Company interests and priorities

Increasing the Sustainability of the Electrode Manufacturing Process

Avery Dennison Corporation is a global materials science and digital identificationn solutions company. It provides branding and information labeling solutions, including pressure-sensitive materials, radio-frequency identification (RFID) inlays and tags, and various converted products and solutions. The company designs and manufactures a range of labeling and functional materials that enhance branded packaging, carry or display information that connects the physical and the digital, and improve customers' product performance. Our core technologies include polymeric design and manufacturing and roll to roll coating and fabrication.

R&D challenges and priority areas:

- **Solvent free fabrication of electrodes.** The energy consumption required for slurry manufacturing and solvent drying renders the electrode manufacturing process inherently unsustainable, energy intensive and expensive. In addition, the state of art solvent is toxic and unsustainably sourced.
- **Next generation binders to increase sustainability and durability.** The drawbacks of traditional PVDF binder are that they are inherently unsustainable and toxic, can generate detrimental HF upon aging and lack desired long term durability performance.
- **In-line fabrication of separator on electrode.** The current method for separator manufacturing is energy intensive and hazardous due to the use of halogenated solvents in the wet process. Concurrent manufacturing and assembly of both electrode and separator would greatly reduce the time and energy required.

Stages of development preferred:

- Pre-experimental
- Early stage technology development - Proof of concept

Types of collaboration preferred:

- Sponsored research agreement
- Joint development agreement

SUBMIT OPPORTUNITIES