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Editors' Choice

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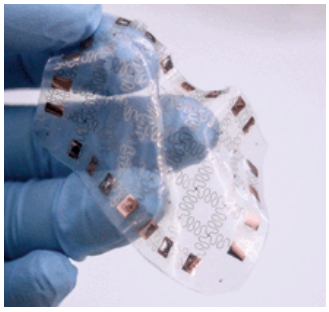
MATERIALS SCIENCE

Faster ways to flexible electronics

Marc S. Lavine

Stretchable electronics that combine both inorganic and organic parts require processing methods compatible with both types of materials. Writing semiconductors directly onto flexible substrates is possible only at low temperatures. If one fabricates the semiconductors first, precise alignment steps are needed, including deposition of the interconnects. Park *et al.* developed a process of directed self-assembly where light-emitting diodes (LEDs) can be fluidically deposited onto a stretchable substrate, so that they bond to regions that are isolated from deformation. The bottom substrate contained regions of solder that directed the LED assembly. A top conductive layer was designed for rapid attachment without critical alignment. Thus, flexible solid-state lighting could be made in a continuous roll-to-roll process.

Adv. Mat. 10.1002/adma.201500839 (2015).



Semiconductor chips attached to a flexible, stretchable support

PHOTO: S.-C. PARK *ET AL. ADVANCED MATERIALS* (12 MAY 2015) © 2015 JOHN WILEY & SONS, INC.

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AGING

In search fo an anti-aging drug

Bryan L. Ray

As organisms age, they accumulate cells that can no longer proliferate. Such cells— termed “senescent”—persist and appear to promote aging by producing and secreting a variety of proteins. Zhu *et al.* tested whether drugs that inhibit cellular signaling pathways that make senescent cells resistant to stress and cell death could deplete senescent cells in mice. A combination of two drugs that inhibit such pathways selectively killed senescent cells in vitro, improved heart and vascular function in aging mice, and improved symptoms in a mouse model of accelerated aging. Although pinpointing the relevant targets of these drugs is difficult, the studies indicate that selectively targeting senescent cells with small molecules may be feasible.

Aging Cell 10.1111/acel.12344 (2015).

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EVOLUTION

Maintaining a massive mitochondrial genome

Laura M. Zahn