

Re: Aluminum Battery?

Source: <http://sci.tech-archive.net/Archive/sci.materials/2004-11/0022.html>

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Uncle Al <UncleAl0@hate.spam.net> wrote in message news:<41896D59.B2114BA@hate.spam.net>...

- > *"The new, patented technology based on nanoscale electrochemistry will*
- > *allow production of rechargeable aluminium batteries providing up to*
- > *20 times more capacity than current batteries."*
- >
- > 1) *Bullshit, up to the "up to"*
- >
- > 2) *If "up to means "less than" and "not rechargeable," no problem.*
- >
- > *My Cable ISP gives me "up to" '100 times the speed of a 56K modem.'*
- > *They must have soem awsfully slow 56K modems.*

Hi Al,

I forgot to include this link:

<http://www.batteriesdigest.com/id301.htm>

They seem to mention a little more about this, and cite some patent by Telcordia, formerly known as Bellcore Communications (spinoff of Bell/AT&T?)

I surfed around looking for further links, and found

http://www.arofe.army.mil/Conferences/Recent_Abstract/200th_Meeting/symposia/b1b/0203.pdf

It mentions the idea of packing Al+++ into a vanadium pentoxide (V2O5) aerogel (ie. foamed metal oxide)

Apparently, this "nanocrystalline" aerogel allows higher surface area contact with the Al+++ which means higher power output.

My understanding is that the main obstacles for using batteries to power electric vehicles are the low power output of batteries relative to their size, and also number of times you can cyclically recharge the battery. Supercapacitors are good for power output (rapid discharge rate) and also cyclical recharging, but are still limited on energy density. Could this aerogel idea, with its high surface area,

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allow for batteries with higher discharge rate? The researchers talk about "reducing the diffusion path" in order to make discharge more efficient. Would this also help improve the rechargeability and thus the number of recharge cycles?