



Sony' s lithium ion batteries – challenging to reduce environmental footprint

Sony introduced the world's first commercial lithium-ion battery in 1991. Since then, Sony has focused on continually improving this technology to deliver rechargeable batteries with superior properties such as improved energy efficiency and increased energy density.

The lithium-ion battery is smaller than a conventional nickel-metal hydride battery yet has higher capacity. In addition, it delivers efficient energy use with less energy loss as it can be charged with high electrical conversion efficiency. In 2009, Sony also commercialized its proprietary olivine-type lithium-ion battery.



Batteries used at power stations and disaster-prevention facilities – Olivine-type lithium-ion rechargeable batteries

The capacity of a rechargeable battery declines over time according to temperature, humidity and the way it is charged. However, by harnessing the outstanding features of olivine-type lithium iron phosphate and applying a proprietary powder design and cell structure technology, Sony has developed a storage battery with a very long life—more than 20 years*. Among the demanding applications that require longer storage life, this battery is used in power stations and disaster-prevention facilities worldwide.

The lithium iron phosphate used for the battery' s negative terminal, or cathode, is a relatively abundant resource. This makes the technology more environmentally sustainable compared with storage batteries that use rare earth metals.

* When fully charged and discharged once a day at room temperature (23°C)



High-efficiency batteries that support Sony's mobile products – Lithium-ion polymer batteries

Rechargeable batteries are important components of Sony' s mobile and digital imaging products. The lithium-ion polymer rechargeable batteries which are used in many mobile products allow for efficient electricity use as they features higher energy efficiency and less energy loss during discharge compared to conventional nickel-metal hydride batteries. Thanks to its high energy density, lithium-ion polymer technology also contributes to smaller products by making batteries thinner.