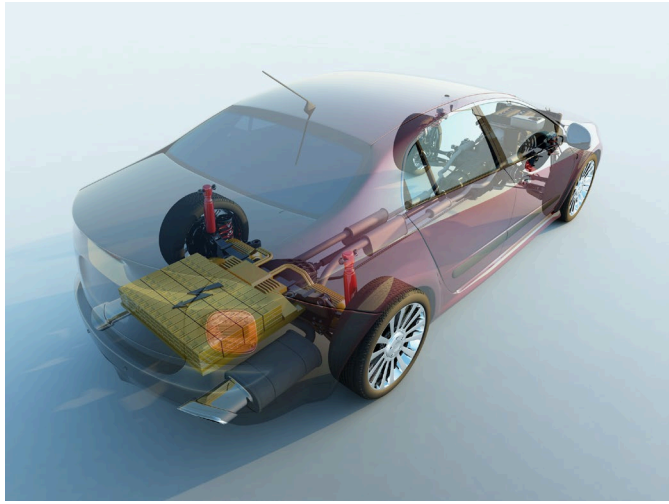
Electric vehicle battery recycling

Read the full article at rsc.li/3u8DLv8



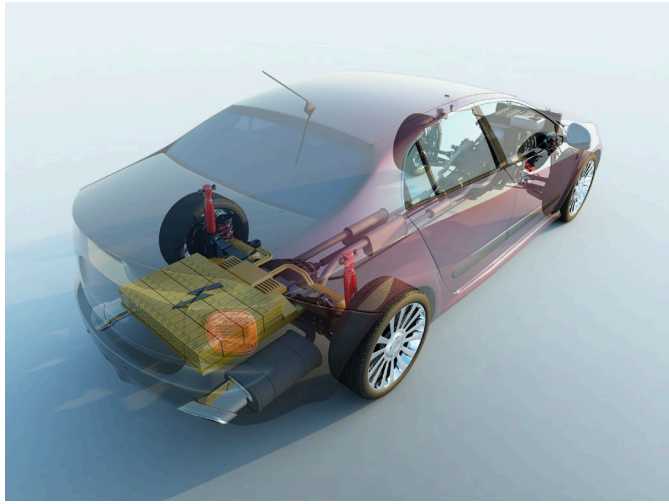
© Getty Images

Researchers have developed a new method for extracting lithium from spent $LiFePO_4$ batteries, used in electric vehicles.

Other recycling methods for lithium-based batteries consume a lot of energy and release waste gases or acid–base reagents that can produce wastewater containing heavy metals. The new mechanochemical method avoids some of these environmental impacts. It involves grinding materials from the battery cathode with a solid oxidising grinding agent. Precipitation reactions, filtration and evaporation then separate three main substances including Li_3PO_4.

Electric vehicle battery recycling

Read the full article at rsc.li/3u8DLv8



© Getty Images

Researchers have developed a new method for extracting lithium from spent $LiFePO_4$ batteries, used in electric vehicles.

Other recycling methods for lithium-based batteries consume a lot of energy and release waste gases or acid–base reagents that can produce wastewater containing heavy metals. The new mechanochemical method avoids some of these environmental impacts. It involves grinding materials from the battery cathode with a solid oxidising grinding agent. Precipitation reactions, filtration and evaporation then separate three main substances including Li_3PO_4.

1. What is a precipitation reaction?
2. Why is it important to recycle the lithium from the batteries?
3. Find out the meaning of the term ‘mechanochemical’.