

COVER

Graphic representation of an integrated quantum optics controlled-NOT chip. Single photons (represented as flashes) propagate on the chip, confined by silica waveguides, and are then coupled into optical fibers for detection. See page 646.

Image: W. Amery/Bristol University

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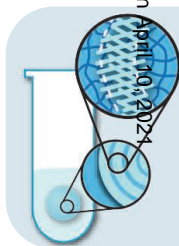
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 A screw dislocation drives the growth of a nanowire pine tree, in which branches regularly extend from the trunk in a spiral, confirming Eshelby's theory of dislocations.
 10.1126/science.1157131

MEDICINE

A Polymorphism Within the *G6PC2* Gene Is Associated with Fasting Plasma Glucose Levels
N. Bouatia-Naji et al.
 Variation in a gene for a protein in the pancreas may help explain why people have different levels of fasting blood glucose, a factor that affects disease risk.
 10.1126/science.1156849

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The Transcriptional Landscape of the Yeast Genome Defined by RNA Sequencing
U. Nagalakshmi et al.
 A more complete catalog of transcribed DNA of yeast is assembled by shotgun sequencing of messenger RNA and reveals numerous previously unknown transcribed regions.
 10.1126/science.1158441

CELL BIOLOGY

The Serine Protease *TMPRSS6* Is Required to Sense Iron Deficiency
X. Du et al.
 A cell-surface enzyme that cleaves proteins is unexpectedly necessary for sensing when iron levels are low and thereby triggering compensatory absorption of iron from food.
 10.1126/science.1157121

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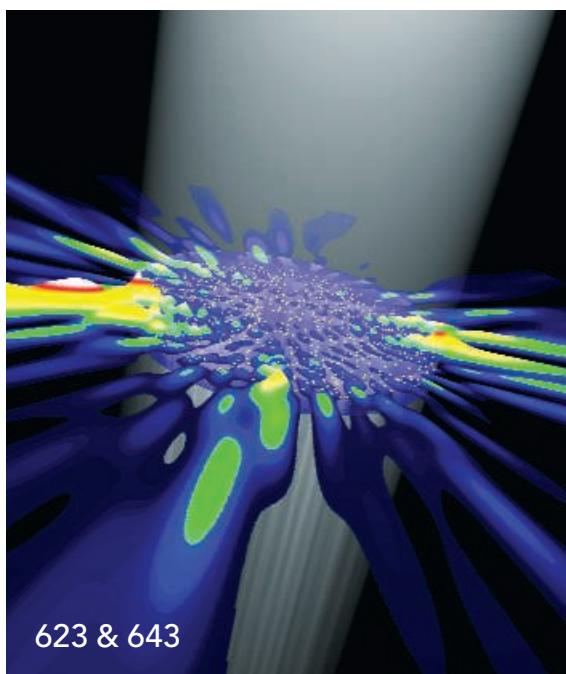
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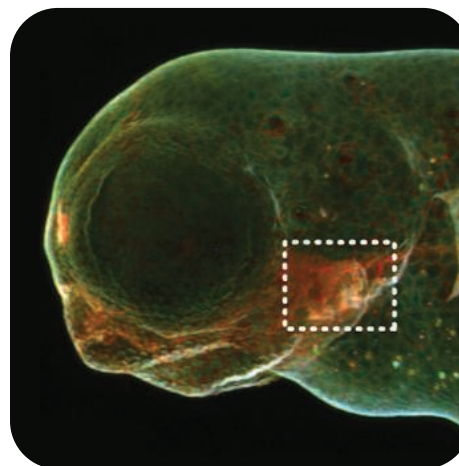
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Exercise, a natural antidepressant.

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PERSPECTIVE: VGF, a New Player in Antidepressant Action?

J. E. Malberg and L. M. Monteggia

The neuropeptide VGF appears to play a role in the antidepressant effects of exercise, the neurotrophic factor BDNF, and the neurotransmitter serotonin.

PERSPECTIVE: Synaptic Patterning by Morphogen Signaling

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Some glial cells can generate action potentials and are hypersensitive to ischemic injury.



New structure for university careers in Europe.

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Structuring Academic Careers in Europe

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Several European universities have begun defining tenure-like career structures.

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A severe disconnect separates some policy-makers from scientists' real lives.

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P. Gosling

The values and culture of nonprofit organizations make them an exciting and rewarding career choice.

May 2008 Funding News

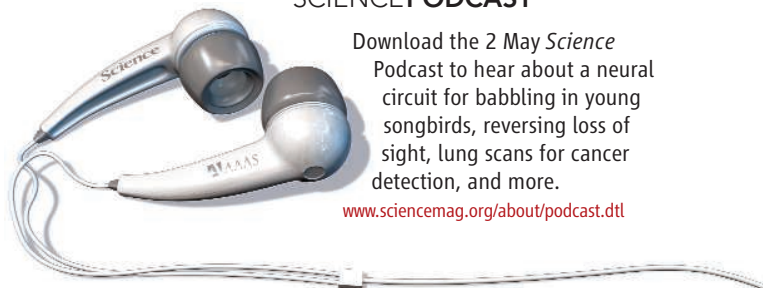
J. Fernández

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