

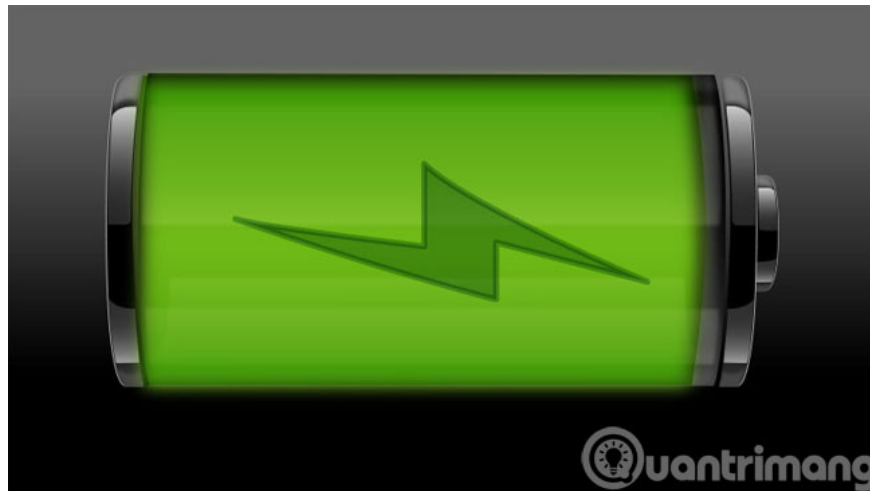
Future smartphone battery technologies

With the speed of smartphone development and accompanying applications are growing rapidly. However, it seems that the development of batteries has not kept up when they still require users to plug in the charger regularly. One signal for us is that scientists are working on the latest technologies to increase the life time and battery life of smartphones. Please refer to the following technologies.

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1. The application increases the time to use Hush battery

Hush is an application created to help technology devices can increase usage time. Research has shown that background tasks consume a lot of energy on mobile devices because they work continuously even when the screen is turned off. The energy of background operations can account for **45.9% of the** total power consumption of a smartphone. Since then, scientists can simply increase the usage time of smartphones and tablets by optimizing this battery consumption.

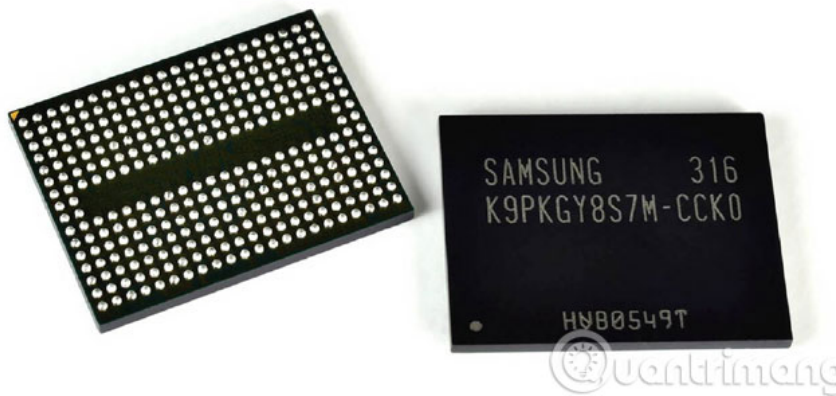


A collaborative research group between Purdue University, Intel Corp. and startup Mobile Enerlytuc has developed an application called Hush that closely monitors background operations of the Android operating system. Since then, this application will prioritize energy for commonly used background tasks. Applications that are not used frequently will be disconnected when the screen turns off to ensure the device's battery power.

Currently, Hush only helps reduce power consumption by about **16%** but remember that this is a software solution so it will not cost users instead of hardware technologies that do not know when to launch. The application development team is still working to improve Hush with the goal of saving half of electricity consumption on Android smartphones.

2. Speed ??up reading and writing NAND flash memory data

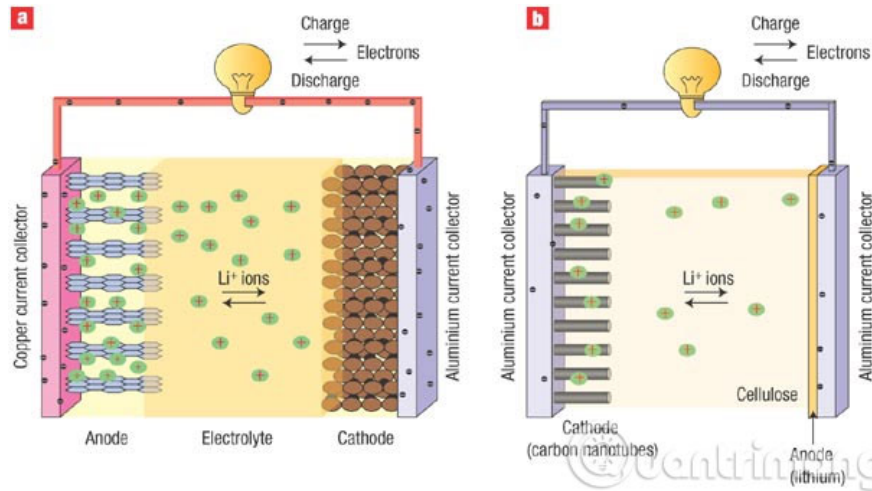
A problem with flash NAND memory is that data packets can only be recorded for a certain number of times before the NAND flash properties are reduced and cannot be used. In other words, the more time it is used, the more data will be stored continuously, the sooner the flash memory will fail.



Fortunately, a team of researchers at Hanyang University in China has found a way to reduce the degradation of this memory. By optimizing the read and write data of the system via the Android stack, the team reduced the data that must be written to memory to 1/6 compared to normal. With this improvement, the read speed of writing NAND flash memory data will be faster thereby increasing the operating life cycle while increasing the system speed. In addition, this technology is expected to increase the average battery life of Android smartphones to **39%**. This is really a technological improvement that not only improves battery life but also brings many upgrades for devices.

3. Pure Anot Lithium battery

In 2014, Stanford University researchers found a way to improve the generation of lithium ion batteries on existing mobile devices. This technology can enhance ion density on the anode by using pure materials and thereby improving battery capacity and battery life. This technology can extend smartphone usage up to 3 times. Try to imagine that it takes up to 3 days to charge smartphones compared to every day as well as charge this current to see the effectiveness of this technology.



4. Use radio waves to charge your phone

Although we can't see it, the space around us has a lot of radio waves like phone waves, Wi-Fi waves, Bluetooth waves. Although not every radio frequency is the same, we absolutely have Can take advantage of this resource to charge batteries for mobile devices.



Researchers at Ohio State University have found a way to charge a battery by using radio frequencies around it. The amount of energy collected is small but it is enough to show a new direction in enhancing battery life for mobile devices. Of course, this battery charging technology is on a different level than wireless charging on high-end phones today. Once completed, it will certainly give us the experience that is only in dreams.

5. Hydro battery

A British company, Intelligent Energy, has successfully developed an iPhone 6 version that is capable of operating within a week without charging. It is thanks to the new battery technology capable of storing energy many times the current battery technology without changing the size.



New technology batteries generate energy based on the chemical reaction between hydrogen and oxygen. It produces more energy but produces less waste, just water and temperature. The battery maker has also created a special charger to charge their new battery.

Because of the new battery technology, Intelligent Energy's iPhone 6 model has slightly changed compared to Apple's original iPhone 6. That is, the machine has some vents to vent the steam from the new battery. Besides, there is a hydrogen air intake under the headphone jack to provide the battery. Owning abundant energy, but this new iPhone 6 trial version is also quite inconvenient during use. Compared to the hardware technologies in the list above, this is the battery solution that soon becomes the most realistic.

1. Room, avoid and cure the phone when the battery bottle
2. 5 tips for maximum battery saving for your phone
3. Why is the fully charged phone battery still running out?

Having fun!

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