost methods for selenization, and studies of substrates and barrier layers.

Organic Solar Cells

E2TAC researchers are working on increasing the efficiency of polymer-based solar cells and on improving their durability and immunity to environmental effects.

a-Silicon and Polysilicon Solar Cells

E2TAC projects include the investigation of spin-coating Techniques for producing wafer-based silicon solar cells, research on thin-film crystalline silicon solar cells, and work on anti-reflection and passivation coatings.

PV Activities at E2TAC

E2TAC researchers are working on several types of thin-film solar cells seeking to achieve improvements in several key areas:

- Higher Efficiency
- Lower Costs
- Roll-to-Roll Processing
- Flexible Substrates
- Higher Growth Rates
- Prototype Manufacturing Development

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About the Organization

The College of Nanoscale Science & Engineering

The College of Nanoscale Science & Engineering's (CNSE) Albany NanoTech complex is the most advanced nanofabrication research facility of its kind at any university in the world: a \$5.5 billion, 800,000-square-foot complex that has attracted over 250 institutions from around the world. CNSE's world class faculty has strong industrial research backgrounds, providing industrial partners and students with valuable exposure to the world of industrial nanotechnology.

The Energy & Environmental Technology Applications Center

CNSE's Energy & Environmental Technology Applications Center (E2TAC), created in 1998, leverages key enabling nanotechnologies and infrastructure to support advances for the energy (including energy efficiency, renewable power generation, and alternative fuels) and environmental industry. E2TAC's mission is to support energy and environmental technology deployment through accelerated commercialization by leveraging partnerships between industry, government, and university. E2TAC collaborates with over 50 energy related companies through its leadership of New Energy New York and other collaborations. E2TAC has activities in three areas: Technology Development; Education & Outreach and Accelerating Commercialization.

Below: The \$5.5 billion Albany Nanotech Complex, 2009.

