



# The fastest nanotube in the west

## Or the east, for that matter

30 Apr 2004 at 16:09, [Lucy Sherriff](#)

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Stateside boffins have managed to make a high-speed, carbon nanotube transistor. This is the latest in a string of devices that can be made with nanotubes, and according to the researchers, is the next step towards replacing silicon in a variety of electronic applications.

The device, built by Peter Burke and his team at the University of California at Irvine, is made from a carbon nanotube squeezed between two gold electrodes.

According to a report on *NanoTechWeb* the transistor works at [microwave frequencies](#), the highest ever achieved with a nanotube transistor, but Burke reckons that is the slow end of the spectrum.

Burke said: "I estimate that the theoretical speed limit for these transistors should be around a terahertz (10<sup>12</sup>Hz), about 1000 times faster than modern computer speeds."

At the moment, it only works at 4 Kelvin, but the team is confident they can make it work at room temperature too. ®

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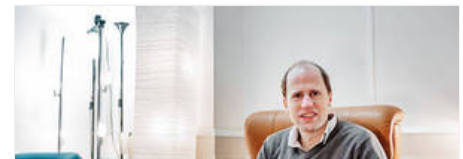
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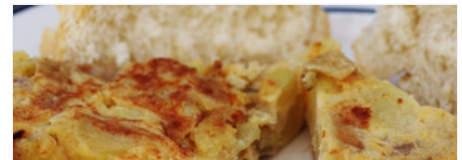
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