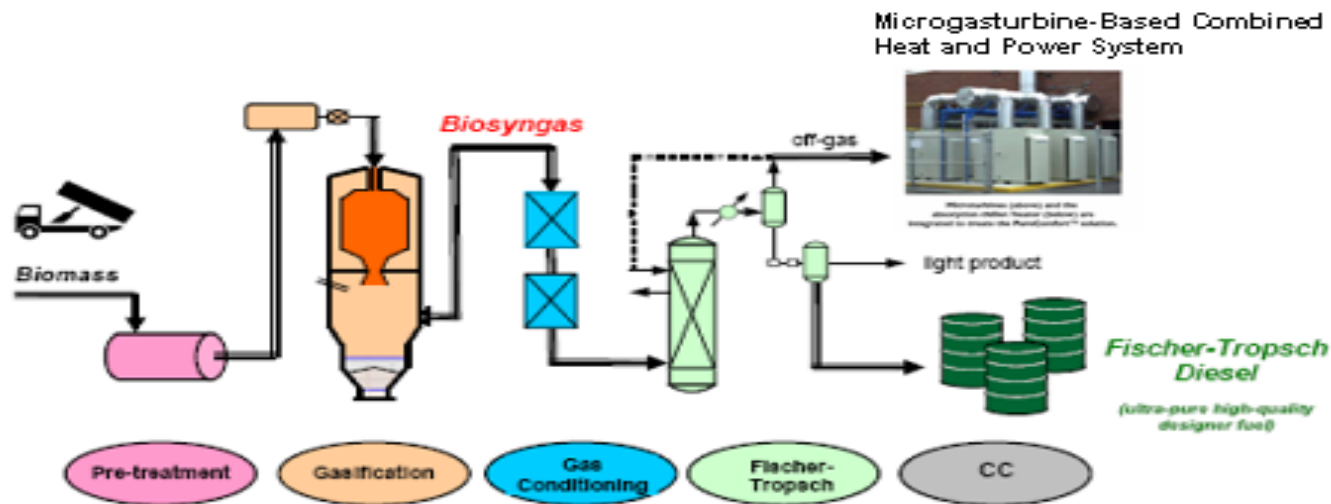


Combined Cooling, Heat, Power, and Biofuel from Biomass and Solid Waste



William Lear, Jacob Chung

- Research and demonstration of a novel technology that enables economic utilization of dispersed biomass and solid waste resources to produce electric power, cooling, heat, and fresh water
- Develop compact modular systems by integration of gasification and power generation systems



Department of
Mechanical & Aerospace Engineering



**Energy & Gas
Dynamics Lab**

Benefits to the State of Florida

● Energy sustainability

- Renewable resources otherwise wasted (bio & MSW)
- Provides transition pathway, little disruption
- Integrates UF breakthroughs in advanced gasification system, high temperature membrane H₂ separator, and PoWER System



● Economic benefits

- Innovations provide strong competitive advantage to Florida manufacturers of system and components
- Near term potential for thousands of new, high-tech jobs in Florida
- Drastically reducing energy production costs
- Stability in energy supply/enhanced grid stability
(hurricanes provide more biomass feedstock, when it's most needed)

