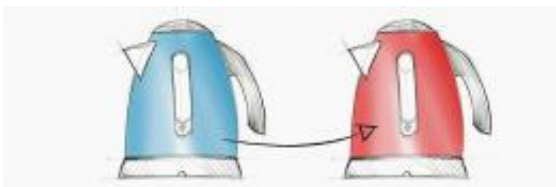


Philips electronic skin technology enables new chameleon-like ambience designs

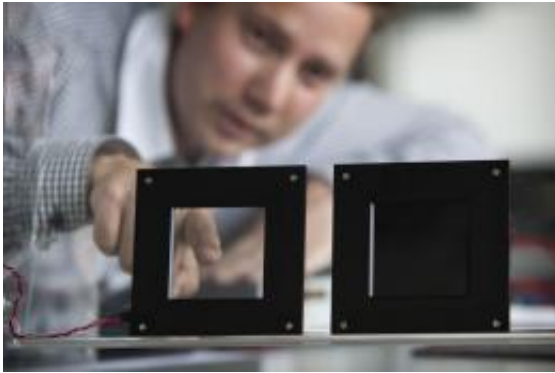
December 9 2009



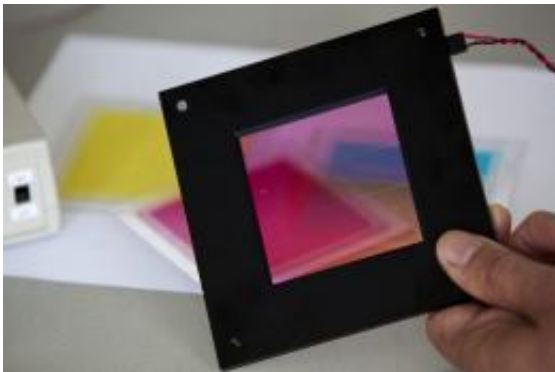
(PhysOrg.com) -- Philips Research has developed a novel color e-paper technology that opens up new design opportunities for personalizing electronic devices. This means that the color and appearance, of the device's surface, for example an MP3 player or mobile phone can easily be changed to match your outfit, mood or environment simply at the touch of a button.

The technology has the potential to be used in the future for larger area 'e-wallpapers' where you can adjust the [color](#) of your wall or smart windows to regulate the daylight coming through your window.

Philips' e-skin technology is based on its previous work with electronic [paper](#) (e-paper). E-paper looks like conventional paper and the bright wash of color it generates uses the ambient light for rendition, just like conventional paint, so no backlight is needed. Which means that the vividness of the color is maintained, even in bright outdoor conditions.



Philips e-skin technology features a gradient of grey levels from a highly transparent optical state (left) to full black (right). This enables future applications like smart windows. Photo: Philips

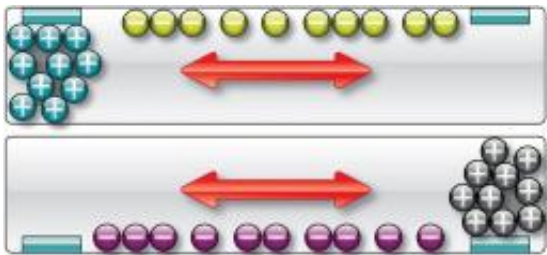


Similar to paper, Philips e-skin has a paint-like appearance. Photo: Philips

Recently, Philips successfully realized a simplified, yet advanced version of its e-paper technology: e-skin. Since it is less complicated and less expensive to realize, it enables new applications. And because e-skin makes use of the ambient light, it is an inherently energy-efficient system, making it particularly suitable for application in portable devices as well.

“The first applications using the technology could be e-skins for small devices such as MP3 players or cell phones. However, the technology is highly scalable,” says Kars-Michiel Lenssen, Principal Scientist at Philips Research. “In the future it will be possible to use e-skins to bring new color and a new aura or ‘vibe’ to much larger equipment.

Philips Research will present its work at the International Display Workshops 2009 in Japan, which is held from December 9-11. IDW '09 will integrate thirteen workshops and a topical session in specialized fields playing important roles in information display activities.



A full-color e-skin could be created from two layers, each with two colors of ink. Here, only the yellow and magenta inks are showing making the pixel appear red. Photo: Philips

Source: Philips

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