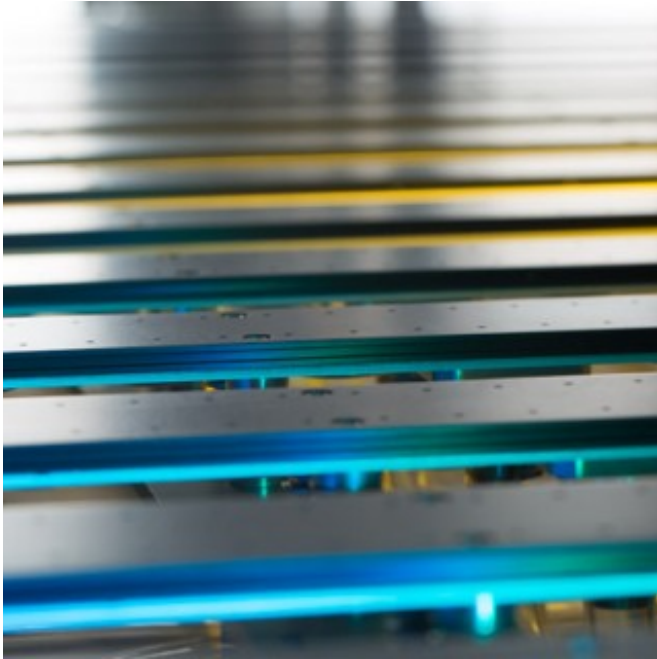


# Kateeva announces YIELDjet—technique for printing OLEDs cheaper

22 November 2013, by Bob Yirka



Credit: Kateeva

(Phys.org) —A silicon valley based company called Kateeva has announced that it has developed a printing technique for mass production of OLED displays that is far cheaper than that used currently by other manufacturers—they call it YIELDjet.

Organic Light Emitting Diodes offer a far better image for displays than do LCDs—the problem is that they cost far more to produce, especially with bigger screens. Because of that OLEDs have become popular with smartphones, but not so much in television or computer screens. That may all change soon though, if promises made by Kateeva in their announcement prove true.

Currently, OLEDs are made using a vacuum evaporation technique that employs shadow masks for patterning—it's messy and inefficient and very difficult to scale up for larger displays. The result is

large screens that cost up to \$10,000.

Kateeva says its new printing method is superior to the current method in three major ways. The first is that instead of using vacuum evaporation, it uses technology similar to an inkjet printer, with nozzles capable of laying down micro-sized beads of material. The second is that the printer prints in a pure nitrogen process chamber which eliminates the problems associated with oxygen adversely impacting the materials. The third is the implementation of super-clean manufacturing techniques that have been borrowed from the microchip manufacturing industry—they have cut down on stray particle problems, Kateeva reps say, by ten times.

Consumers have been waiting for a breakthrough in OLED manufacturing technology—phones that have them have screens that have richer colors, use less battery power and some are even flexible. If OLEDs could be made as cheaply as LCDs, there would almost certainly be a huge uptick in sales of large screen TVs as well as other devices, offering a way for makers of such devices to put off the market saturation that has led to slower sales in recent years.

Kateeva's prototype platform is capable of printing six 55 inch displays at once and has been designed in such a way as to allow nearly seamless introduction into current manufacturing lines. The company has yet to demo screens produced by the machines it's built, however, which means that it's still not clear just how well the platform works or whether it will hold up when subjected to [mass production](#) demands

**More information:** [Press release](#)

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