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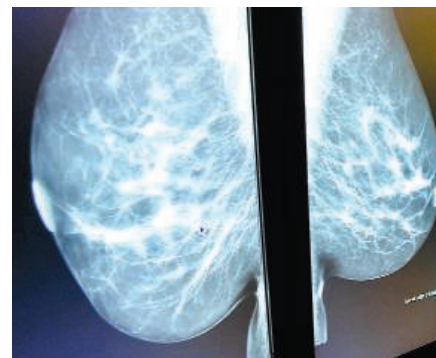
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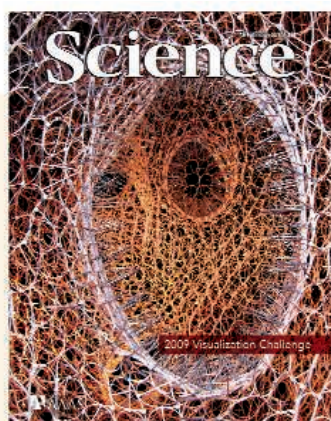


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COVER

"Branching Morphogenesis," an installation made from more than 75,000 interconnected cable zip ties, illustrates the predicted forces generated by human lung endothelial cells as they form networks within an extracellular matrix over time. Winners of the 2009 *Science/NSF* International Science & Engineering Visualization Challenge are featured in a special section starting on page 945.

Image: *Jenny E. Sabin*; installation: *Peter Lloyd Jones, Jenny E. Sabin, Andrew Lucia, Annette Fierro/Sabin+Jones LabStudio, University of Pennsylvania*

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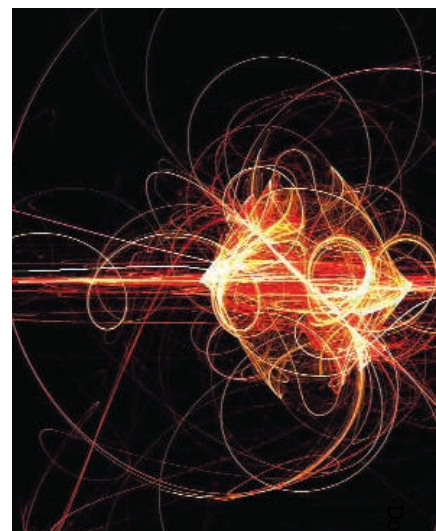
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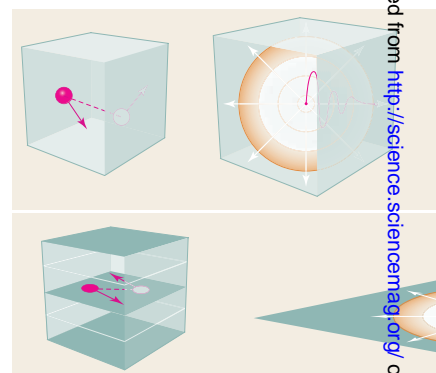
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Design of Polymethine Dyes with Large Third-Order Optical Nonlinearities and Loss Figures of Merit

J. M. Hales et al.

Nonlinear optical materials are designed and characterized for potential applications in all-optical switching.
10.1126/science.1185117

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Highlights From Our Daily News Coverage

Is That Elephant Running? Don't Bet on It

New study argues that, regardless of their speed, elephants don't actually run.

What Doesn't Kill Microbes, Makes Them Stronger

Low levels of antibiotics trigger mutations that cause resistance.

Ancient Human Sequenced for First Time

Strands of hair paint detailed picture of 4000-year-old Greenlander.

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M. Wang et al.

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RESEARCH ARTICLE: Deciphering Protein Kinase Specificity Through Large-Scale Analysis of Yeast Phosphorylation Site Motifs

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Jasmonate Biochemical Pathway

A. Gfeller et al.

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CONNECTIONS MAP: Arabidopsis Jasmonate Signaling Pathway

A. Gfeller et al.

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SCIENCE CAREERS

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Free Career Resources for Scientists

Tooling Up: The Applications Scientist Career Track

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Perspective: Audacity Is Overrated

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RESEARCH ARTICLE: S-Nitrosylation from GSNOR Deficiency Impairs DNA Repair and Promotes Hepatocarcinogenesis

W. Wei et al.

An enzyme that removes harmful marks from cellular proteins guards against liver cancer.



SCIENCE SIGNALING
Insight into an oral pathogen.

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Science Policy News and Analysis

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