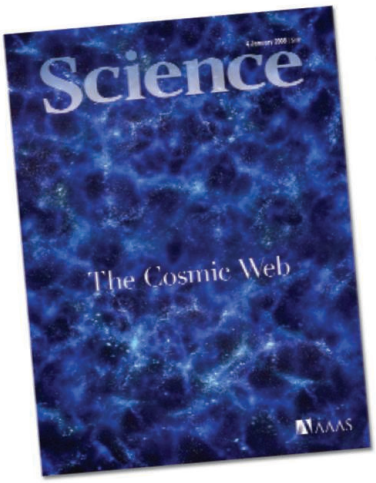
Volume 319, Issue 5859



COVER

The universe is filled with filamentary structures of dark and visible matter that make up the "cosmic web," as suggested in this artist's rendering of cosmic bubbles and connected clumps. A special section beginning on page 46 considers the latest research into the origins and evolution of the cosmic web.

Image: Shigemi Numazawa/Atlas Photo Bank/Photo Researchers Inc.

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SPECIAL SECTION

Cosmic Web

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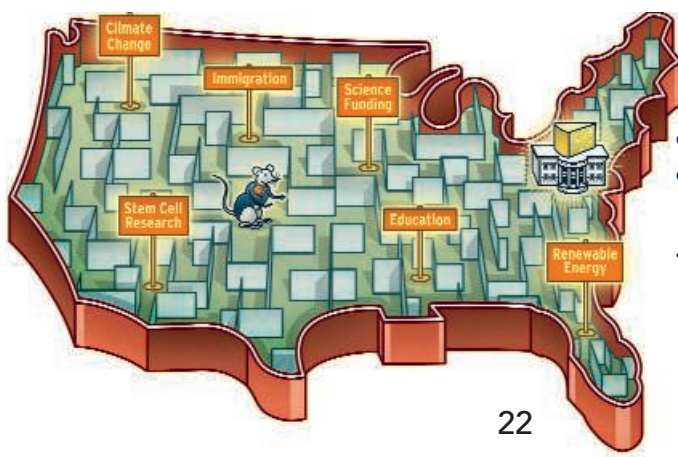

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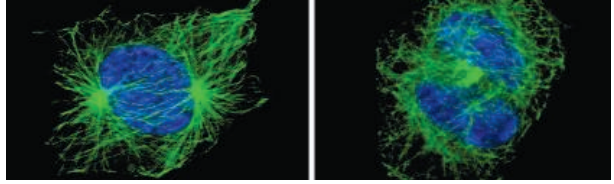

SCIENCE EXPRESS

www.sciencexpress.org

BIOPHYSICS

Three-Dimensional Super-Resolution Imaging by Stochastic Optical Reconstruction Microscopy
B. Huang, W. Wang, M. Bates, X. Zhuang
Three-dimensional fluorescence images of cellular structures in fixed cells are realized at 20- to 30-nm lateral and 50-nm axial resolution, without scanning.
10.1126/science.1153529

BIOCHEMISTRY

Direct Observation of Hierarchical Folding in Single Riboswitch Aptamers
W. J. Greenleaf et al.
Optical trapping reveals that activation by adenine stabilizes the weakest helix in a riboswitch, after which secondary and tertiary structures are formed sequentially.
10.1126/science.1151298

GENETICS

Mutations in the Pericentrin (*PCNT*) Gene Cause Primordial Dwarfism
A. Rauch et al.
In humans, an inherited condition with small brain size and near-normal intelligence is caused by mutations that disrupt chromosome separation during cell division.
10.1126/science.1151174

CLIMATE CHANGE

The Spatial Pattern and Mechanisms of Heat Content Change in the North Atlantic
M. S. Lozier et al.
Warming and cooling in different parts of the North Atlantic since 1950 reflect variable atmospheric circulation, complicating our understanding of anthropogenic changes.
10.1126/science.1146436

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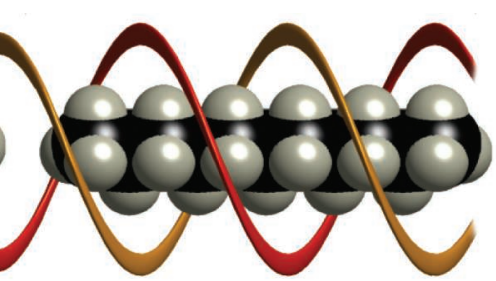

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J. M. Asara and M. H. Schweitzer
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Reduced North Atlantic Deep Water Coeval with the Glacial Lake Agassiz Freshwater Outburst 60
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Data on deep water formation in the North Atlantic indicate that the sudden draining of a huge glacial lake south of Hudson Bay led to dramatic cooling 8200 years ago.

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The *Physcomitrella* Genome Reveals Evolutionary Insights into the Conquest of Land by Plants 64
S. A. Rensing et al.
Comparison of the moss genome sequence with those of other plants reveals hallmarks of colonization of land, including genes to manage terrestrial stresses such as dehydration.

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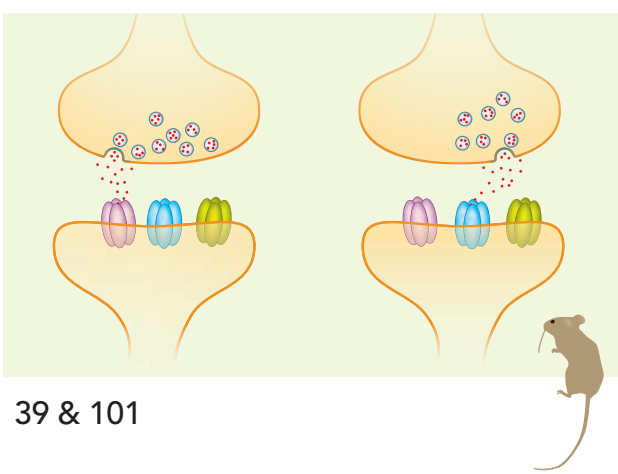

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