

Researchers test carbon nanotube-based ultra-low voltage integrated circuits

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A team of researchers from Peking University in Beijing, China, and Duke University in Durham, North Carolina, has demonstrated that carbon nanotube-based integrated circuits can work under a supply voltage much lower than that used in conventional silicon integrated circuits.

Low supply voltage circuits produce less heat, which is a key limiting factor for increased circuit density. Carbon-based electronics have attracted attention mostly because of their speed.

The new research shows that carbon nanotube integrated circuits could also offer the promise of extending Moore's Law by allowing even more transistors to fit onto a single chip without overheating.

The results are reported in a paper accepted for publication in the American Institute of Physics' journal [Applied Physics Letters](#).

More information: "Carbon nanotube based ultra-low voltage integrated circuits: scaling down to 0.4 V", *Applied Physics Letters*.

Provided by American Institute of Physics

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