function of the discharge rate and cycle number. Prototype batteries showed reversible lithium cycling with good capacity retention. The chargedischarge ratio after a few cycles was 0.985. The battery performance was evaluated during discharge the cells at different rates. The energy density calculated at a C/4 rate was about 100 Wh kg\(^{-1}\) while the power density calculated at a 3C rate was higher than 280 W kg\(^{-1}\) (both of the values are based on the total battery weight without the current collectors weight). Improvements are expected in terms of a better cathode/anode capacity ratio and electrode porosity reduction.

In the presentation, the electrochemical characterization of the separator as well as the performance of optimized lithium-ion batteries will be reported.

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REFERENCES


Figure 1. SEM micrograph cross-section of a anode/MgO-based separator/cathode hot laminated cell.