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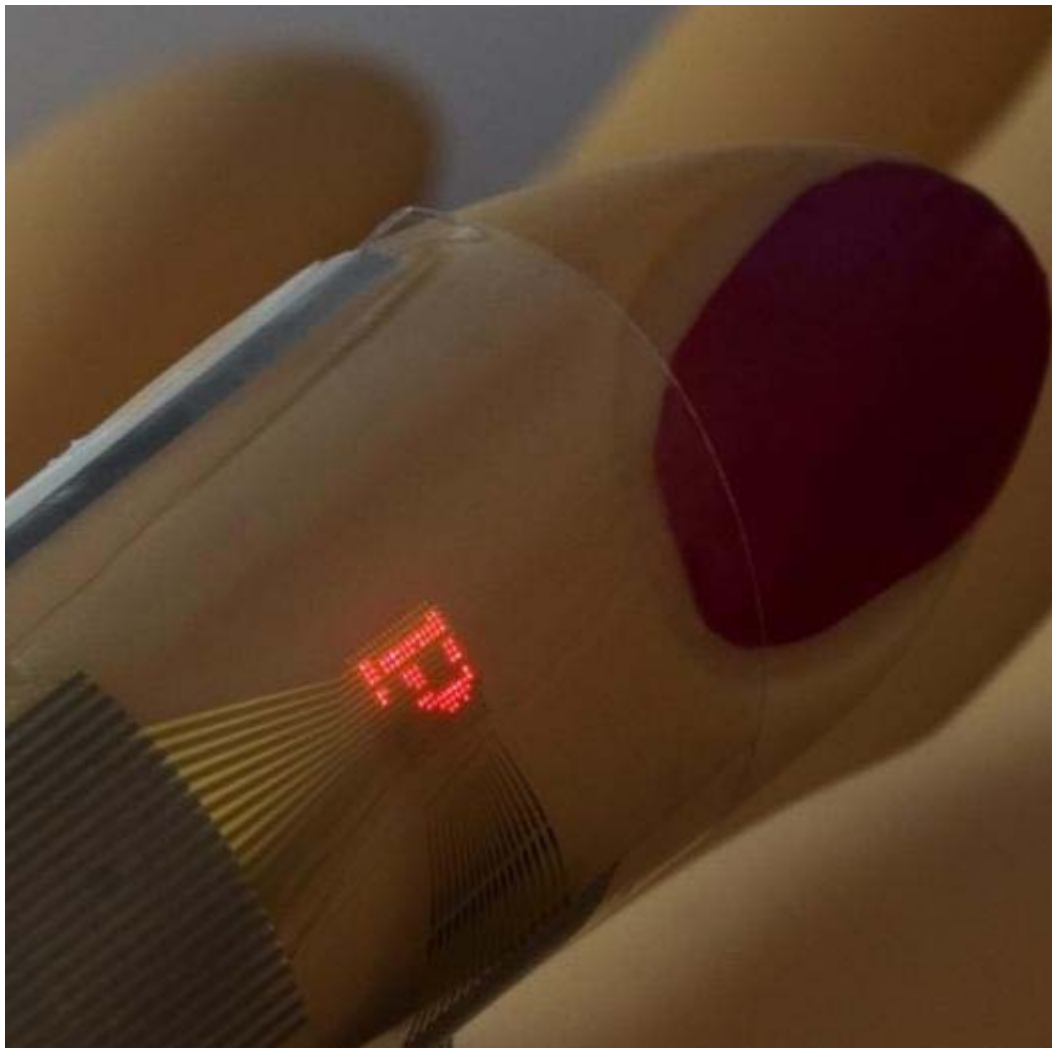

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OLED? Make way for ILED displays



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THE KENNEDY FUI

By [Mark Beard](#)
August 24, 2009

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PROTOTYPE

Marketers dream of the day when they can tack moving pictures onto cereal boxes and wheat-paste ads inside bus shelters and the alleys between big city bars and nightclubs.

But such video screens - which can be made bendable, stretchable, and inexpensively - remain a manufacturing challenge for materials scientists.

Researchers are focusing their energies on organic light-emitting diodes, because they offer faster refresh rates and brighter colors than conventional LCD screens.

Today you can see OLEDs, which have organic material sandwiched between two inorganic substrates, at work in a handful of mobile phone touchscreens and wrist-worn devices.

Now a University of Illinois scientist says he and his colleagues can “grow” so-called inorganic LEDs that may be even brighter and more efficient than OLEDs.

Not only that, says the Illinois scientist, John A. Rogers, but the ILEDs can be also be made with existing tools and with adjustments to photovoltaics and electronics printers made by the [Illini](#) spinout, Semprius (www.semprius.com).

Rogers’s group last week published a paper about their ILED production techniques in the journal Science. They describe techniques for creating flexible, stretchable displays on glass, plastic, and rubber.

Because the diodes cover a small part of the substrates, the scientists report, the displays are mostly transparent. They predict that ILEDs will be useful in augmented reality eyewear and in-car navigation systems, like the one Jeff Bridges tosses up in front of Karen Allen in John Carpenter’s “Starman.”

Rogers also sees a place for the flexible ILED displays (in addition to computer monitors and home theater screens) on wearable health monitors and diagnostic equipment.

With wireless notes minding grapevines, and mobile phones ordering their owners into public squares for pillow fights, it’s fair to say that computing has become ubiquitous.

ILED and OLED will do the same for high-resolution video.

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RECOMMENDED SI

Tiny beast backs up a houseful of data

With so many of our memories being made in “the digital” these days, perhaps it’s time to invite HAL into our homes to keep track of it all.

Lenovo (www.lenovo.com) last week announced an intimidating-looking server box specifically for home use. The IdeaCentre D400 (right), due out in a week or so, looks as intimidating as the villainous computer in “2001,” or the IBM Blue Gene supercomputer at Boston University. That is, until you see it up close.

The D400 cube measures less than 9 inches across, but it can store up to 8TB (that is TB, as in terabytes) of your family’s movies and music - indeed every PC in the home - on its four disk drives. (To access the push button drive bays, you simply open a panel on one side of the D400.)

The D400, which is expected to retail for about \$500, has an Intel Atom processor, and ships with 1GB of memory.

The D400 has 5 USB ports and a single eSATA connector. But for wireless networking, you will have to plug the D400 into your home’s WiFi router.

Along with the D400, Lenovo announced the IdeaCentre Q100, a cute little PC not much more than a half-inch thick.

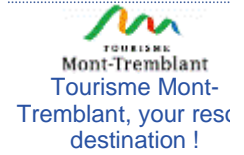
As a “nettop,” the Q100 is not designed for heavy lifting, but for surfing the Web, checking messages, and watching videos.

The Q100 and a slightly souped-up version of the nettop, the Q110, will be available in mid-September for about \$250 and \$350, respectively. ■

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