

# The Complex Role of Aluminium Contamination in Nickel-Rich Layered Oxide Cathodes for Lithium-Ion Batteries



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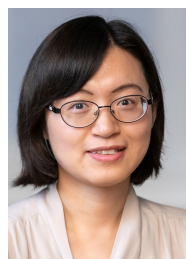
Juhan Lee



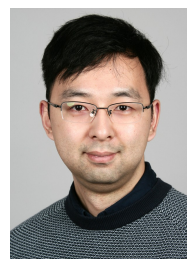
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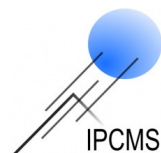
Zonghao Shen



Chao Xu



Zachary Ruff



Invited for this month's cover picture is the group of Dr B. Layla Mehdi from the University of Liverpool. The cover picture demonstrates the impact of Al impurities on the nickel-rich NMC cathodes. This observation of increased Al content can bring new insights into the ongoing discussions concerning the capacity fading phenomenon of nickel-rich layered oxide materials in lithium-ion batteries. Read the full text of the Article at 10.1002/batt.202100110.

## Who designed the cover?

The cover was design by the Architect Tom Budd.

## What was the inspiration for this cover design?

The design of the cover was inspired by the Ni-rich NMC cathode studied in this work, which is one of the very materials used in the commercial electric vehicles.

**What new scientific questions/problems does this work raise?**

This work emphasizes the importance and role of Al-based impurities, which greatly affect the phase transformation and stability of the NMC cathodes studied herein. This observation of increased Al content can bring new insights into the ongoing discussions concerning the capacity fading phenomenon of Ni-rich layered oxide materials in lithium-ion batteries.

