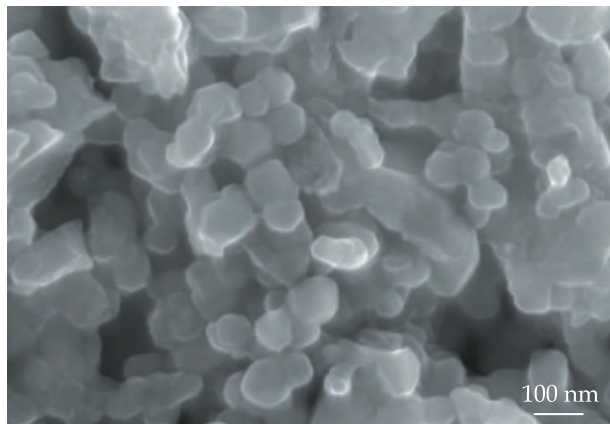


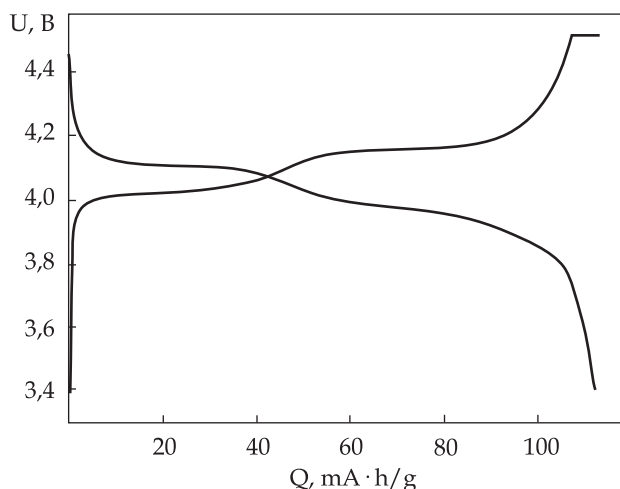
LITHIUM MANGANESE SPINEL LiMn_2O_4 FOR HIGH-RATE BATTERY APPLICATIONS

Advantages

High-voltage cathode material; as compared with the commercial analog, it can sustain current loads of up to 14 800 mA/g (100 C)



SEM micrograph of LiMn_2O_4



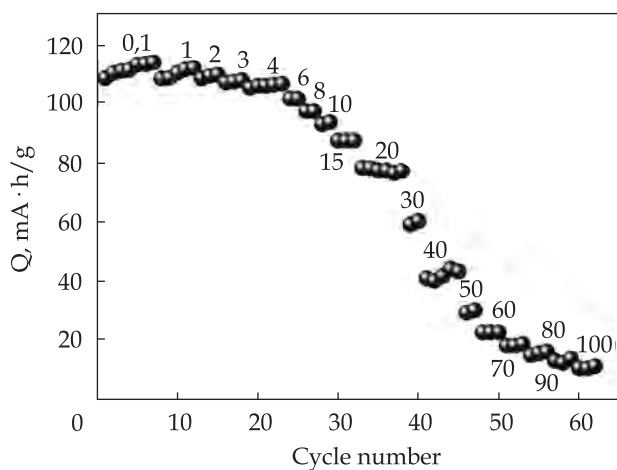
Stationary charge/discharge curve for LiMn_2O_4 at a current load of 148 mA/g (1 C)

Areas of Application

Cathode material for lithium-ion batteries used in renewable energy

Specification

Operating voltage range, V	3.4–4.5
Nominal capacity at 1.5 C discharge current, mA·h/g	115
Maximal current load, mA/g	14 800
Particle size, nm	50–70
Crystallite size, nm	65



Discharge capacity dependence on the cycle number for LiMn_2O_4

Stage of Development.

Suggestions for Commercialization

IRL5, TRL4
The electrode material is proposed

IPR Protection

IPR2, IPR3

Contact Information

Sviatoslav A. Kirillov, Joint Department of Electrochemical Energy Systems of the NAS of Ukraine;
+38 044 424 35 72, e-mail: kir@i.kiev.ua