

ASL Code of Conduct Rechargeable Batteries

Purpose

The Goal of this code of conduct is the achievement of a high level of safety standard and safety awareness in ASL in terms of rechargeable batteries. We want to achieve this goal through targeted information and awareness, not through prohibition and control.

To whom this document directs

- Employees
- Students
- Academic guests
- Temporary employees

What is it about?

Due to our daily work with autonomous platforms, a considerable number of rechargeable batteries is in daily operation in the lab. Some of these batteries may be potentially dangerous when not properly handled.

Potentially dangerous battery types are:

Battery type	Danger sources (Risk)	Possible Impact
Lithium Ion	<ul style="list-style-type: none">- Mechanical stress (medium)- Mechanical deformation (medium)- Mechanical damage (high)- Short Circuit (high)- Overcharging (high)- Wrong storage (low)	<ul style="list-style-type: none">- Overheating- Meltdown of housing- Other structure parts may catch fire- Unwanted chemical reactions- Fire- Explosion- Emission of toxic gases- Strong smoke development
Lithium Polymer	<ul style="list-style-type: none">- Mechanical stress (high)- Mechanical deformation (high)- Mechanical damage (high)- Short Circuit (high)- Overcharging (high)- Wrong storage (low)	<ul style="list-style-type: none">- Overheating- Meltdown of housing- Other structure parts may catch fire- Unwanted chemical reactions- Fire- Explosion- Emission of toxic gases- Strong smoke development

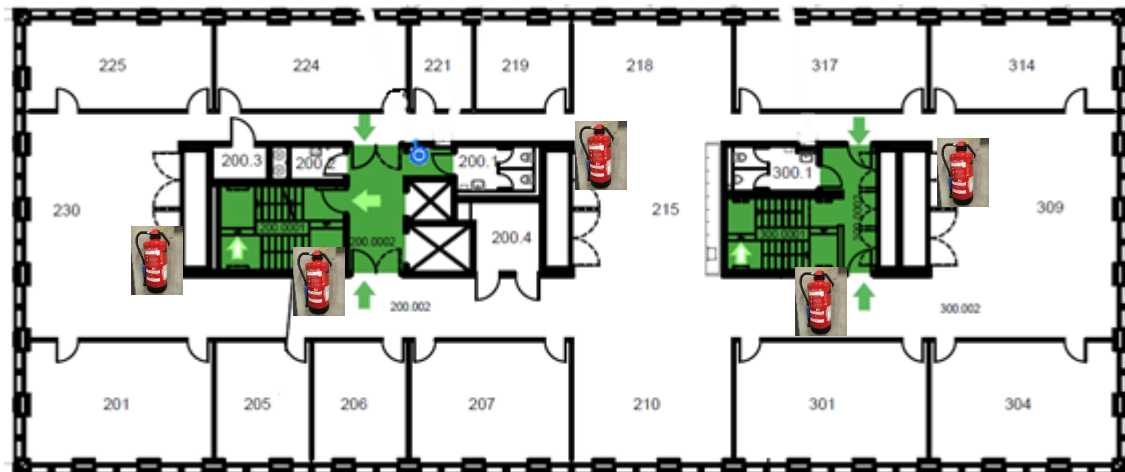
Do's and dont's when working with batteries

- Comply with the battery manufacturer's specification
- Store unused batteries in fire safe boxes
- Dispose exhausted, defective, deformed or damaged batteries immediately
- Charge batteries with a specification matching charger
- Keep your working desk tidy and avoid inflammable materials laying around near to your electrical installations
- If unattended (e.g. overnight) charge your batteries in a fire safe box

- Do never charge batteries without a fire safe enclosing
- Do never charge defective, deformed or damaged batteries
- Do never charge batteries without an appropriate charging unit
- Do never short the terminals of a battery
- Do never mechanically treat a battery
- Do never punctuate the enclosure of a battery
- Do not expose batteries to high temperatures

Tools to fight a fire with batteries or electronics in general

LEE J floor: 5 x F-500 EA fire extinguishers distributed in the corridors



What to do in case of overheating or fire of a battery

- Do not touch anything on your platform
- Move quickly away of your platform
- Get one of the fire extinguishers (marked LiPo) and battle the fire
- If cooled down get the platform out of the building or put it into a firesafe box and close it
- Inform the ETH emergency organization (**phone number 888**)

What to do in case of heavy smoke on the floor

- Urge anybody present on the floor to get out of his room and to leave to floor
- Go **downstairs** to the next floor
- In the stair house press the **red FIRE EMERGENCY Button**
- Wait on the arrival of the firefighter brigade
- Do not open the windows

Important phone numbers

ETH emergency organization	888
Firefighter brigade	118

First Name	I hereby declare that I have read and understood the meaning of this document*
Last Name	
Date	Signature

*With this signature you only declare that you have read the document. It has no legal liability.