

FROM MODEL

The screenshot displays the COMSOL Multiphysics interface for a Lithium-Ion Battery model. The left sidebar shows the Model Builder tree with components like Porous Electrode Reaction 1 and Separator 1. The main window shows the Settings for Porous Electrode Reaction, including parameters for materials (NCA Electrode, LTO Electrode), equilibrium potential, and electrode kinetics (Butler-Volmer). The right sidebar shows the Input & Results section with a table of experimental data and a Nyquist Plot.

Cell Properties

- NCA electrode thickness: 35 μm
- LTO electrode thickness: 115 μm
- Separator thickness: 50 μm
- Current collector area: 32 cm^2
- NCA, initial state of charge: 0.45
- LTO, initial state of charge: 0.2987

Experimental Data

Frequency	Real Impedance	Imaginary Impedance
1000	7.981132075E-4	7.09090909E-5
820	8.177358491E-4	7.90909091E-5
640	8.358490566E-4	9.09090909E-5

Nyquist Plot

The Nyquist Plot shows Imaginary Impedance [Ωm^2] on the y-axis (scaled by $\times 10^4$) versus Real Impedance [Ωm^2] on the x-axis. The plot displays a semi-circular arc at low frequencies and a linear increase at high frequencies, with experimental data points (blue circles) and a fitted curve (blue line).

TO APP

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