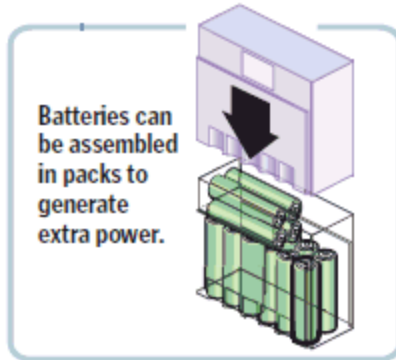
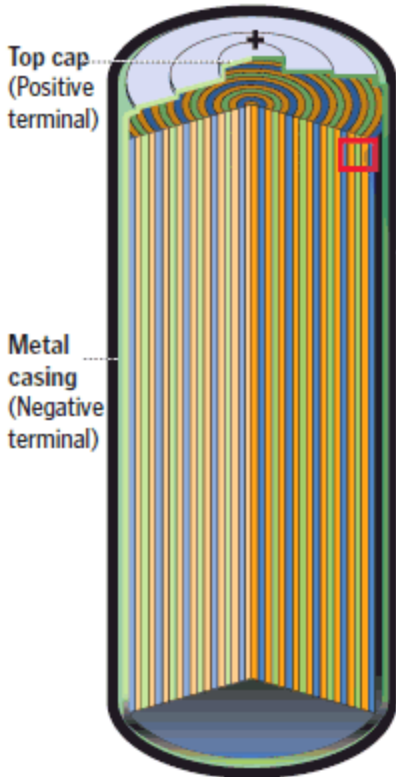


MIT researchers are developing a lithium-ion battery that can charge in seconds. The finding could lead to a new generation of batteries and storage power for everything from laptops to electric cars.

Lithium-ion battery

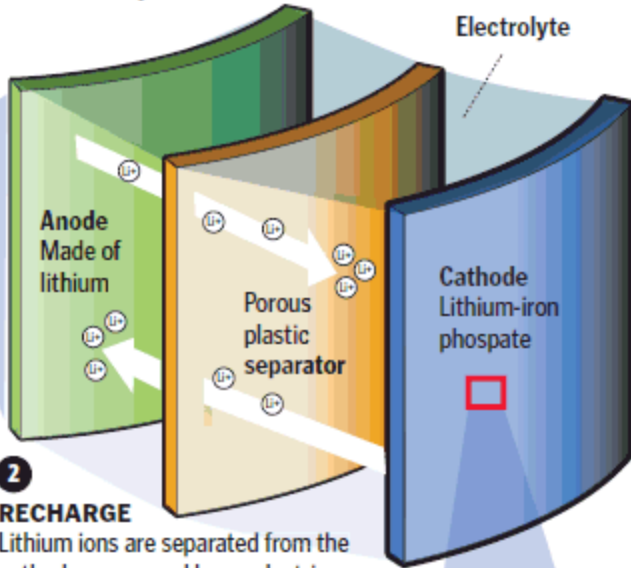
Batteries are composed of sheets of electrodes submerged in a liquid (electrolyte) that allows lithium ions to move from one electrode to the other.



1

DISCHARGE

Batteries generate electric current when lithium ions from the storage electrode (anode), float through the electrolyte and are chemically bound to the cathode.



2

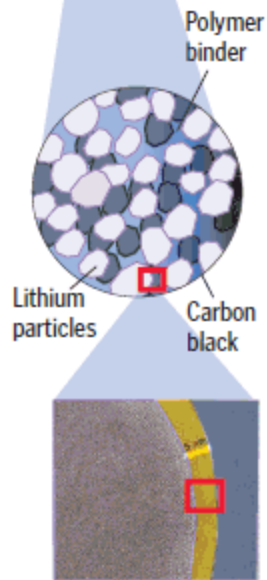
RECHARGE

Lithium ions are separated from the cathode compound by an electric charge and sent back to be trapped again in the anode.

3 SPEED

Speed at which battery can charge is limited by how fast the lithium ions can move through the electrodes. To increase this speed, scientists are building electrodes with nano-particle clumps and carbon additives.

To increase this speed even more, MIT researchers are covering the compound with a microscopic crystallized coating that greatly increases mobility of the lithium ions.



SOURCE: MIT

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