Fault Monitoring in PEFC Stacks by Evaluation of Local Performance and Cell Impedance Analysis

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Outline

• Fault detection setup
• Performance vs. load
• Membrane dry-out
  • Anodic faults
  • Cathodic faults
• Lessons learned
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• Monitoring of high importance
  → Assure high efficiency and lifetime

• CVM is not sufficient to identify fault modes

• PCB and impedance technique improve monitoring sensitivity and understanding of local faults
  – Cell location in stack
  – Active area

• On-line monitoring of single cells seems to be achievable using DEIS

Thank you very much for your attention!