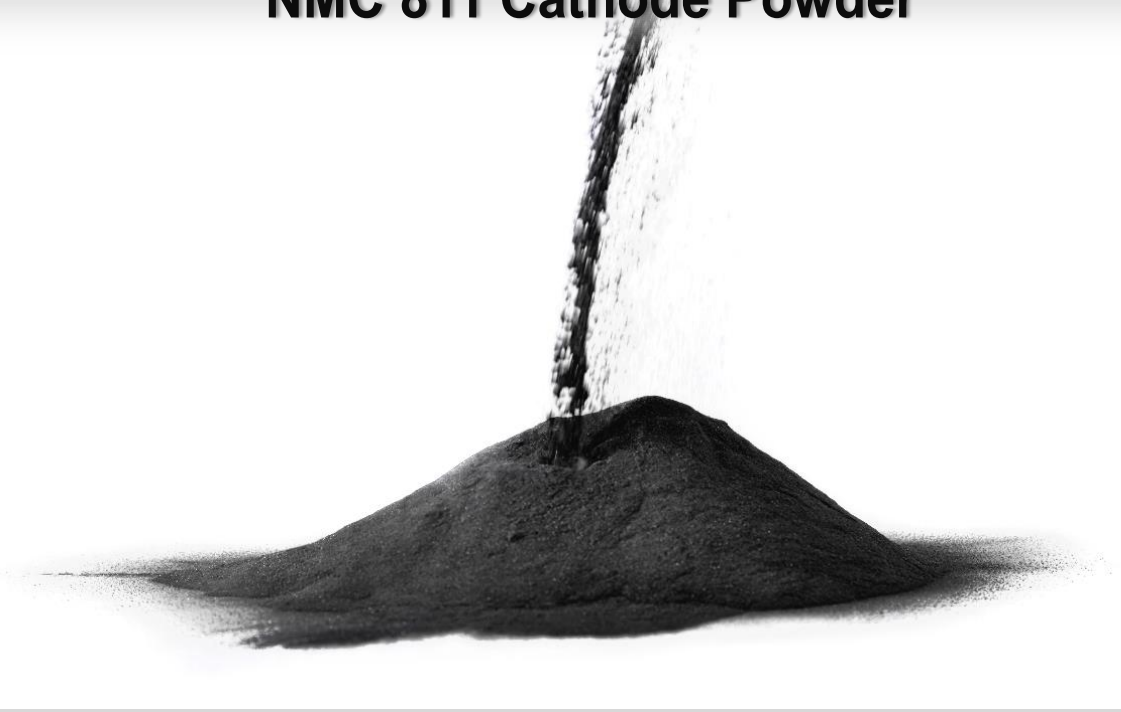
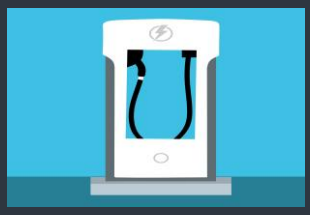
Lithium Nickel Manganese Cobalt Oxide NMC 811 Cathode Powder

LTS Research Laboratories offers high performance Lithium Nickel Manganese Cobalt Oxide (NMC) powders, available in various compositions used in next generation Lithium-ion batteries. LTS can provide following NMC grades for research or commercial purposes:

NMC333
NMC532
NMC622
NMC811





INTRODUCTION:

The increasing demand of solid-state batteries has lead to more consumption of solid-state electrolytes. One of the most successful solid-state battery systems is the one made with Lithium Nickel Manganese Cobalt Oxide (NMC) as a cathode material. The most common cathode combination is Ni/Mn/Co:3/3/3 mol% also known as NMC333. Depending on application this combination can be varied. Typical available cobinations are NMC333, NMC532, NMC622, NMC811.

PROPERTIES:

- Good energy density
- Long cycle life
- Excellent high-Temperature behavior, lowest self heating rate of all cathode powders
- Low cost

APPLICATIONS:

- EV vehicles – Automotive batteries
- Medical devices
- Electric tools
- Consumer Electronics
- E-bikes

SPECIFICATIONS:

Element Content (wt%)									
Li	7.40±0.20wt%	Co	6.60±0.60wt%	Fe	0.005	Na	0.05	Mg	0.02
Ni	47.50±1.50wt%	Mn	5.50±0.60wt%	Cu	0.005	Ca	0.02		

Particle Density	≥2.10g/cm3
Specific Capacity	≥190.0mAh/g
PH	11.60±0.20

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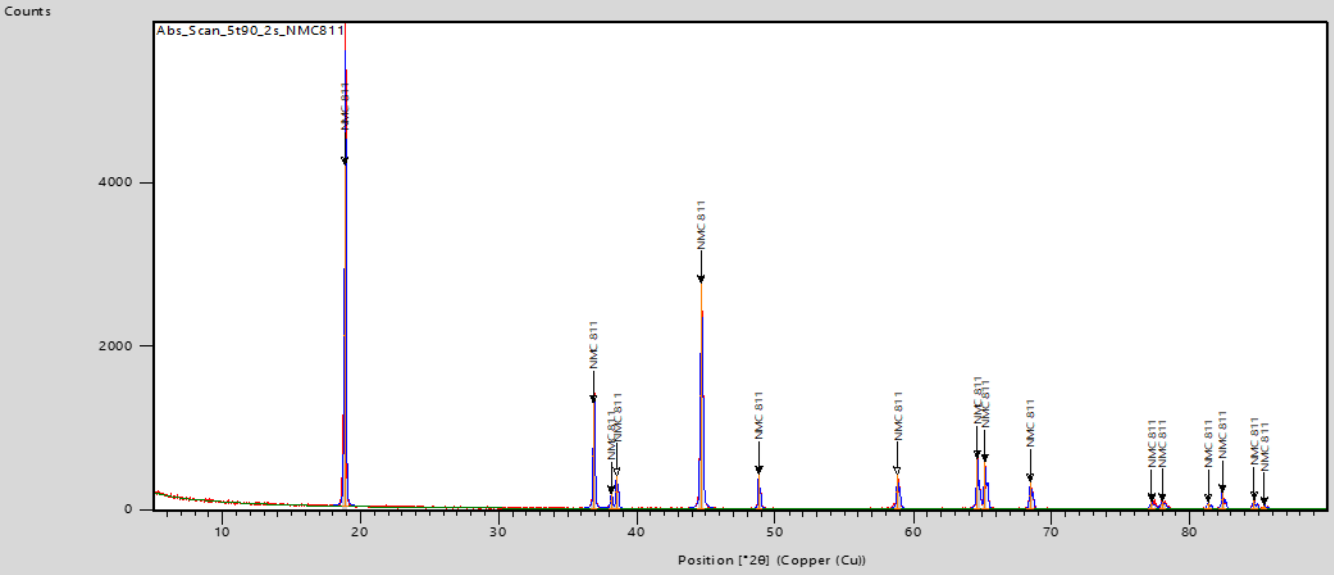
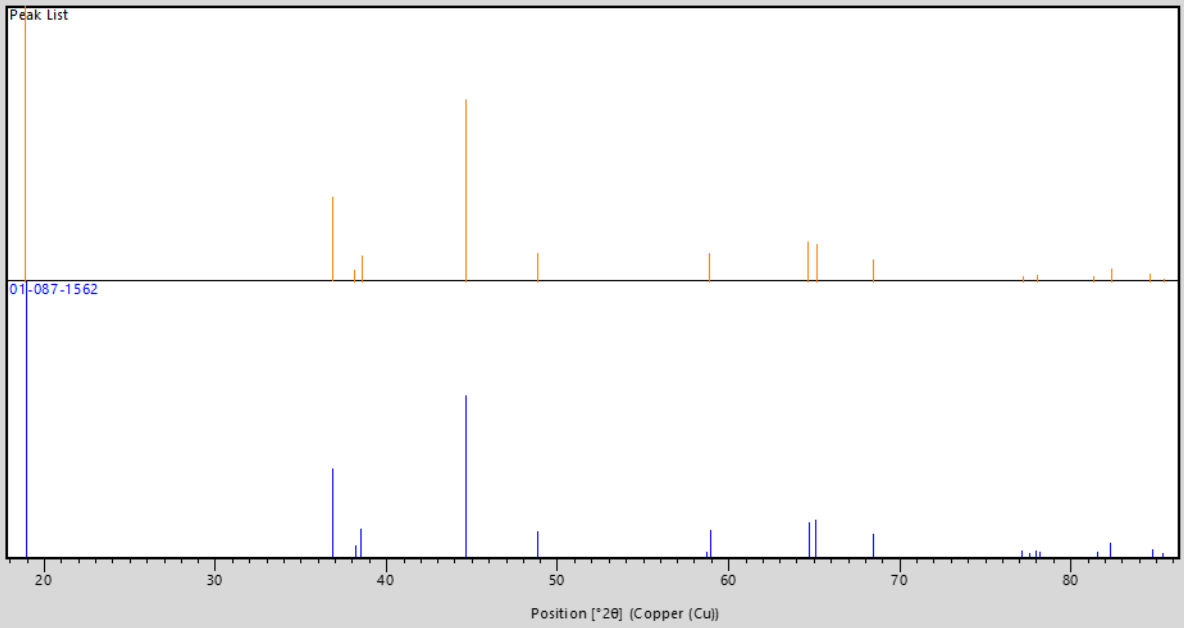
NMC 811 Cathode Powder

The following characterization results reflect on the NMC 811 offered by LTS Research Laboratories Inc.

X-Ray Diffraction (XRD)





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