

SAFETY ALERT

LITHIUM-ION BATTERIES



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Lithium-ion Battery risks in the workplace

Lithium-ion batteries are commonly used in small devices, tools and research instruments. Lithium-ion batteries are classified as dangerous goods (Class 9) because of their potential to cause fire hazards.

These batteries have a higher capacity to store energy compared to a traditional battery, and damage, deterioration, failure or misuse can lead to chemical burns, electric shock, explosion or fire that may be difficult to extinguish.



What you need to do now.

- ✗ don't leave your device in direct sunlight or in hot vehicles for extended periods
- ✗ don't leave your device continuously plugged in on charge. Batteries are meant to cycle – discharge and recharge
- ✗ don't charge your device on a combustible surface
- ✗ don't charge a large number of devices or batteries in the same space (increased chance of thermal runaway)
- ✗ don't try to forcibly remove a battery or replace with an incompatible battery
- ✗ don't try to put a damaged or swollen battery back into any device
- ✓ if your device supports battery health monitoring and/or optimised battery charging, ensure these are enabled
- ✓ only use dedicated Li-ion battery disposal pathways as described in the Lithium-ion battery Sharepoint page and don't stockpile battery waste.
- ✓ tape the terminals before disposal
- ✓ use the power charger, dock or screen provided by DTS to charge your laptop
- ✓ ensure all stored lithium batteries units (excluding those in use and contained in a device or equipment) are entered into the University Chemical Manifest (Chemwatch)

In the case of odour or signs of vapour or smoke coming from a device:

If possible, turn off the power immediately and cover the device with a fire blanket (fire extinguishers have limited use with Li-ion battery fires)

Avoid all contact with the fumes (fumes can be both toxic and carcinogenic)

Remove all people from the space, and follow emergency procedures

Incidents involving lithium batteries should be reported through AIMS as soon as possible.

What happened.

Australian universities including UON have experienced a range of lithium-ion battery incidents including:

- Swollen batteries associated with continuous charge or being left in hot vehicles related to fieldwork.
- Small fires associated with storage of used batteries where the terminals have come into contact with other batteries for prolonged periods, or where batteries have been used in out of specification setting.

Who does this impact.

All users of devices with lithium-ion batteries.

What the university is doing.

HSW has produced this safety alert and guidance to increase awareness around this issue.

Background/Related info.

For further guidance refer to [Hazardous Materials and Dangerous Goods \(sharepoint.com\)](#) or contact Health and Safety (healthandsafety@newcastle.edu.au).

Additional information is also available at [Battery and charging safety - Fire and Rescue NSW](#).