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PLANETARY SCIENCE

The Restless World of Enceladus

By Carolyn Porco

Scientists have known for decades that Saturn's sixth-largest moon is odd, but recently received images hint that its wrinkled landscape hides underground waters brewing with organic molecules. Could Enceladus be an icy cauldron for extraterrestrial life?

Image by Ron Miller

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BIOTECHNOLOGY

A New Molecule of Life?

By Peter E. Nielsen

Peptide nucleic acid, a synthetic hybrid of protein and DNA, could form the basis of a new class of drugs—and of artificial life unlike anything found in nature.

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NEUROSCIENCE

Magic and the Brain

By Susana Martinez-Conde and Stephen L. Macknik

Magicians have been testing and exploiting the limits of cognition and attention for hundreds of years. Neuroscientists are just beginning to catch up.

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The Light Fantastic

From the Editors

The 2008 Olympus BioScapes Competition recognizes the year's greatest achievements in light microscopy.

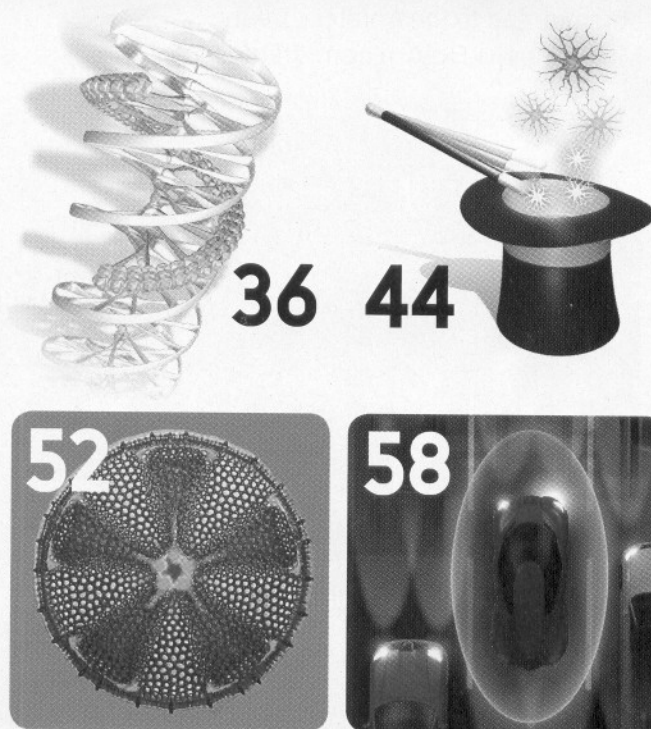
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AUTO TECHNOLOGY

Driving toward Crashless Cars

By Steven Ashley

Next-generation safety technology could give us vehicles that are difficult to crash—and eventually may not need drivers at all.



ON THE COVER

If astronauts ever visit Enceladus, they could witness the active geysers at its south pole, as imagined here by artist Ron Miller.

BIOLOGY

66 Taking Wing

By Nancy B. Simmons

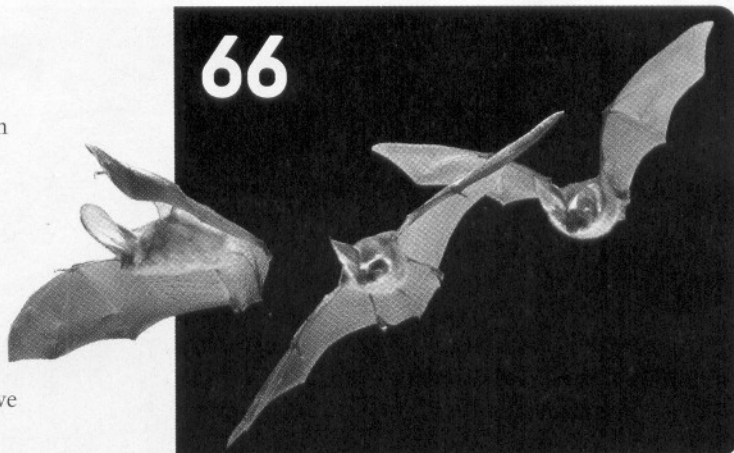
Fossil and genetic findings elucidate the evolution of bats—and settle a long-standing debate over the origins of flight and echolocation.

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By Lorrie Faith Cranor

Understanding the human factors that make people vulnerable to online criminals can improve both security training and technology.

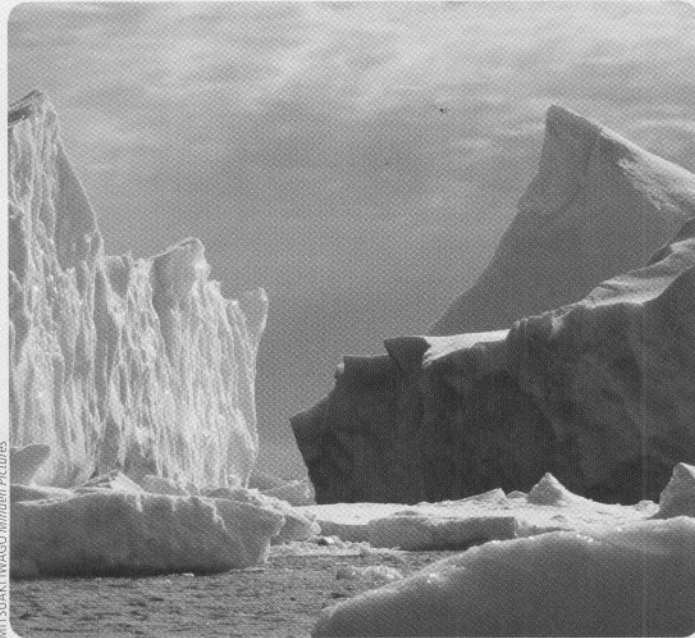


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Who will rule the poles? A look at the Arctic landgrab for oil, the opening of the Northwest Passage and the potential end to the Antarctic treaty.

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MITSUAKI IWAGO/Minden Pictures



News

The X Chromosome and the Case against Monogamy
New evidence shows that women pass along more genes to kids than men do—and that males historically have fathered children with several women.



Mind Matters

Why Calories Taste Delicious: Eating and the Brain
Sugar is still pleasurable even when it isn't sweet—an important clue to the rise of obesity.



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Liquid Lenses Promise Sharper Phone-Cam Photos
Rensselaer Polytechnic Institute researchers develop a new autofocus lens.



60-Second Science Blog

Growing Urban Areas in Africa Helped to Spread HIV More Than a Century Ago
The most pervasive global strain of HIV began spreading among humans between 1884 and 1924.



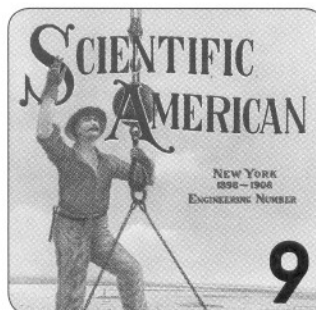
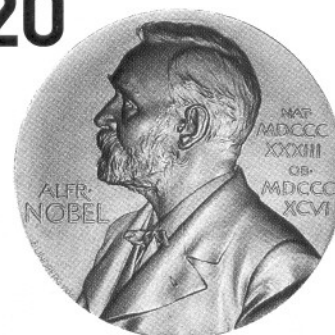
Extreme Tech

The Sticky Science of Gecko Toes
Artificial adhesive microfibers that do not lose their tackiness seem to imitate the structures with which a wall-climbing lizard clings to wet surfaces.

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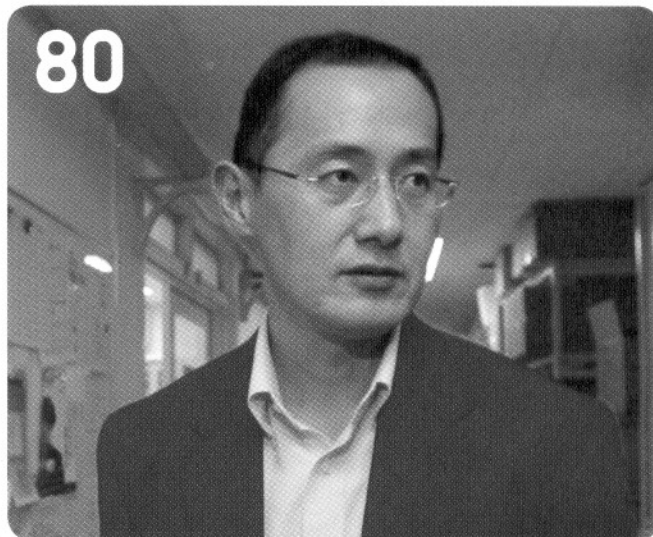
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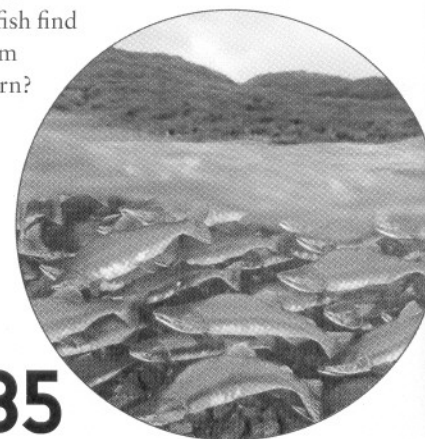
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