**Engineering**

**Heterojunction Bipolar Light Emitting Transistor (HBLET)**

This invention is the world’s first light-emitting transistor. The HBLET extends the capabilities of light-emitting diodes and could make this transistor the fundamental element in electronics and optoelectronics by producing infrared light in phase with the transistor’s base current allowing it to attain a switching speed superior to light-emitting diodes (LEDs) and fast enough to operate in fiber optic networks, as well as other applications.

For more information, contact Lesley Millar  
(217) 265-6216 or millar@uiuc.edu

**Flexible Sensory Skin**

Flexible Sensory Skin is characterized by sensors and electronics embedded into a flexible polymer substrate “skin.” The small size and distance between each sensor allows a high density of sensing and placement on uneven and curved surfaces. The sensor skin can sustain bending, direct contact, and exposure to elements with sensitivity to extreme heat.

For more information, contact Mark Kaczor  
(217) 265-0548 or m-kaczor@uiuc.edu

**Microscale Liquid Conductivity Sensors**

Microscale, thin-film liquid conductivity sensors are capable of measuring ion concentrations in nanoliter-size samples of liquid. The devices can be used for small-volume sample analysis or for in-vivo measurement in chemical or biological processes and mesoscale machines. Sensors can be fabricated as part of an integrated circuit and may be integrated with other sensors for multiparameter measurements.

For more information, contact Sean Reeder  
(217) 244-9104 or sdreeder@uiuc.edu

**Bioengineering**

**Molluscum Contagiosum Virus MC 160 Protein**

Uses for the viral protein MC160, discovered in the 1990s, were previously unknown. By further elucidation of the role of the NF-κB in the TNF-α mediated pathway in inflammation, investigators have discovered a revolutionary new compound for the treatment of inflammation.

For more information, contact Eric Payne  
(217) 265-6212 or ecpayne@uiuc.edu

**www.otm.uiuc.edu**
The University of Illinois ranked 9th on the United States Patent Office's list of Universities receiving the most patents for inventions in 2004.

**Agriculture**

Impatiens with Improved Resistance to Western Flower Thrips

This new population of impatiens shows improved resistance to feeding damage inflicted by Western Flower Thrips. Western Flower Thrips is the most serious insect pest in the Floriculture industry, affecting greenhouses worldwide.

For more information, contact Richard Loe
(217) 333-7198 or loe@uiuc.edu

Edible Covering for Livestock Feedstuff

This edible, spray-on covering protects livestock feedstuffs during storage, reduces surface spoilage, improves digestibility, and is biodegradable. The edible covering is made of easily obtained products that, when mixed and applied, add to the nutrient value of the feedstuff.

For more information, contact Richard Loe
(217) 333-7198 or loe@uiuc.edu

**Software**

Web-based Software Tools

NCSA has developed a software suite that allows novices to edit and manage content directly on a website and corporations to maximize the efficiency of both the users in their organization and of their content management system.

For more information, contact John McEntire
(217) 333-3715 or jmcentir@uiuc.edu

Textureshop and Rototexture

Textureshop and Rototexture aid in photo, video, and film post-production by combining existing techniques for shape-from-shading and texture synthesis to create new tools for texturing objects in photographs or video. The approach distorts the texture based on recovered normals and creates the illusion that the texture adheres to the undulations of the photographed surface.

For more information, contact Dave Washburn
(217) 265-0778 or dwashbur@uiuc.edu

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