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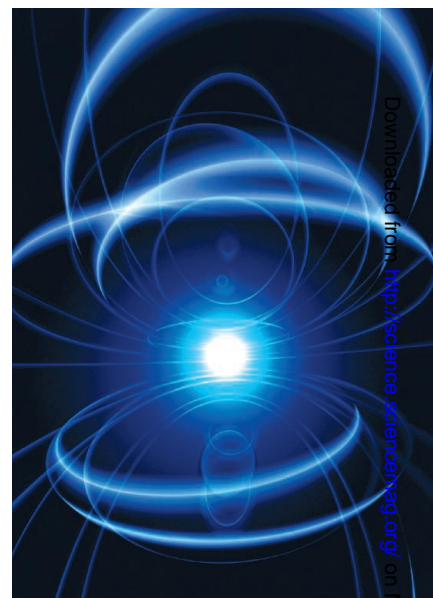
BREVIA

- 642 Vanadium Nitrogenase Reduces CO
C. C. Lee et al.
An enzyme that reduces nitrogen to ammonia can also reduce carbon monoxide to hydrocarbons.

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COVER

Mexican free-tailed bats roost at Bracken Cave near San Antonio, Texas. Streicker *et al.* (p. 676) describe how the spread of new forms of rabies virus is restricted between bat species; Frick *et al.* (p. 679) explain how a fungal disease of bats, white-nose syndrome, is likely to lead to local extinctions of once-common bat species.

Photo: © Merlin D. Tuttle, Bat Conservation International, www.batcon.org

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A large repertoire of genes shows preferential expression of the paternally or maternally inherited allele.
>> *Perspective p. 636; Report p. 682*
- 649 **Role of Secondary Sensory Cortices in Emotional Memory Storage and Retrieval in Rats**
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REPORTS

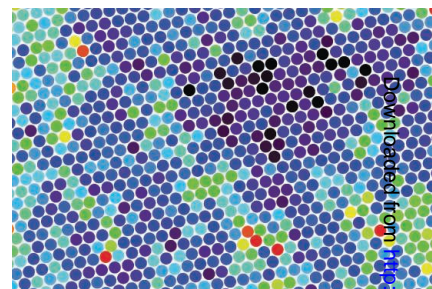
- 656 **Normal Modes and Density of States of Disordered Colloidal Solids**
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Y. L. Chen et al.
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J. Leach et al.
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- 665 **MESSENGER Observations of Extreme Loading and Unloading of Mercury’s Magnetic Tail**
J. A. Slavin et al.
Relative to Earth, Mercury’s magnetospheric substorms are more intense and occur on shorter time scales.
- 668 **Evidence for Young Volcanism on Mercury from the Third MESSENGER Flyby**
L. M. Prockter et al.
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- 672 **Mercury’s Complex Exosphere: Results from MESSENGER’s Third Flyby**
R. J. Vervack Jr. et al.
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- 676 **Host Phylogeny Constrains Cross-Species Emergence and Establishment of Rabies Virus in Bats**
D. G. Streicker et al.
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- 679 **An Emerging Disease Causes Regional Population Collapse of a Common North American Bat Species**
W. F. Frick et al.
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>> *Perspective p. 634; Science Podcast*
- 682 **Sex-Specific Parent-of-Origin Allelic Expression in the Mouse Brain**
C. Gregg et al.
The relative contributions of the paternal and maternal genomes differ in distinct brain regions and also in males and females.
>> *Perspective p. 636; Research Article p. 643*
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M. Kaya and H. Higuchi
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M.-C. Tsai et al.
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- 693 **FAN1 Acts with FANCI-FANCD2 to Promote DNA Interstrand Cross-Link Repair**
T. Liu et al.
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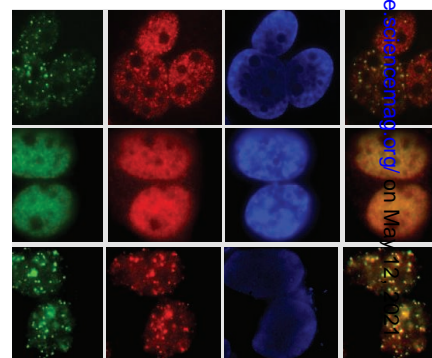
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SCIENCEONLINE

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Strange Metal Transport Realized by Gauge/Gravity Duality

T. Faulkner et al.

Black hole theory is used to develop a mathematical description of a class of metals with unusual electronic properties.

10.1126/science.1189134

The Chlorine Isotope Composition of the Moon and Implications for an Anhydrous Mantle

Z. D. Sharp et al.

The range of chlorine isotope values of the Moon is distinct from those of Earth and meteorites, indicating that the Moon is dry.

10.1126/science.1192606

>> [Science Podcast](#)

Aryl Hydrocarbon Receptor Antagonists Promote the Expansion of Human Hematopoietic Stem Cells

A. E. Boitano et al.

The identification of a mechanism for ex vivo amplification may facilitate clinical application of hematopoietic stem cell therapies.

10.1126/science.1191536

Structural Basis for Activation of Class Ib Ribonucleotide Reductase

A. K. Boal et al.

A single protein activates two different metallofactors by distinct chemistries.

10.1126/science.1190187

Glutamine Deamidation and Dysfunction of Ubiquitin/NEDD8 Induced by a Bacterial Effector Family

J. Cui et al.

Pathogenic bacterial proteins interfere with eukaryotic ubiquitination pathways to induce cytopathic effects.

10.1126/science.1193844

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Highlights From Our Daily News Coverage

Western Diet Tied to Intestinal Disease and Allergies

Gut bacteria may make people in developed countries more prone to a variety of maladies.

Orangutans Go Green

Apes are amazingly energy efficient for their size.

Marijuana Time Warp

Active ingredient in cannabis disrupts the body's internal clock.

SCIENCE SIGNALING

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RESEARCH ARTICLE: HCMV-Encoded Chemokine Receptor US28 Mediates Proliferative Signaling Through the IL-6–STAT3 Axis

E. Slinger et al.

PODCAST

M. J. Smit and A. M. VanHook

A viral G protein–coupled receptor may initiate a positive feedback loop to promote tumor proliferation and vascularization.

RESEARCH ARTICLE: The Nonphagocytic NADPH Oxidase Duox1 Mediates a Positive Feedback Loop During T Cell Receptor Signaling

J. Kwon et al.

Reactive oxygen species enhance T cell receptor signaling by promoting the phosphorylation of a proximal kinase.

SCIENCE CAREERS

www.sciencereers.org/career_magazine

Free Career Resources for Scientists

Taken for Granted: Creating Their Own Credibility

B. L. Benderly

A nonprofit founded and run by a group of independent researchers has permitted decades of scientific work.

Scientist Dads Step Up

V. Venkatraman

Although women still do most of the parenting, some scientist dads are taking on the role of primary caregiver.

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PERSPECTIVE: PINING Down the Origin of Prostate Cancer

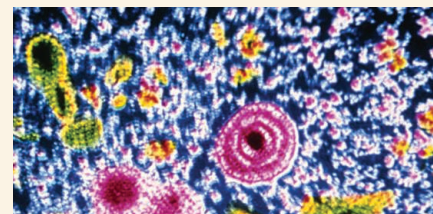
D. Moscatelli and E. L. Wilson

Two distinct cell types give rise to prostate cancer, which might cause differences in the resulting tumor's behavior.

PERSPECTIVE: A Microbe-Dependent Viral Key to Crohn's Box

D. A. Peterson and P. J. Turnbaugh

Multiple facets of the human microbiome must be considered when deciphering complex diseases such as Crohn's.



SCIENCE SIGNALING

How HCMV infection promotes cancer.

RESEARCH ARTICLE: Pathway-Based Identification of Biomarkers for Targeted Therapeutics—Personalized Oncology with PI3K Pathway Inhibitors

J. N. Andersen et al.

Drug-specific modulation of an oncogenic signaling pathway can help predict tumor sensitivity to candidate drugs.

RESEARCH ARTICLE: Ferroportin and Iron Regulation in Breast Cancer Progression and Prognosis

Z. K. Pinnix et al.

An iron efflux pump is a pivotal protein in breast cancer biology and a strong and independent predictor of breast cancer prognosis.

SCIENCE PODCAST

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Download the 6 August *Science* Podcast to hear about bats threatened by white-nose syndrome, Arctic methane, the water content of the Moon's interior, and more.

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Science Policy News and Analysis

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