Nanodot team aims to charge phones in less than a minute

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The world of smartphone users, which is a very large base indeed, is ripe for better battery solutions and an Israel-based company has an attractive solution in store, in the form of nanodot batteries that charge in less than a minute, The name of the company is StoreDot, which prides itself on technology based on its explorations into self-assembled nanodots of biological origin. The multifunctional nanodots are designed to make some important changes to using smartphones and other devices.

StoreDot Nanodot is described as a bio-organic nano crystal. They are uniform in size, 2 nanometers in diameter, and consist of bioorganic peptide molecules. The team is working on the technology for smart graphic displays, flash memory and image sensors. In a brief

promotional video, they say that "in the 30 seconds it took you to hear about it, it has already recharged your smartphone for the entire day." The StoreDot team is made up of people with expertise in biology, chemistry, physics, engineering and electronics. The company takes pride in its ability to integrate such scientific talents. (Before founding the company Dr. Doron Myersdorf, CEO, was senior director for the SSD Business Unit of SanDisk, and he established and managed the division in Israel. Prof. Simon Litsyn, CTO, is an expert in information storage and transmission and was chief scientist at SanDisk.)

The "green" material used to create the smartphone battery flash charges in 30 seconds and provides extended battery lifetime. Myersdorf said that after intensive research they realized what they have in their hands are "new materials, with new chemistry, and new physics," that can change the future.(The company site points out that StoreDot's technology for energy storage can be applied in batteries, a sustainable solution that can replace lithium-ion batteries.) Reuters on Monday said the battery in effect acts "like a super-dense sponge to soak up power and retain it." TechCrunch last month described the company pitch as "bio-organic nano-crystal technology as an enabler for faster charging batteries and also a cheaper and non-toxic alternative to cadmium in screens."

Talking about the benefits their technology could bring, the company turned to displays using StoreDot technology which can enjoy rich color vividness, efficient power consumption and being eco-friendly; StoreDot's novel approach of applying visible fluorescing Nanodots introduces a "dramatic improvement," they said, in essential components of environmentally friendly flexible displays.

Furthermore, the biocompatibility presents a unique opportunity to apply them in nanomedicinal technology, drug delivery, and food security labeling. Peptide-based nanodots can function as biomarkers, for

examining organ function and early diagnosis of neurodegenerative diseases.

According to Reuters, Myersdorf hopes to use the same technology to create a car battery that recharges in two or three minutes, rather than having to be charged overnight.

The company's research phase is complete. The battery will soon reach production stage, they said. They are working to bring the product to your smartphone. Reuters said that the prototype is too bulky for a mobile phone, but the company is working to achieve a slim battery. "The company believes it will be ready by 2016 to market a slim battery that can absorb and deliver a day's power for a smartphone in just 30 seconds," said Reuters.

In terms of work ahead, a power cycle round refers to the number of times a battery can be re-charged in its lifetime. According to the Reuters report, they still have some way to go with the size of battery and power cycle rounds, said Zack Weisfeld, who has evaluated ventures in the mobile phone sector globally. Myersdorf said in Reuters that a fast-charge phone would cost $100-$150 more than current models and would ultimately be able to handle 1,500 recharge/discharge cycles, for about three years of life.

More information: www.store-dot.com/