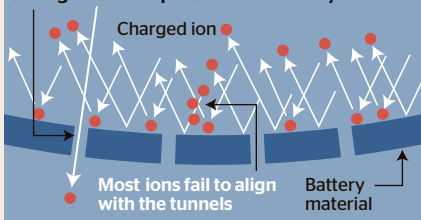


Powering up on the beltway

How it works

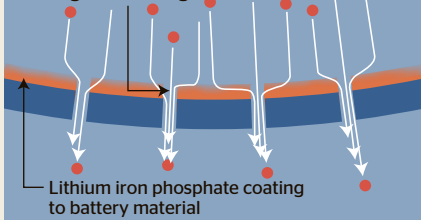
Old battery

For battery to function, lithium ions must pass through microscopic tunnels in battery material



New beltway battery

Beltway material diverts ions through tunnels, increasing the speed of charge or discharge



● Electric vehicle performance could be greatly improved and charging time dramatically reduced, although the batteries would draw too much power to be charged at their maximum rate at home

Improved power supply

● A prototype beltway battery could be fully charged in 15 seconds. A normal battery of the same size took six minutes



● A mobile phone that currently takes hours to charge could take as little as 30 seconds



● Solar and wind-power generation would benefit from improved efficiency of storage, so that electricity could be released when there is no wind or sun

