

SiGNa Chemistry Inc creates a water-rechargeable battery

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When you think about charging a battery you probably picture an outlet, not a bottle of water. One company is out to change all of that. A company called SiGNa Chemistry Inc has created a hydrogen-producing cartridge that is able to work in concert with pocket-sized fuel cell charging device in order to give cell phones and other mobile devices an

instant power boost.

The device, which has been dubbed the mobile-H2™, works like this. You grab one of the power cells and just add water. The device will then generate power and charge your depleted batteries without an outlet or solar panels. Good news if you happen to run out of power at night. The truly cool part of this equation is that any type of water will do. Even gray water or waste water.

The chemistry behind this [power](#) is pretty cool. SiGNa's cartridge technology contains both sodium and sodium silicide (NaSi). Normally when a sodium metal reacts with [water](#), and produces [hydrogen](#) gas, the reaction is fairly violent and releases a fair amount of heat. SiGNa has found a way around this by using a custom synthesis for their sodium silicide that creates a more controllable reaction.



The company is not releasing any specifics on how they synthesize their sodium silicide, but some previous documents released by the company suggest that they may have absorbed sodium into silica by coating a form of commercially available silica gel with a liquid sodium-potassium alloy, essentially creating a black powder, which would then be given a range of heat treatments to enhance its stability.

More information: signachem.com/wp-content/themes/signa/pdf/mobile-h2.pdf

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