Super-Thin Solar Cells Developed for Nanoelectronic

by Jeremy Elton Jacquot, Los Angeles on 10.17.07

SCIENCE & TECHNOLOGY

Just when you thought scientists had developed the smallest solar cells yet, they have to go and "up" the notch again with an even smaller model. Case in point is the latest solar cell from a team of chemists at Harvard University - coming in at a minuscule two hundredth the size of a normal human hair. The team, led by Charles Lieber, believes could help power the nanogadgets of tomorrow - everything from consumer tech to medical diagnostics.

The tiny silicon nanowires convert light into electrical energy, producing the equivalent about 200 picowatts. Incoming light produces electrons in the outer shell of the wire's multilayered structure; they are eventually moved down micropores into its core, producing electrical charges. Though not much (that's only two hundred *billionths* of a watt), Lieber explains that, on a nanoscale level, it should be enough to run ultra-low power electronics that could be worn both on and inside the body.

Lieber's solar cells have a conversion efficiency of about 3.4%, which is scalable to 5% depending on the incoming light's intensity. The next step, he says, will be to find new ways to boost their efficiency - once they reach 10-15%, he expects they will even become practical for large-scale applications. “There’s no physical reason it couldn’t be higher. I’m pretty optimistic that we’ll be able to track down the efficiency issue,” he said

Via ::Agence France Presse: Look, Ma, no batteries: Powering nanoelectronics with liq (news website)

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i wonder if the could use those solarpanels as "paint" on a car? or maybe on skyscapers son they produce their own electricity.

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