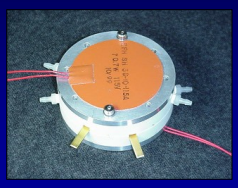
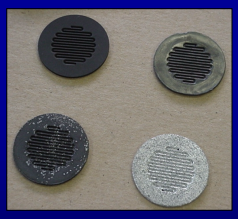
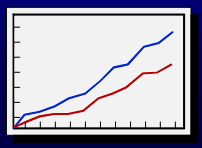
This presentation evaluates composite materials for the bipolar plates of fuel cells



Role of bipolar plates in fuel cells



Comparison of bipolar plate materials



Comparison of bipolar plate performance

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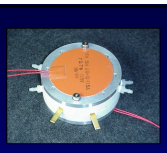
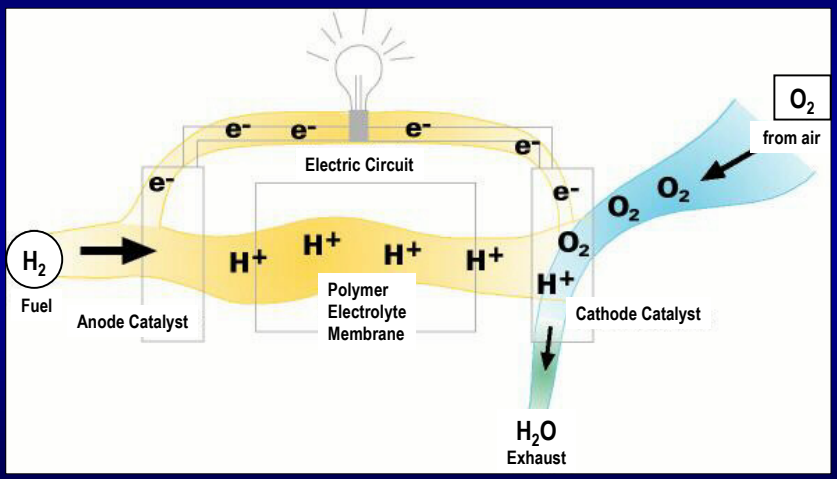
Fuel cells are devices for energy conversion





[Breakthrough Technologies Institute/Fuel Cells 2000]

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Composite materials are ideal for bipolar plates

Advantages

- Easy to shape
- Light in weight
- Resistant to corrosion

Disadvantages

- Low conductivity
- High cost (at present)

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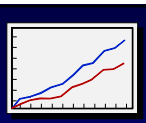
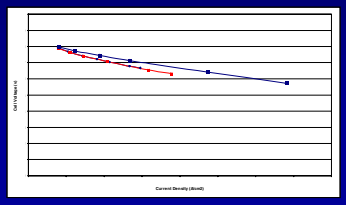
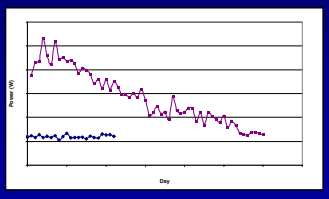
There are three methods for bipolar plate evaluation





Polarization Curves



Power Curves

Visual Inspection

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