THE ETERNAL BATTERY

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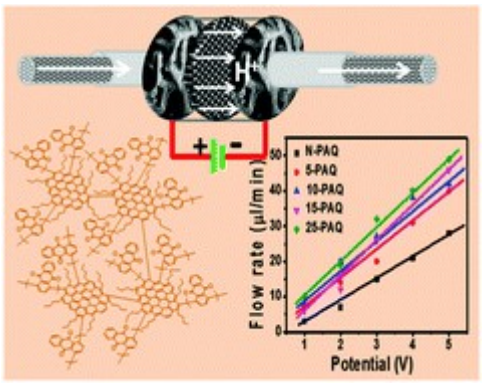
A battery that absorbs carbon dioxide from the air passing over its electrodes as it is being charged up, and then releases carbon dioxide gas as it is being discharged. In operation, the device would simply alternate between charging and discharging, with fresh air being drawn through the system during the charging cycle, and then the pure, concentrated carbon dioxide leaving during the discharging.

As the battery charges, an electrochemical reaction takes place at the surface of each of a stack of electrodes. These are coated with a compound called polyanthraquinone, which is composited with carbon nanotubes. The electrodes have a natural affinity for carbon dioxide and readily react with its molecules in an airstream, even when it is present at very low concentrations. The reverse reaction takes place when the battery is discharged during which **the device can provide part of the power needed for the whole system** and in the process ejects a stream of pure carbon dioxide. The whole system operates at room temperature and normal air pressure.



Charging can be done purely by passing air over the electrodes and as power is extracted the carbon dioxide which was absorbed by the polyanthraquinone is now released. Each cell of the battery discharges it's carbon dioxide into the air, and then passes through next cell which charges, this is all done on a nano scale.

Because the fuel for this battery is air, there is no real fuel cost! leaving the developer with no income unless an electronics package is added which meters air consumption and can be charged.