A Robust and Inexpensive Iron-Air and Nickel-Iron Rechargeable Battery for Grid-Scale Energy Storage

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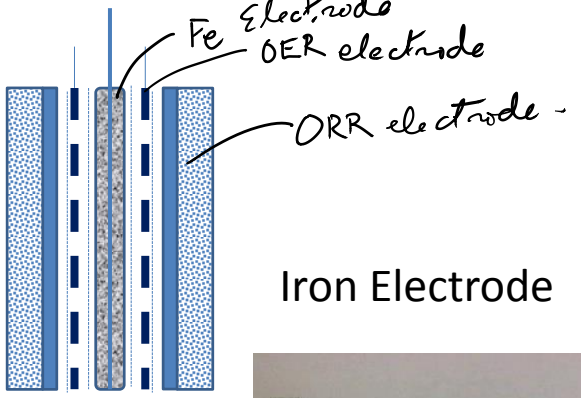
Sub-Awardee*: Jet Propulsion Laboratory, California Institute of Technology*
ARPA-E GRIDS Program (Program Manager: Dr. John Lemmon/Dr. Mark Johnson)

Advantages of the Iron-Air Battery

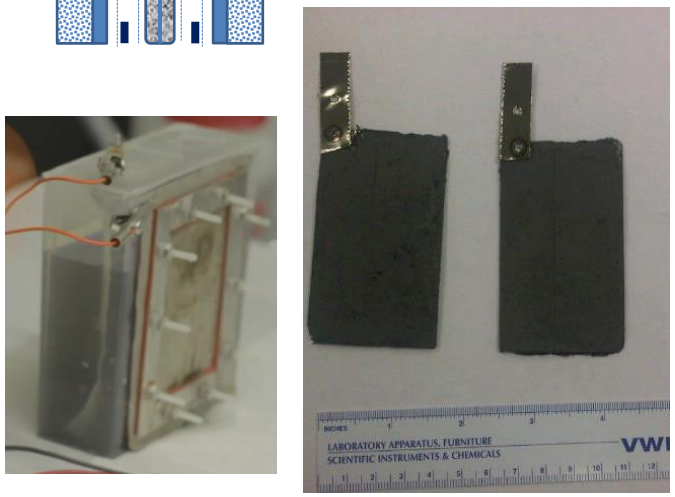
- Extremely Low Cost and Abundant Materials
- Environmentally friendly
- High Theoretical Specific Energy, 764 Wh/kg
- Iron electrode is robust to cycling over 2000 cycles at 100% Depth of Discharge

Demonstrated under ARPA-E Project :

- High Charging Efficiency >95%
- 3C rate capability
- > 2000 cycles



Iron Electrode



Nickel – Iron Cell

Oxygen Electrodes