

Storing and charging lithium-ion batteries safely

– With helpful tips and checklists



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1. Increasing popularity, underestimated risks

There are very few technology trends that have become so firmly established in recent years than the development of ever more powerful energy storage systems based on lithium (Li).

For about 30 years, lithium-ion batteries and accumulators have been conquering the market for energy storage and are used in more and more products and devices. It is no coincidence that the development of the Li-memory technology was awarded with the Nobel Prize for Chemistry in 2019. Whether power tools, garden tools or e-bikes, our private and professional everyday life without lithium batteries is now unimaginable.

But this boom has a flip side. Because these energy storage systems that are so practical and efficient are anything but harmless. They can burst into flames and cause serious fires. Even specially shielded batteries can develop temperatures of over 1,000 °C, as experiments by the BDE have shown.

In recent years, these fire risks have led to frequent recalls of products from a wide range of types and sources of lithium-ion batteries. As more and more batteries are manufactured, the need to transport, store and preserve them has led to an increase in fires with **high damages** as a direct result of lithium-ion batteries. In 2019 alone, around 12,700 tonnes of new lithium-ion batteries came into circulation. Reliable concepts are essential to safely control these risks.

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