EDITORIAL
1365  Reset Cooperation with Russia
Glenn Schweitzer

NEWS OF THE WEEK
1372  Congress Takes First Step Toward One-Stop Shopping for Climate
1373  Macau Launches Late Bid to Cure Its Pearl River Delta Blues
1374  U.S. Supreme Court Delves Into What Is and Isn’t Patentable
1375  Science Windfall Stimulates High Hopes—and Political Maneuvering
1376  From Science’s Online Daily News Site
1377  Scientists Seek Easier Access to Seed Banks
1377  U.S. Promises to Reduce Delays in Granting Visas for Scientists
1377  From the Science Policy Blog

NEWS FOCUS
1378  A Medical Mystery in Middle China
>> Science Podcast
1382  Russia’s Polar Hero
Diving Into the Sacred Sea
1385  Authors Scramble to Make Textbooks Conform to Texas Science Standards
1386  Minority Retention Rates in Science Are Sore Spot for Most Universities Following the Leaders

LETTERS
1389  Redesigning the Wildlife Trade System
A. P. Pernetta
Wood Energy: Predicting Costs
F. D. Doty
Wood Energy: Protect Local Ecosystems
B. D. Titus et al.
Wood Energy: The Dangers of Combustion
F. J. Ries et al.
Response
D. deB. Richter Jr. et al.

CORRECTIONS AND CLARIFICATIONS
1391  TECHNICAL COMMENT ABSTRACTS

BOOKS ET AL.
1392  SuperSense
B. M. Hood, reviewed by M. Shermer
1393  Dread
P. Alcabes, reviewed by K. R. Foster

POLICY FORUM
1394  Repurposing with a Difference
M. S. Boguski et al.

PERSPECTIVES
1396  Extreme Spinning Tops
M. Kramer
>> Report p. 1411
1397  Novel Probes for Molecular Electronics
E. Meyer and T. Glatzel
>> Report p. 1428
1398  Silicon Carbide as a Platform for Power Electronics
C. R. Eddy Jr. and D. K. Gaskill
1400  Breaching the Cancer Fortress
P. Olson and D. Hanahan
>> Report p. 1457
1401  Yield Stress Fluids Slowly Yield to Analysis
D. Bonn and M. M. Denn

REVIEW
1403  Comprehensive Control of Atomic Motion
M. G. Raizen

BREVIA
1407  Herapathite
B. Kahr et al.
Discovered in 1852 and used for polarizing light, the crystal structure of iodoquinine sulfate has been solved.

CONTENTS continued >>

COVER
The flight path of a maple seed visualized in a composite multiflash photograph. Autorotating seeds slow their descent by exploiting the low pressure generated by a vortex that forms at the leading edge of their spinning wing. A similar leading-edge vortex also elevates the lift of insect, bat, and hummingbird wings. See page 1438.

Photo: David Lentink
Magnetic Fields in the Formation of Massive Stars
J. M. Girart et al.
Observations of polarized dust emission show that the magnetic field controls the dynamical evolution of a massive star-forming region.

A Radio Pulsar/X-ray Binary Link
A. M. Archibald et al.
Radio observations reveal a system undergoing the transition from a low-mass x-ray binary star to a millisecond radio pulsar.

Determining the Dynamics of Entanglement
O. Jiménez Farías et al.
The evolution of quantum mechanically entangled photon pairs can now be measured as they interact with their environment.

Colloidal Nanocrystals with Molecular Metal Chalcogenide Surface Ligands
M. V. Kovalenko et al.
Chalcogenide-based ligands are used to link colloidal nanocrystals together and can be converted into semiconducting complexes.

Polarization Control of Electron Tunneling into Ferroelectric Surfaces
P. Maksymovych et al.
High electric fields delivered with an atomic force microscope tip pattern polarization domains in ferroelectric thin films.

Isotopic Homojunction Band Engineering from Diamond
H. Watanabe et al.
Nanoscale multilayers of diamond that alternate in isotopic composition create quantum wells that confine electrons.

Measuring the Charge State of an Adatom with Noncontact Atomic Force Microscopy
L. Gross et al.
Charging of gold and silver atoms on salt films changes the force detected by the tip of a scanning probe microscope.

Oxygen-18 of O_2 Records the Impact of Abrupt Climate Change on the Terrestrial Biosphere
J. P. Severinghaus et al.
Ice core studies show that changes in low-latitude rainfall accompanied abrupt climate change over the past 100,000 years.

Boom-and-Bust Development Patterns Across the Amazon Deforestation Frontier
A. S. L. Rodrigues et al.
Rainforest loss in the Amazon is associated with ephemeral increase in people’s relative prosperity.

Leading-Edge Vortices Elevate Lift of Autorotating Plant Seeds
D. Lentink et al.
Winged plant seeds use leading-edge vortices to create lift, in the same way that flying animals do.

Fluorescent False Neurotransmitters Visualize Dopamine Release from Individual Presynaptic Terminals
N. G. Gubernator et al.
Optical tracking of neurotransmitter release in the brain reveals multiple synaptic populations that depend on brain activity.

Structure of Rotavirus Outer-Layer Protein VP7 Bound with a Neutralizing Fab
S. T. Aoki et al.
Binding of neutralizing antibodies to rotavirus stabilizes coat-protein trimers and blocks cell entry.

Extensive Demethylation of Repetitive Elements During Seed Development Underlies Gene Imprinting
M. Gehring et al.
Gene function in Arabidopsis endosperm depends on whether a gene is maternally or paternally inherited.

Genome-Wide Demethylation of Arabidopsis Endosperm
T.-F. Hsieh et al.
The endosperm genome of Arabidopsis shows extensive gene imprinting.

Hyper-Recombination, Diversity, and Antibiotic Resistance in Pneumococcus
W. P. Hanage et al.
Promiscuity not only leads to diversity in streptococcal bacteria, but also to an increased likelihood of acquiring drug resistance.

Inhibition of Hedgehog Signaling Enhances Delivery of Chemotherapy in a Mouse Model of Pancreatic Cancer
K. P. Olive et al.
Pancreatic tumors are unresponsive to chemotherapy because their limited vasculature precludes efficient drug delivery.
Case Closed: Scientists Nab Birds
That Brought Down Airplane
Forensic analysis of feathers fingers culprit in Hudson River crash.

**SCIENCE SIGNALING**
www.sciencesignaling.org

*The Signal Transduction Knowledge Environment*

**RESEARCH ARTICLE:** PI3Kγ Adaptor Subunits Define Coupling to Degranulation and Cell Motility by Distinct PtdIns(3,4,5)P3 Pools in Mast Cells
T. Bohnacker et al.

**PERSPECTIVE:** Finding Partners for PI3Kγ—When 84 Is Better Than 101
T. Balla

**PODCAST**
M. P. Wymann and A. M. VanHook
Adaptor subunits of phosphoinositide 3-kinase γ specify different cellular responses.

**PERSPECTIVE:** Insulin Signaling in Sporadic Alzheimer’s Disease
F.-F. Liao and H. Xu
Amyloid-β and its oligomers disrupt insulin signaling by targeting the insulin receptor or downstream kinases.

**SCIENCE CAREERS**
www.sciencecareers.org/career_magazine

*Free Career Resources for Scientists*

**Speed Networking for Scientists**
L. Holmes and K. Travis
Speed networking can be an effective way to promote new research collaborations.

**Reaching for the Stars**
C. Thomas
Maggie Aderin-Pocock’s passion for science drives her career and public outreach.

**Science Careers on Facebook**
Science Careers Staff
Become a Facebook fan at http://www.facebook.com/pages/ScienceCareers/11799201290.

**SCIENCEPODCAST**
www.sciencemag.org/multimedia/podcast

*Free Weekly Show*
Download the 12 June Science Podcast to hear about deorosenation and development in the Amazon, stamping out Kashin-Beck disease in China, measuring the charge state of gold and silver atoms, and more.

**ORIGINS BLOG**
blogs.sciencemag.org/origins

*A History of Beginnings*

**SCIENCE INSIDER**
blogs.sciencemag.org/scienceinsider

Science Policy News and Analysis
Editor's Summary

This copy is for your personal, non-commercial use only.

**Article Tools**  Visit the online version of this article to access the personalization and article tools:
http://science.sciencemag.org/content/324/5933

**Permissions**  Obtain information about reproducing this article:
http://www.sciencemag.org/about/permissions.dtl