



## COVER

Using sunlight to rearrange the chemical bonds of water into hydrogen and oxygen, as in photosynthesis, would constitute a practical way to store solar energy as a fuel. Such an energy source will depend on new catalysts that promote this fuel-forming reaction cheaply and efficiently. See page 1072.

**Photo illustration:** Paul Montie  
(images: iStockphoto.com; Getty Images)

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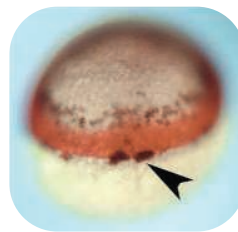
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## SCIENCE EXPRESS

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### PHYSICS

Quantum Communication with Zero-Capacity Channels

*G. Smith and J. Yard*

Two quantum communication channels, each of which is so noisy that it has zero-capacity to independently transmit information, can do so when used together.

10.1126/science.1162242

### CELL BIOLOGY

High-Quality Binary Protein Interaction Map of the Yeast Interactome Network

*H. Yu et al.*

Comparison of existing methods for mapping protein-protein interactions in yeast cells shows that the high-throughput approaches are complementary to one another.

10.1126/science.1158684

### DEVELOPMENTAL BIOLOGY

Chemokine Signaling Controls Endodermal Migration During Zebrafish Gastrulation

*S. Nair and T. F. Schilling*

During zebrafish gastrulation, chemokines are required for integrin-dependent adhesion of endodermal cells to mesoderm, a role distinct from their action as chemoattractants.

10.1126/science.1160038

### PHYSICS

Coupled Superconducting and Magnetic Order in CeCoIn<sub>5</sub>

*M. Kenzelmann et al.*

Unlike other superconductors, magnetic ordering coexists with and is stabilized by superconductivity in the exotic superconductor CeCoIn<sub>5</sub>.

10.1126/science.1161818

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*P. A. Pevzner, S. Kim, J. Ng*

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Response to Comment on "Protein Sequences from Mastodon and *Tyrannosaurus rex* Revealed by Mass Spectrometry"

*J. M. Asara, M. H. Schweitzer, L. C. Cantley, J. S. Cottrell*

[full text at www.sciencemag.org/cgi/content/full/321/5892/1040c](http://www.sciencemag.org/cgi/content/full/321/5892/1040c)

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N<sub>2</sub>O<sub>5</sub> Oxidizes Chloride to Cl<sub>2</sub> in Acidic Atmospheric Aerosol 1059

*J. M. Roberts et al.*

Laboratory studies affirm that the oxidation of chloride ions in aerosols by N<sub>2</sub>O<sub>5</sub> is a significant source of chlorine in the troposphere, a major reactant that helps form ozone.

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*K.-C. Chen, W.-W. Wu, C.-N. Liao, L.-J. Chen, K. N. Tu*

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

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*L. Sang, H. A. Collier, J. M. Roberts*

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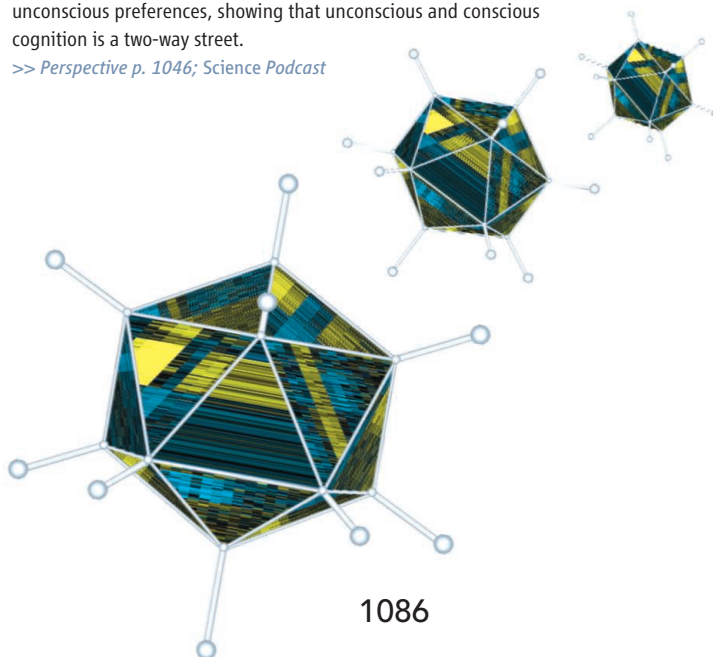
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*S. Galdi, L. Arcuri, B. Gawronski*

Unexpectedly, consciously expressed voting choices predict later unconscious preferences, showing that unconscious and conscious cognition is a two-way street.

>> *Perspective p. 1046; Science Podcast*



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European countries are working to improve pensions for mobile scientists.

**Science Careers Poll Results: A Realistic Readership**

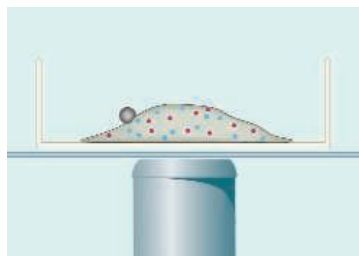
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Grad students and postdocs are guardedly optimistic about their career prospects.

**From the Archives: Choosing a Thesis Lab**

*S. Brass*

For M.D./Ph.D. students, the thesis-lab choice poses special challenges.



Measuring responses to mechanical force.

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*M. Roberge*

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