

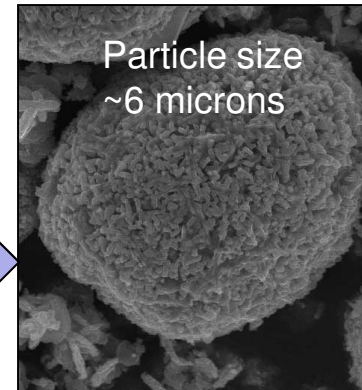
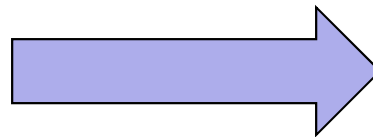
Ovonic Nickel Hydroxide Manufacturing Process

Adaptable for Lithium Cathodes



USA Manufacturing

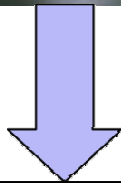
Li-Ion Cathodes



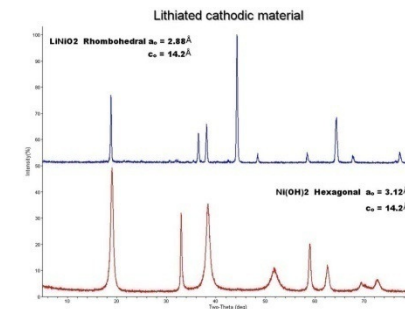
- Spherical particles
- Tap Density
- Surface Area
- Average Particle Size

- Ovonic process allows for high substitution
- Nickel Cobalt Aluminum
- Nickel Cobalt Manganese

NiMH



- Ni(OH)₂ key component in NiMH cost and performance
- Enables 70°C charge acceptance
- Extends life through oxygen suppression



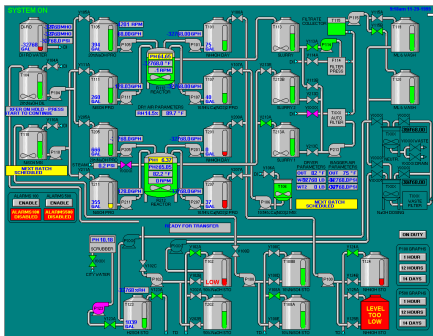
➤ **Both NCA, NCM demonstrated**

Ovonic Cathode Manufacturing

Multi-Chemistry Capability



Tons per day



Six-Sigma Operation

- **USA Manufacturing of Nickel Hydroxide since 1996**
 - Precursor material
- **Nickel-Cobalt-Manganese (NCM)**
- **Nickel-Cobalt-Aluminum (NCA)**
- **Elements and stoichiometry to customer specification**
- **Wide variety of additional modifiers and dopants**
- **Particle size, tap density, surface area, crystallinity to customer specification**