



## COVER

Heavy pollution blankets Tiananmen Square, Beijing, on 27 December 2007. Chinese authorities are taking drastic measures to improve the city's air quality for the Olympics. Bad air is just one of many environmental challenges China is facing. See the special News Focus section beginning on page 628.

*Image: Feng Li/Getty Images*

## DEPARTMENTS

- 607 Science Online
- 608 This Week in *Science*
- 612 Editors' Choice
- 614 Contact *Science*
- 617 Random Samples
- 619 Newsmakers
- 710 New Products
- 711 Science Careers

## EDITORIAL

- 611 Blue Skies for China  
by *Bojie Fu*  
>> News special section p. 628

## NEWS OF THE WEEK

- New Catalyst Marks Major Step in the March Toward Hydrogen Fuel 620  
>> *Science Express Report* by *M. W. Kanan et al.*; Reports pp. 671 & 676
- Regulators Seek to Redefine 'Working Life' 621
- New Minister Raises Expectations for Science in Argentina 622
- Is Dinosaur 'Soft Tissue' Really Slime? 623

### SCIENCESCOPE

- Science at the Olympics 624
  - Will Beijing's Dirty Air Hurt Performance?
  - Can Ice Vests Provide a Competitive Chill?
  - Do New Materials Make the Athlete?
  - Can Neuroscience Provide a Mental Edge?
  - Does Doping Work?
- >> *Science Careers* article by *E. Pain* p. 607

## NEWS FOCUS

### *China's Environmental Challenges*

- Three Gorges Dam: Into the Unknown Fears Over Western Water Crisis 628
- A Green Fervor Sweeps the Qinghai-Tibetan Plateau 633
- Beijing's Marathon Run to Clean Foul Air Nears Finish Line 636  
>> *Editorial* p. 611; *Science Podcast*



628

## LETTERS

- The Cost Benefits of Early Detection *W. G. Guntheroth* 639
- Policy Forum Offered New Ideas *J. Liu and J. Diamond*
- Survey Says: Name a Role Model *M. R. Webb*
- Gene Mutations and Cognitive Delay *C. M. Leonard and J. M. Kuldau* Response *J. M. McClellan et al.*

## CORRECTIONS AND CLARIFICATIONS 641

## BOOKS ET AL.

- The Dragon and the Elephant** Agricultural and Rural Reforms in China and India 642  
*A. Gulati and S. Fan, Eds., reviewed by C. P. Timmer*
- Science Festivals: Celebrating Science as Culture** 643  
*L. M. Krauss*

## POLICY FORUM

- Structural Disequilibria in Biomedical Research 644  
*M. S. Teitelbaum*

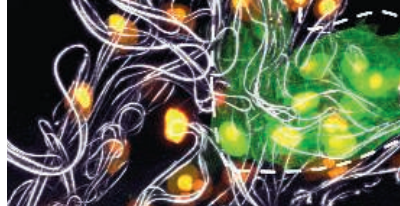
## PERSPECTIVES

- A Splicing Switch for T Cells 646  
*N. Holmes*  
>> *Report* p. 686
- The Cosmic Rosetta Stone 647  
*V. Bromm*  
>> *Report* p. 669
- "Make and Bake" in Signaling 648  
*A. G. Eliopoulos*  
>> *Research Article* p. 663
- Did You Say "Fast"? 650  
*J. Flückiger*  
>> *Report* p. 680
- Electrochemical Capacitors for Energy Management 651  
*J. R. Miller and P. Simon*
- Ecosystem Disturbance, Carbon, and Climate 652  
*S. W. Running*

Downloaded from <http://science.sciencemag.org> on September 15, 2019

642

CONTENTS continued >>



## SCIENCE EXPRESS

[www.scienceexpress.org](http://www.scienceexpress.org)

### DEVELOPMENTAL BIOLOGY

**Induced Pluripotent Stem Cells Generated from Patients with ALS Can Be Differentiated into Motor Neurons**

*J. T. Dimos et al.*

Skin cells from elderly individuals with a mutation that causes amyotrophic lateral sclerosis (ALS) were used to derive stem cells that could then be differentiated.

10.1126/science.1158799

### PALEOCLIMATE

**Regional Synthesis of Mediterranean Atmospheric Circulation During the Last Glacial Maximum**

*J. Kuhlemann et al.*

A three-dimensional reconstruction of atmospheric temperatures in the Mediterranean during glacial times is analogous to one of winter during the Little Ice Age.

10.1126/science.1157638

### DEVELOPMENTAL BIOLOGY

**Dual Origin of Tissue-Specific Progenitor Cells in *Drosophila* Tracheal Remodeling**

*M. Weaver and M. A. Krasnow*

When fruit flies metamorphose from larvae, a new trachea forms both from undifferentiated cells of the imaginal disc and differentiated cells that re-enter the cell cycle.

10.1126/science.1158712

### CHEMISTRY

**In Situ Formation of an Oxygen-Evolving Catalyst in Neutral Water Containing Phosphate and  $\text{Co}^{2+}$**

*M. W. Kanan and D. G. Nocera*

A catalyst that precipitates in situ when cobalt ions are reduced in a phosphate buffer efficiently forms oxygen from water needed for electrochemical applications.

>> *News story p. 620; Science Podcast*

10.1126/science.1162018

## TECHNICAL COMMENT ABSTRACTS

### NEUROSCIENCE

**Comment on "Magnetic Resonance Spectroscopy Identifies Neural Progenitor Cells in the Live Human Brain"** 640

*J. C. Hoch, M. W. Maciejewski, M. R. Gryk*

[full text at www.sciencemag.org/cgi/content/full/321/5889/640b](http://www.sciencemag.org/cgi/content/full/321/5889/640b)

**Comment on "Magnetic Resonance Spectroscopy Identifies Neural Progenitor Cells in the Live Human Brain"**

*S. D. Friedman*

[full text at www.sciencemag.org/cgi/content/full/321/5889/640c](http://www.sciencemag.org/cgi/content/full/321/5889/640c)

**Comment on "Magnetic Resonance Spectroscopy Identifies Neural Progenitor Cells in the Live Human Brain"**

*J. F. A. Jansen, J. D. Gearhart, J. W. M. Bulte*

[full text at www.sciencemag.org/cgi/content/full/321/5889/640d](http://www.sciencemag.org/cgi/content/full/321/5889/640d)

**Response to Comments on "Magnetic Resonance Spectroscopy Identifies Neural Progenitor Cells in the Live Human Brain"**

*P. M. Djurić et al.*

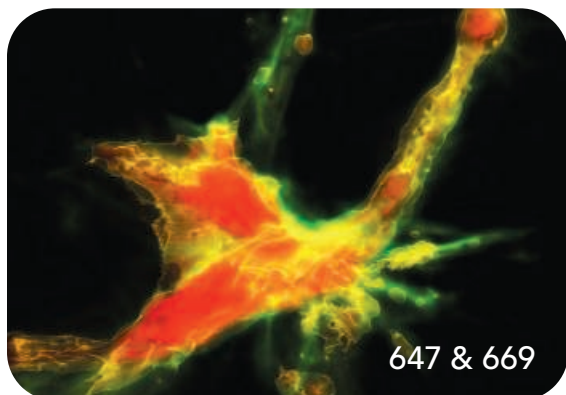
[full text at www.sciencemag.org/cgi/content/full/321/5889/640e](http://www.sciencemag.org/cgi/content/full/321/5889/640e)

## REVIEW

### PALEONTOLOGY

**Hopping Hotspots: Global Shifts in Marine Biodiversity** 654

*W. Renema et al.*



## BREVIA

### BIOCHEMISTRY

**Evidence of Global Chlorophyll d** 658

*Y. Kashiyama et al.*

A survey of chlorophyll d, used by a cyanobacterium for harvesting infrared light, implies that this microbe inhabits a much wider range than previously thought.

## RESEARCH ARTICLES

### BIOCHEMISTRY

**Crystal Structure of the Termination Module of a Nonribosomal Peptide Synthetase** 659

*A. Tanovic, S. A. Samel, L.-O. Essen, M. A. Marahiel*

A large enzyme complex assembles peptide natural products without ribosomal participation by successive catalytic steps at the end of a flexible, substrate-loaded arm.

### CELL BIOLOGY

**Essential Cytoplasmic Translocation of a Cytokine Receptor-Assembled Signaling Complex** 663

*A. Matsuzawa et al.*

Degradation of one member of a protein complex that forms when a cytokine receptor is activated causes the complex to move to the cytoplasm, triggering the downstream pathway.

>> *Perspective p. 648*

## REPORTS

### ASTRONOMY

**Protostar Formation in the Early Universe** 669

*N. Yoshida, K. Omukai, L. Hernquist*

A model traces the coalescence of small variations in gas density after the Big Bang into protostars, showing that the first stars would be large enough to make heavy elements.

>> *Perspective p. 647*

CONTENTS continued >>

REPORTS CONTINUED...

CHEMISTRY

High Rates of Oxygen Reduction over a Vapor Phase–Polymerized PEDOT Electrode 671  
*B. Winther-Jensen et al.*

A conducting polymer grown on a high–surface area membrane exhibits rates of oxygen reduction for electrochemical applications comparable with those of platinum electrodes.

>> *News story p. 620*

CHEMISTRY

Structures of Neutral Au<sub>7</sub>, Au<sub>19</sub>, and Au<sub>20</sub> Clusters in the Gas Phase 674  
*P. Gruene et al.*

Vibrational spectroscopy and theory reveal the elusive structures of small, stable gold clusters with catalytic ability: Au<sub>7</sub> has a two-dimensional structure and Au<sub>20</sub> is pyramidal.

MATERIALS SCIENCE

Colossal Ionic Conductivity at Interfaces of Epitaxial ZrO<sub>2</sub>:Y<sub>2</sub>O<sub>3</sub>/SiTiO<sub>3</sub> Heterostructures 676  
*J. Garcia-Barriocanal et al.*

Thin layers of zirconium oxide containing some yttrium in a strontium titanate fuel cell increase its ionic conductivity, allowing it to operate at much lower temperatures. >> *News story p. 620*

CLIMATE CHANGE

High-Resolution Greenland Ice Core Data Show Abrupt Climate Change Happens in Few Years 680  
*J. P. Steffensen et al.*

Greenland’s climate flipped to a different state within 1 to 3 years more than once during the last deglaciation.

>> *Perspective p. 650*

MICROBIOLOGY

The Global Stoichiometry of Litter Nitrogen Mineralization 684  
*S. Manzoni, R. B. Jackson, J. A. Trofymow, A. Porporato*

A global data set shows that the decomposition rate of plant litter is primarily controlled by its nitrogen content, which affects the rate of microbial activity.

IMMUNOLOGY

Regulation of CD45 Alternative Splicing by Heterogeneous Ribonucleoprotein, hnRNPLL 686  
*S. Oberdoerffer et al.*

A ribonucleoprotein directs the splicing of the transcript for CD45, a transmembrane tyrosine phosphatase that initiates signaling through antigen receptors.

>> *Perspective p. 646*

IMMUNOLOGY

Pyogenic Bacterial Infections in Humans with MyD88 Deficiency 691  
*H. von Bernuth et al.*

Although a key immune gene is necessary for mice to fight off a broad range of pathogens, in humans it is only required to protect against a few specialized bacteria.

IMMUNOLOGY

Censoring of Autoreactive B Cell Development by the Pre-B Cell Receptor 696  
*R. A. Keenan et al.*

A protein that helps newly rearranged antibody chains arrive at the cell surface of immature immune cells is found to help delete cells with potential autoreactivity.

DEVELOPMENTAL BIOLOGY

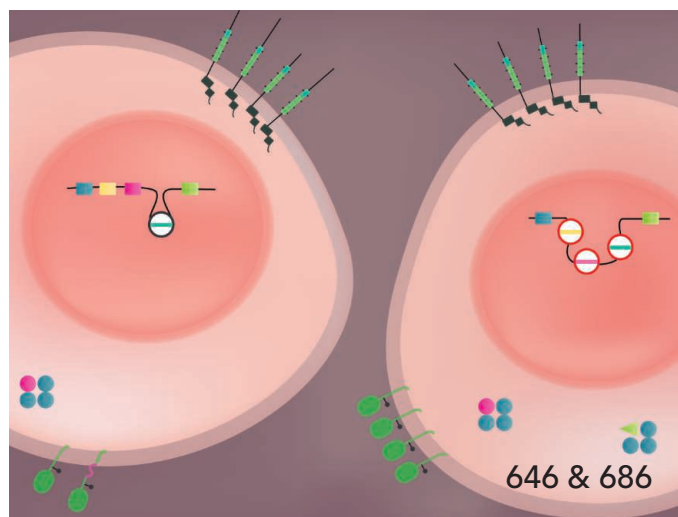
Generation of Pluripotent Stem Cells from Adult Mouse Liver and Stomach Cells 699  
*T. Aoi et al.*

Induced pluripotent stem cells are generated by direct reprogramming of adult liver and stomach cells.

NEUROSCIENCE

The Cell and Molecular Basis of Mechanical, Cold, and Inflammatory Pain 702  
*B. Abrahamsen et al.*

Pain neurons containing a particular sodium channel respond only to cold, mechanical, and inflammatory pain, not to all painful stimuli as previously assumed. >> *Science Podcast*



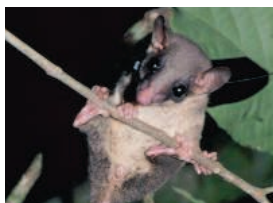
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CONTENTS continued >>>



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HIGHLIGHTS FROM OUR DAILY NEWS COVERAGE

### Now That's a Party Animal

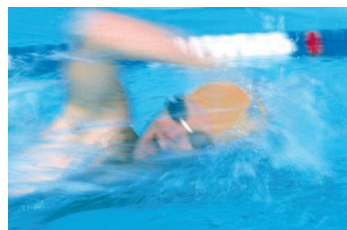
Researchers discover a wild tree shrew that lives on alcoholic nectar.

### Take a Deep Breath—and Thank Mount Everest

Plate tectonics gave rise to atmospheric oxygen.

### To Sleep, Perchance to Forget

Aging may impair the consolidation of memories during sleep.



A career in keeping athletics clean.

## SCIENCE CAREERS

[www.sciencecareers.org/career\\_development](http://www.sciencecareers.org/career_development)

FREE CAREER RESOURCES FOR SCIENTISTS

### Taken for Granted: The Fat Lady Sings

*B. L. Benderly*

Organizers claim success in unionizing postdocs on University of California campuses.

### A Scientist in the Service of Clean Sports

*E. Pain*

Chemist Osquel Barroso matches his scientific and sporting interests at the World Anti-Doping Agency.

>> *News story p. 627*

### Careers in Research Support

*S. Gaidos*

Institutions recognize the advantages of hiring science Ph.D.'s as research administrators.

### August 2008 Funding News

*J. Fernández*

Learn about the latest in research funding, scholarships, fellowships, and internships.



Anesthetics increase postoperative pain.

## SCIENCE SIGNALING

[www.sciencesignaling.org](http://www.sciencesignaling.org)

THE SIGNAL TRANSDUCTION KNOWLEDGE ENVIRONMENT

### PODCAST

*N. R. Gough and A. M. VanHook*

Some anesthetics activate TRPA1 channels to trigger pain and nerve-mediated inflammation.

### PRESENTATION: A Static Network Analysis Tool for Pharmacological Analysis of Signal Transduction Pathways

*B. B. Samal and L. E. Eiden*

Simulate knocking out one or more components from a pathway to find alternate connections between a stimulus and a target response.

## SCIENCE PODCAST

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