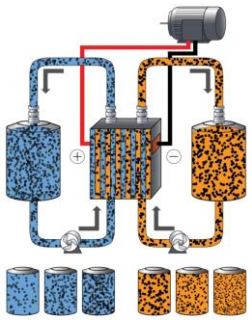
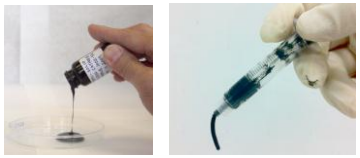
SEMI-SOLID RECHARGEABLE POWER SOURCES: FLEXIBLE, HIGH-PERFORMANCE STORAGE FOR VEHICLES AND GRID AT ULTRALOW COST (<$0.10/Wh)

1. Technology Summary

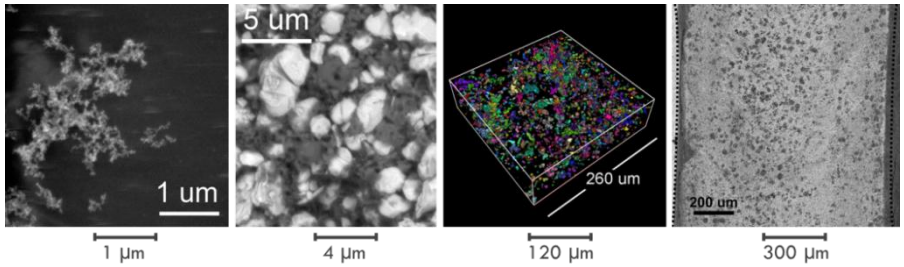
- **Revolutionary Electrical Energy Storage Concept**
  - Combines best attributes of rechargeable batteries and flow cells
  - Decouples energy storage from power delivery

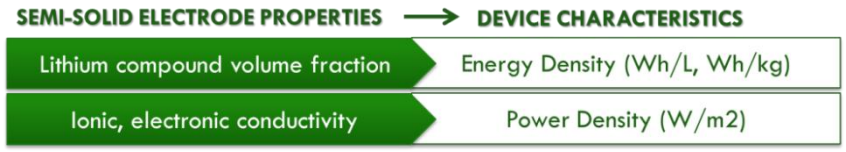


- **Semi-solid Electrodes Deliver High Energy Density, Low Cost**
  - 50vol% Li4Ti5O12 (anode) / LiMn1.5Ni0.5O4 (cathode)
  - **= 440 Wh/L, 210 Wh/kg**



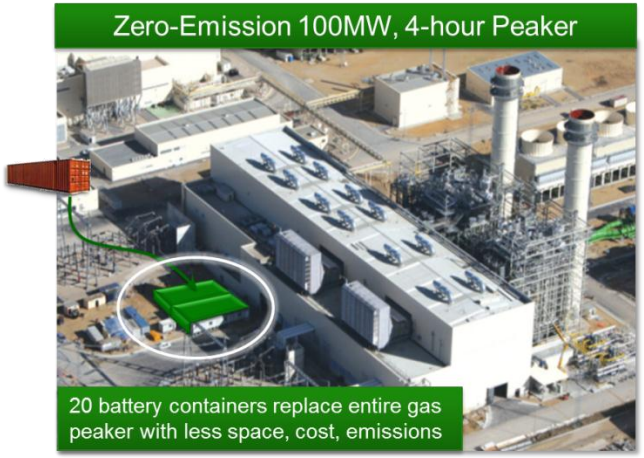
- **Microstructure Overview**





2. Technology Impact

- **Reduce Greenhouse Gases**
  - Replaces inefficient, polluting gas peakers
  - Zero point-of-use emissions
  - Enables high penetration of renewable energy



- **High Value in Multiple Grid Environments**
  - Highly compact for cities, community energy sites
  - Multi-MWh capacity for PV and Wind farm use
- **U.S. Competitive Advantage in Advanced Energy**
  - Develop and bring to market a Breakthrough Technology invented in America.

3. Key Personnel

- **MIT:** Y.-M. Chiang, W. C. Carter, A. Belcher, P. Hammond
- **24M**: J. Cross, T. Wilder
- **Rutgers**: G. Amatucci

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