

From The Times

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Glowing walls could kill off the light bulb

Ben Webster, Environment Editor

Light-emitting wallpaper may begin to replace light bulbs from 2012, according to a government body that supports low-carbon technology.

A chemical coating on the walls will illuminate all parts of the room with an even glow, which mimics sunlight and avoids the shadows and glare of conventional bulbs.

Although an electrical current will be used to stimulate the chemicals to produce light, the voltage will be very low and the walls will be safe to touch. Dimmer switches will control brightness, as with traditional lighting.

The Carbon Trust has awarded a £454,000 grant to Lomox, a Welsh company that is developing the organic light-emitting diode technology. The trust said it would be two and a half times more efficient than energysaving bulbs and could make a big contribution to meeting Britain's target of cutting carbon emissions by 34 per cent by 2020. Indoor lighting accounts for a sixth of total electricity use.

The chemical coating, which can be applied in the form of specially treated wallpaper or simply painted straight on to walls, can also be used for flat-screen televisions, computers and mobile phone displays.

As the system uses only between three and five volts, it can be powered by solar panels or batteries. Lomox, which will use the grant to prove the durability of the technology, believes it could be used in the first instance to illuminate road signs or barriers where there is no mains electricity.

Ken Lacey, the chief executive of Lomox, said that the first products would go on sale in 2012. "The light is a very natural, sunlight-type of lighting with the full colour range. It gives you all kinds of potential for how you do lighting," he said.

Although organic light-emitting diodes (LEDs) have been available for several years, Mr Lacey said that concerns over cost and durability had prevented further development. He said that Lomox had developed a much cheaper process and discovered a combination of chemicals that were not vulnerable to the oxidation that shortened the operating life span of other types of organic LEDs.

Mr Lacey said the technology could be used to make flexible screens that could be rolled up after use, or carried into a presentation, for example.

Mark Williamson, director of innovations at the Carbon Trust, said: "Lighting is a major producer of carbon emissions. This technology has the potential to produce ultra-efficient lighting for a wide range of applications, tapping into a huge global market.

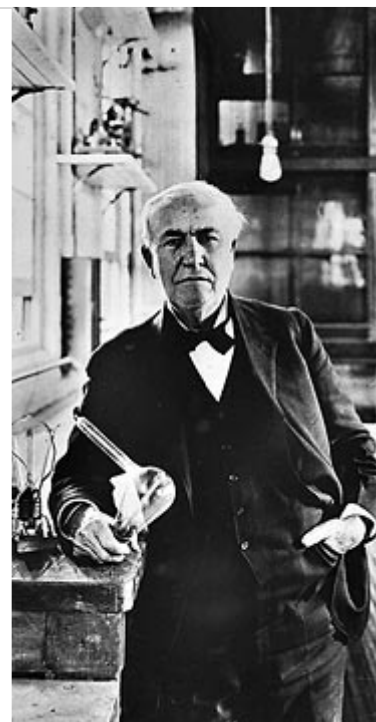
"It's a great example of the innovation that makes the UK a hotbed of clean technology development."

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Organic LEDs could kill off the light bulb, first created by Thomas Edison