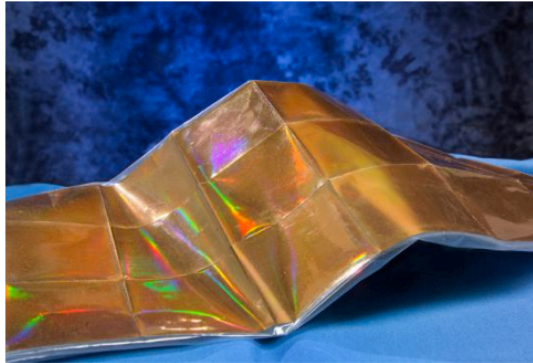


Solar energy — as easily as unrolling a yoga mat



By Mark Beard
May 23, 2011

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PROTOTYPES

Yes, you have heard it before: In five years, solar panels will be super-flexible and incredibly efficient — capable of powering everything from smartphones to homes after a few hours in the sun.

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Cambridge-based MicroContinuum Inc. is working with researchers at the University of Missouri, University of Colorado, and Idaho National Laboratory on “nantennas” — small antennas that gather much more energy from the sun than existing solar cells.

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MicroContinuum’s challenge is to form nantennas into thin, flexible sheets that can be produced inexpensively in high volumes. Those thin sheets could then be incorporated into building materials and other products. Imagine a roll-up sheet, like a yoga mat, that you can toss over any structure, or roof tiles whose outermost layers are laced with nantennas.

The nantennas, according to a University of Missouri announcement, will collect 90 percent of available light.

Current solar panels capture only 30 percent of the sun’s energy, at best, the researchers said.

And yes, prototypes of the flexible film should be available within five years, they added.

Technologies similar to nantennas might include infrared sensing devices that can spot contraband at airports or be incorporated into line-of-sight communications and optical computing, the researchers said.