Self-assembling solar cells built using ancient wisdom, modern technology

By Vladislav Savov posted Jan 15th 2010 9:14AM

Alright, so self-assembling electronics are hardly new in and of themselves, and nanoscale tech tends to always come with bombastic promises, but you don’t wanna miss how this latest innovation is built. Two professors from the University of Minnesota have successfully demonstrated a self-assembly technique that arranges microscopic electronic elements in their proper order thanks to the absolute enmity that exists between water and oil. By coating elements with a hydrophilic layer on one side and some hydrophobic goo on the other, they’ve achieved the proper element orientation, and the final step in their work was the insertion of a pre-drilled, pre-soldered sheet, which picks up each element while being slowly drawn out of the liquid non-mixture. The achievement here is in finding the perfect densities of water and oil to make the magic happen, and a working device of 64,000 elements has been shown off -- taking only three minutes to put together. If the method’s future proves successful, we’ll all be using electronics built on flexible, plastic, metal, or otherwise unconventional substrates sometime soon.

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