

## European Companies Develop Hydrogen Fuel Cell for Mobile Phones

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The French Atomic Energy Agency (CEA) and ST Microelectronics, a Swiss semiconductor company, have released a prototype for a small hydrogen fuel cell for use with mobile phones. The PEM fuel cell, which derives its power from disposable hydrogen cartridges, is scheduled to be released in late 2009 or early 2010 in the form of an external power source or charger.

The hydrogen cartridge, made by Bic, is the size of a small cigarette lighter. Each cartridge contains five times as much energy as a current lithium ion mobile phone battery can hold; thus, each cartridge can charge a phone up to five times. The cartridge contains sodium borohydride (NaBH) powder and water. Projecting the water onto the NaBH initiates hydrolysis, which creates hydrogen.



*photo from EE Times Asia*

This technology stems from the need to provide more power to mobile phones. Current-generation cell phones use 3-5 W of power, a significant increase from the cell phones of five years ago, which used about 1 W of power.

### Sources:

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