

Nano Technology within a consumer product held in the palm of your hand

Speaker:

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Abstract:

Manipulating holograms in the palm of your hand. NanoTechnology within a consumer product held in the palm of your hand.

At LEIA inc. we are developing an LCD-based interactive holographic display specially designed for mobile devices. We're the manufacturer of the world's first holographic 3D displays for mobile applications. Core to our technology are diffraction gratings defined using advance deep ultra-violet (DUV) lithography on an inexpensive glass backlight substrate. These nanometer-scale diffraction gratings can directionally scatter incident light from an LED source. A liquid crystal display (LCD) is elegantly placed on top of the backlight to seamlessly modulate the light rays to form a hologram, that is, a virtual object made entirely of light. The Leia display requires no glasses and no eye-tracking. The 3D graphical contents can be simply derived from a chrome-based platform using open-source WebGL and java-based scripting languages.

The ability to realistically render the world in 3D enables a wealth of possibilities and will dramatically enhance established industries such as healthcare, retail, design and architecture, and education. In this talk, we will give an overview of the Leia diffractive backlight and the mass production of our nanostructure diffraction gratings. NanoTechnology within a consumer product held in the palm of your hand.

References:

- Nature, March 2013 (featured cover article): <http://www.nature.com/nature/journal/v495/n7441/full/nature11972.html>
- Reuters article: <http://bit.ly/1BMCASZ>
- Reuters video: <http://reut.rs/1CGnEXG>
- WSJ video: <http://on.wsj.com/18Xlx5D>