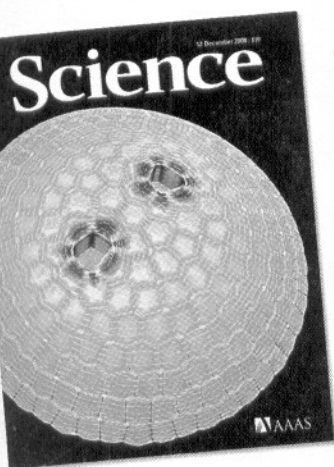




COVER

Finite element method simulation of an *Arabidopsis* shoot apical meristem where two cells have been laser-ablated. The color map indicates the von Mises stress (a measure of distortional stress); the white lines mark the directions of maximal principal stress, which are circumferential around the ablated cells, in agreement with experimentally determined microtubule orientations. See page 1650.

Image: Pawel Krupinski/Lund University

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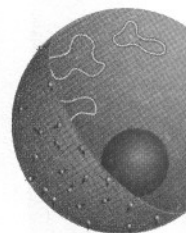
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High magnetic fields can strip away the superconducting regime of a cuprate superconductor, revealing the presence of an enigmatic quantum critical point.

10.1126/science.1165015

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Femtosecond XANES Study of the Light-Induced Spin Crossover Dynamics in an Iron(II) Complex

Ch. Bressler et al.

X-ray absorption spectroscopy resolves the dynamics of spin-state interconversions, which take place in less than a picosecond, in a well-studied class of iron compounds.

10.1126/science.1165733

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The periodic wrapping of DNA around nucleosomes in chromatin determines a periodic variation in mutation type and frequency around transcription start sites in a fish.

10.1126/science.1163183

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The Sphingolipid Transporter Spns2 Functions in Migration of Zebrafish Myocardial Precursors

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Normal heart development in zebrafish requires the function of a lipid transporter in a membrane surrounding the yolk, a tissue outside of the embryo proper.

10.1126/science.1167449

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A Single Gene Causes Both Male Sterility and Segregation Distortion in *Drosophila* Hybrids

N. Phadnis and H. A. Orr

A *Drosophila* gene that causes sterility in the offspring of two species and may be important for speciation causes increased transmission of itself to progeny.

10.1126/science.1163934

GENETICS

A Mouse Speciation Gene Encodes a Meiotic Histone H3 Methyltransferase

O. Mihola et al.

A gene responsible for sterility in the offspring of two mouse species, and therefore important in speciation, regulates gene expression via methylation in chromatin.

10.1126/science.1163601

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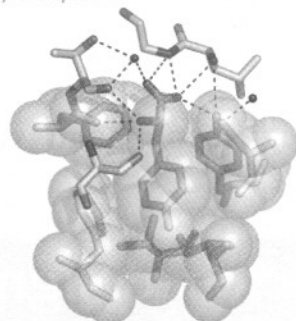
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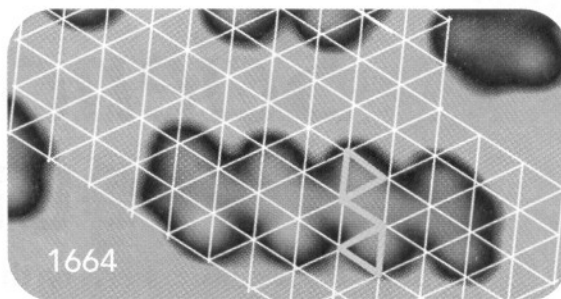
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