

Highlights

1. Lead-steel layered composite electrode material with excellent properties is successfully prepared by hot dipping and roll-bonding technology.
2. Effect of rolling reduction ratio on microstructure, conductivity and electrochemical properties is studied.
3. The morphology of the peeled surface is observed, and the interface formation mechanism is discussed.
4. The practical application of the composites is tested by the industrial production experiment for adiponitrile.