

## Lithium-Ion Battery and Electronic Mobility Devices Fire Safety

### PURCHASING

1. Buy devices and batteries from reputable manufacturers and vendors.
2. When purchasing, look for the Underwriter Laboratories (UL) mark. The UL mark shows that the product was tested to nationally recognized safety standards (UL2849 or UL2272).
3. Check for product recalls before buying.
4. Follow the manufacturer's instructions for charging and storage. Always only use the cords and power adaptors made specifically for the device.
5. When purchasing a new battery, only buy batteries and chargers specifically designed by the manufacturer for your device. Do not seek alternative battery options.

### HANDLING & USE

1. Follow the manufacturer's instructions for charging, use, and storage
2. Use only the charger that came with the device
3. Charge devices outside, if possible, and Do Not charge your device in direct sunlight
4. Do Not charge your device in your room
5. Plug devices directly into a wall outlet, do not use extension cords
6. Do not leave devices unattended while charging
7. Unplug devices once fully charged
8. Do not charge devices near flammable materials
9. Keep batteries and devices at room temperature and avoid exposing batteries to extreme temperatures

### STORAGE

1. Store batteries and devices in dry, cool locations
2. Do not store batteries near heat sources or flammable materials
3. For long-term storage, keep batteries at about 40% charge.

### WARNING SIGNS AND EMERGENCY RESPONSE

1. *Stop using and unplug devices immediately* if you notice:

<ul style="list-style-type: none"><li>• Odors</li></ul>	<ul style="list-style-type: none"><li>• Shape changes such as bulging</li></ul>
<ul style="list-style-type: none"><li>• Color changes</li></ul>	<ul style="list-style-type: none"><li>• Leaking</li></ul>
<ul style="list-style-type: none"><li>• Excessive heat</li></ul>	<ul style="list-style-type: none"><li>• Odd noises</li></ul>

2. If a battery catches fire:

<ul style="list-style-type: none"><li>• Leave the area immediately</li></ul>	<ul style="list-style-type: none"><li>• Call Campus Security x5000 or 626-395-5000</li></ul>
<ul style="list-style-type: none"><li>• Secure the area to contain the fire</li></ul>	<ul style="list-style-type: none"><li>• DO NOT attempt to extinguish the fire yourself</li></ul>

### DISPOSAL

1. Throwing batteries away in the trash is illegal; Do Not put lithium-ion batteries in regular trash
2. For proper disposal on the Caltech campus,
  - Individually wrap batteries or tape the ends
  - Submit a "Facilities Service Request" under Environmental Health & Safety for an electronic waste pick-up through the [Access.Caltech](#) portal.

### ADDITIONAL SAFETY TIPS

1. Never modify or disassemble batteries

By following these guidelines, you can significantly reduce the fire risks associated with lithium-ion batteries and electronic mobility devices. Always prioritize safety and be alert for any signs of battery malfunction.