

Introduction to Session 3

Bioprocessing Research

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Fuels and chemicals from alternative sources, such as carbohydrates and biomass, represent a major opportunity in the United States. Imports of crude oil currently account for approx 50% of the oil used in the US. Several significant factors have changed or evolved during the past few years that will enhance the viability of alternative fuels and chemicals:

1. Extension of the tax credit on gasohol until the year 2000;
2. New oxygenated fuel requirements;
3. New oxygenated fuel requirements for ozone nonattainment areas;
4. Recycling laws, landfill restrictions, and biodegradables; and
5. Major market disruption (Persian Gulf War).

Technology challenges to create a market opportunity for fuels and chemicals have not changed. New processes must be developed that are more energy efficient, have lower operating costs, require less capital investment, and are environmentally acceptable.

This session focuses on bioprocessing research, which impacts on ethanol, chemicals, and biomass. New reactor systems for producing ethanol and solvents are presented, plus presentations on the hydrolysis of cellulose and a biosolar reactor. The poster session contains a wide variety of topics in bioprocessing research.