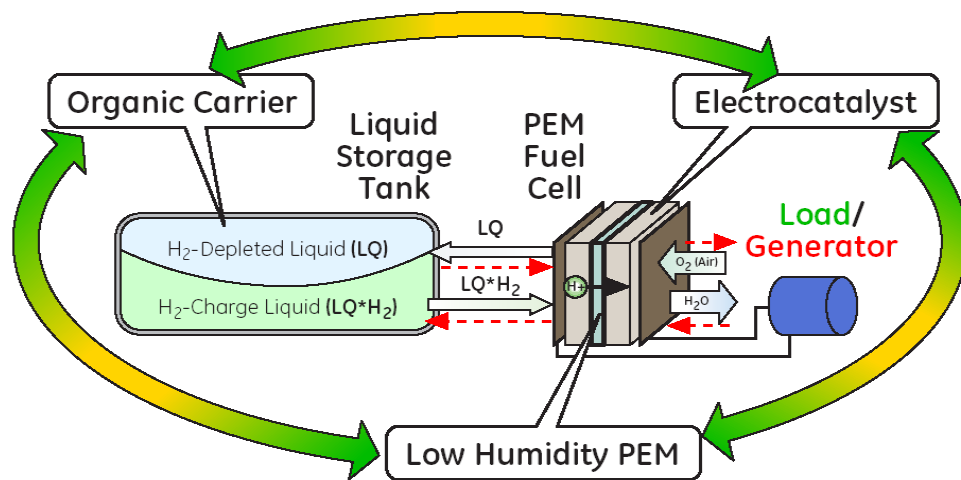


The EFRC will develop the fundamental understanding of electrocatalysis, transport phenomena and membrane materials for an entirely new high-density energy storage system that combines the best properties of a fuel cell and a flow battery



RESEARCH PLAN AND DIRECTIONS

- Main focus:**
- Effective (de)hydrogenation electrocatalysts
 - Energy dense reversible liquid organic hydrogen carriers
 - Low humidity proton exchange membranes, selective transport of protons in the presence of fuels
 - Compatibility of cell components

Approaches: Combination of modeling, synthetic chemistry and electrochemistry

Unique aspects: Using PEM fuel cell with liquid organic carriers instead of hydrogen gas

Potential outcome: High-density mobile and stationary energy storage systems