

2.996 Fundamentals of Advanced Energy Conversion Lecture Memo

Lecture number: 8

Date: March 1st, 2004

- **Efficiency revisited: First law, second law, electrochemical, fuel efficiencies**
- **Faraday's law, Faradic efficiency**
- **Basic operations of electrochemical cells: anode and cathode**
- **Conservation of charge**
- **Cell types: Galvanic, Equilibrium and Electrolytic**
- **Pb-acid rechargeable battery**
- **Complete cell diagram**
- **Standard reference potential**
- **The combined 1st and 2nd laws with generalized work**