

## Buried-Anode Thin-Film Microbattery B-Roll

### *Scene-by-Scene Description*

Get the facts behind the footage available on the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) B-Roll Web site at [eere.energy.gov/news/b\\_roll.cfm](http://eere.energy.gov/news/b_roll.cfm).

**Video Title:** Thin-Film Lithium Rechargeable Microbattery B-Roll

*Video Only/No Audio*

**Location:** National Renewable Energy Laboratory (NREL), Golden, Colorado

**Shoot Date:** September 24, 2009

**Total Running Time:** 2:19

**Scene 1:** 00:05: NREL researchers fabricate and test the thin-film microbattery component layer known as the electrolyte, or ion storage layer. Unlike the liquid component in standard battery technology, thin-film batteries utilize a solid electrolyte made from a glass known as LiPON that requires fabrication in a vacuum chamber.

**Scene 2:** 00:57: Researcher walks into the Surface Analysis Laboratory in NREL's Science and Technology Facility. The Surface Analysis Team determines the chemical, elemental, and molecular composition as well as the electronic structure of material surfaces and interfaces.

**Scene 3:** 01:26: Researcher uses surface analysis equipment to study thin-film structures used in microbattery components.

**Scene 4:** 01:52: Buried-anode thin-film battery samples created at NREL's Science and Technology Facility displayed with sizing reference (still images).

### *Learn More about the Buried-Anode Thin-Film Microbattery*

A breakthrough, commercially viable battery design – developed at the Department of Energy's National Renewable Energy Laboratory – could hold the secret to developing a large battery that is safer, more powerful, and longer lasting. This technology may help accelerate the development of more fuel-efficient vehicles.

More information about energy storage technologies like the buried-anode thin-film microbattery can be found on the EERE Vehicle Technologies Program Web site at [eere.energy.gov/vehiclesandfuels](http://eere.energy.gov/vehiclesandfuels).