



Cornell University

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"Micro-Mobility" E-Bike & Lithium-Ion Battery Safety Guidance

Most Micro-Mobility e-bikes and e-scooters are powered by lithium-ion batteries. These are the same type of battery that powers many of today's electric vehicles, cell phones, laptops, and power tools. When lithium-ion batteries are damaged, they can overheat, catch on fire, and even lead to explosions. A thermal runaway is when fires occur, and they tend to burn very hot making it difficult for emergency responders to extinguish.

E-bike and e-scooter battery fires have been associated with faulty and non-compatible charging equipment, improper charging practices, and overloaded electrical circuits.

To help prevent fires, the following guidelines should be followed when charging, storing micro-mobility e-bikes and e-scooters:

- These units should not be charged within residential rooms, offices, or Academic Buildings. Use of external bike racks or bike rooms that are protected by an automatic sprinkler system is required.
- Always follow the device manufacturer's instructions for charging, use and storage.
- Store micro-mobility e-bikes, e-scooters, and batteries away from exit doors and 3-foot minimum separation from all combustible materials.
- Avoid Knockoffs, only purchase and use devices, batteries, and charging equipment that are listed by a nationally recognized testing lab and labeled accordingly (U.L. or ETL)
- Only use the battery and charging units that were designed and came with the device.
- The charging device shall be plugged directly into a wall outlet. The use of extension cords or power strips is strictly prohibited.
- Disconnect the charging unit and batteries when they are fully charged.
- Have device repairs performed by a qualified professional.
- Regularly inspect your device and batteries for warning signs listed below.
- Do not put lithium-ion batteries in the trash. Recycling is always the best option. Take the batteries to a battery recycling location or contact your local waste department for disposal instructions.
- Stop using the micro-mobility e-bike or e-scooter if you notice any of these problems with the battery: unusual odor; change in color; too much heat; change in shape; leaking, smoking, or not keeping a charge.
- Call Cornell Public Safety at (607) 255-1111 if a battery overheats, begins smoking, you detect an odor or odd noises, or change in color or shape. Immediately discontinue use, disconnect from charging unit and if safe to do so, move the device away from anything that can catch fire.

Reference Material:

www.dhSES.ny.gov/system/files/documents/2023/09/lithiumion.pdf

<https://www.nfpa.org/education-and-research/home-fire-safety/lithium-ion-batteries>