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- Smithsonian Takes the Plunge With Ocean Exhibit
- Privatization Prevents Collapse of Fish Stocks, Global Analysis Shows

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- HIV Testing for Whole Populations A. M. Prince Response D. Halperin et al.
- Effects of Expanded Mosquito Range S. N. Bevins

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K.-K. Ni et al.
Raman laser irradiation can cool a cloud of KRb molecules to ultralow translational, vibrational, and rotational temperatures, a step toward forming molecular condensates.
10.1126/science.1163861

IMMUNOLOGY
Innate Immunity in Caenorhabditis elegans Is Regulated by Neurons Expressing NPR-1/GPCR
K. L. Styer et al.
In the nematode Caenorhabditis elegans, sensory neurons surprisingly can inhibit innate immune responses, in part through the mitogen-activated protein kinase signaling pathway.
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Comment on “Age and Evolution of the Grand Canyon Revealed by U-Pb Dating of Water Table–Type Speleothems”
J. Pederson et al.
full text at www.sciencemag.org/cgi/content/full/321/5896/1634b

Response to Comment on “Age and Evolution of the Grand Canyon Revealed by U-Pb Dating of Water Table–Type Speleothems”
V. Polyak, C. Hill, Y. Asmerom
full text at www.sciencemag.org/cgi/content/full/321/5896/1634d

CLIMATE CHANGE
Ancient Permafrost and a Future, Warmer Arctic
D. G. Froese et al.
The existence of a 700,000-year-old patch of permafrost in sub-Arctic Canada shows that ground ice far from the pole can resist melting during warm intervals.
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Transient Electronic Structure and Melting of a Charge Density Wave in TbFe3
F. Schmitt et al.
Photoemission spectroscopy is extended to reveal the dynamics of correlated electronic phase transitions, showing how ordered electrons “melt” upon heating of TbFe3.
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Coupled Superconducting and Magnetic Order in CeCoIn5
M. Kenzelmann et al.
Unlike other superconductors, magnetic ordering coexists with and is stabilized by superconductivity in the exotic superconductor CeCoIn.
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Shape Changes of Supported Rh Nanoparticles During Oxidation and Reduction Cycles
P. Nolte et al.
Pyramidal rhodium nanoparticles flatten upon surface oxidation at high temperatures but revert upon reduction, allowing the study of how structure affects catalytic activity.
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F. Huo et al.
An array that can support millions of thin, flexible polymer pens can be used to deposit tiny molecular ink dots of variable size over large areas.
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4D Electron Diffraction Reveals Correlated Unidirectional Behavior in Zinc Oxide Nanowires
D.-S. Yang, C. Lao, A. H. Zewail
Ultrafast electron diffraction reveals that exciting the electrons of a zinc oxide nanowire causes a sudden extension, more than a hundred times longer than expected from heating.
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An Inhibitor of FtsZ with Potent and Selective Anti-Staphylococcal Activity
D. J. Haydon et al.

A small synthetic molecule directed against a microbial protein required for cell division protects mice infected with Staphylococcus aureus from death. >> Perspective p. 1644

Ecology

Can Catch Shares Prevent Fisheries Collapse?
C. Costello, S. D. Gaines, J. Lynham

Global catch statistics since 1950 suggest that fisheries will be half as likely to collapse if fishermen have a sustainability incentive through a guaranteed right of harvest. >> News story p. 1619

Evolution

Parasite Treatment Affects Maternal Investment in Sons
T. E. Reed et al.

Mother seabirds that are infected by parasitic nematodes are less able to gather food and feed their fast-growing sons, shifting the sex ratio and affecting population viability.

Developmental Biology

Apoptotic Force and Tissue Dynamics During Drosophila Embryogenesis
Y. Toyama et al.

During development, programmed cellular death within sheets of cells can generate forces that accelerate tissue fusion; a similar process may apply to wound healing. >> Perspective p. 1641

Medicine

Clusters of Hyperactive Neurons Near Amyloid Plaques in a Mouse Model of Alzheimer’s Disease
M. A. Busche et al.

In a mouse model of Alzheimer’s disease, neurons close to the characteristic deposits of amyloid show high activity, in contrast to the overall reduction in brain function.

Neuroscience

Reward-Predictive Cues Enhance Excitatory Synaptic Strength onto Midbrain Dopamine Neurons
G. D. Stuber et al.

When a rat learns to associate a cue with a reward, dopamine-containing neurons in the midbrain acquire an enhanced response to that cue through the action of glutamate.

Molecular Biology

Molecular Coupling of Xist Regulation and Pluripotency
P. Navarro et al.

X chromosome inactivation in stem cells is reversed, a step in allowing them to become pluripotent, when three factors repress the inactivation RNA.