

Energy Utilization of Secondary Raw Materials and Alternative Energy Sources

What is the main challenge in fuel cells for electricity generation?

- A. Lack of suitable electrodes
- B. Purity of fuel hydrogen
- C. Inadequate voltage output
- D. Limited availability of oxygen

What is a disadvantage of steam natural gas reforming for hydrogen production?

- A. High energy efficiency
- B. Low CO₂ emissions
- C. Consumption of fossil fuel
- D. Generation of clean hydrogen

What is the advantage of plasma gasification technology?

- A. Production of significant CO₂ emissions
- B. Energy utilization of tertiary raw materials
- C. Inefficient thermochemical conversion
- D. Generation of non-leachable waste

Why is the purity of synthesis gas crucial for further use?

- A. It enhances the color of the gas
- B. It reduces the need for purification
- C. It prevents corrosion in pipes
- D. It ensures efficient downstream processes

What are the advantages of membrane separation in hydrogen recovery?

- A. Complex procedures
- B. High energy costs
- C. Independence from gas composition changes
- D. Limited application potential

What is the focus of research on biomass processing using microwave pyrolysis?

- A. Production of solid residue
- B. Influence of procedural parameters
- C. Quality of input products
- D. Turbostratic carbon structure

What is Gas to Liquids (GTL) in the context of alternative fuel production?

- A. Gasoline to Liquids
- B. Geothermal to Liquids
- C. Green to Liquids
- D. Gas to Liquids

What is the major concern in the safety of hydrogen technologies?

- A. High initiation energy
- B. Slow combustion chemistry
- C. Low explosiveness
- D. Atmospheric conditions

What does the Organic Rankine Cycle (ORC) technology primarily use for electricity generation?

- A. High-potential heat
- B. Solar energy
- C. Low-potential heat
- D. Geothermal energy

What is the potential application of ORC units with an installed capacity of up to 50 kWe?

- A. Industrial use only
- B. Commercial and residential spheres
- C. Geothermal power plants
- D. Hydrogen production facilities