



Never knowingly undersoldered

Friday April 20, 2007

# the INQUIRER

News, reviews, facts and friction

[SEARCH](#)[TECH FINDER](#)[REVIEWS](#)[WEEK TO DATE](#)[EARLIER](#)[SOFTWARE](#)[MEMORY](#)[MICROPROCESSORS](#)[MOBILE/PDA](#)[GRAPHICS](#)[SERVERS](#)[CHANNEL](#)[SET TOP BOXES](#)[CONSOLES](#)[INQ JOBS](#)[ABOUT US](#)[MESSAGE BOARD](#)[LOGIN](#)[WHITE PAPERS](#)[RSS](#)

Edited by [Mike Magee](#) Phone +44 208 248 2800

[Terms and Conditions](#) of use.

To advertise in Europe [e-mail here](#)

To advertise in Asia [email here](#).

To advertise in North America [email here](#).

Join the INQbot Mail List for a weekly guide to our news stories: [Subscribe/unsubscribe here](#).

## Boffins grow viable nanotubes

Internet to be a series of tubes

By [Nick Farrell](#): Thursday 10 August 2006, 14:29

**BOFFINS AT** the University of Cambridge have managed to grow carbon nanotubes which can be made integrated into computer chips.

Although nanotechnology has is the "next best thing" in the electronics biz there has been problems getting the nanotubes to

grow at a temperature which works with metal-oxide semiconductor (CMOS) technology.

Nanotubes need to be baked at a high temperature of 500 Celcius while the highest CMOS Fabs can do is 350 on a fairly hot day.

The scientists had scratched their heads and stroked their beards before declaring growth lower than 500 degrees was impossible. This made sticking them in electronics as likely as a packet of peanuts independently working out Quantum theory.

Then a group of engineers at the University of Cambridge, led by Mirco Cantoro, Stephan Hofmann, Andrea Ferrari and John Robertson had a go at a technique using thermal Chemical Vapour Deposition. This is a chemical process often used in the semiconductor industry. Much to the naysayers surprised they managed to grow nanotubes at even lower temperatures than are needed at CMOs fabs.

It also shed new light how carbon nanotube grow. Scientists and assumed that the catalyst has to be liquid. But the Cambridge lot thought they would try solid catalyst.

The idea has been published in the popular tabloid *Nano Letters* under the punchy headline, "Catalytic chemical vapor deposition of single-wall carbon nanotubes at low temperatures". μ

**L'INQ**

[Physorg.com](http://Physorg.com)

**Sponsored links**

- [Laptop Data recovery](#)
- [Compare Graphics Card prices - XFH, Sapphire, PNY and more](#)
- [Compare CPU prices - Intel, AMD and more](#)

[Home](#) [Discuss on our Forum](#) [Flame Author](#)

 [Recommend this article](#)  [Print](#)



**Top INQ Stories**

- [1. Radeon HD2600 gets snapped](#)
- [2. Nvidia confirms 8800 GS, Ultra](#)
- [3. AMD praises Intel performance](#)
- [4. Otellini lets slip Vista Service Pack date](#)
- [5. Google now bigger than anything](#)



Future Technology



© 2007 VNU Business Publications Ltd.