EDITORIAL
1019 Research Integrity in China
Wei Yang
>> News story p. 1035

NEWS OF THE WEEK
1024 A roundup of the week’s top stories

NEWS & ANALYSIS
1026 Chinese Mission Ushers in New Era of Lunar Exploration
1027 Clues to Supertyphoon’s Ferocity Found in the Western Pacific
1028 Cholesterol Forges Link Between Obesity and Breast Cancer
>> Report p. 1094
1029 DARPA Aims to Rebuild Brains
1030 New Head of Advocacy Group Plans to ‘Fight the Good Fight’
1031 Tense Vigil in China as Nasty Flu Virus Stirs Back to Life

NEWS FOCUS
1032 The Life Force
>> Report p. 1098
1035 China’s Publication Bazaar
An Aura of Legitimacy
>> Editorial p. 1019; Science Podcast

LETTERS
1041 The More Parasites, the Better?
C. J. Carlson et al.
Open Data: Crediting a Culture of Cooperation
B. Bolukbasi et al.
Open Data: A Sustainable Model
J.-W. Li
Ethics Tests for Trials
D. B. Khatry

BOOKS ET AL.
1043 Some Suggestions from 2013—The SB&F Prizes Finalists
>> Science Podcast
1046 From the UK—Finalists for the Royal Society’s Young People’s Book Prize

PERSPECTIVES
1051 Calibrating Asteroid Impact
C. R. Chapman
>> Research Article p. 1069
1052 Protein Expression Under Pressure
C. Vogel
>> Report p. 1100
1054 Abundant Metals Give Precious Hydrogenation Performance
R. M. Bullock
>> Reports pp. 1073, 1076, and 1080
1055 Devices for Low-Resource Health Care
R. Richards-Kortum and M. Oden
1057 Genomes from Metagenomics
I. Sharon and J. F. Banfield
1059 Retrospective: Fred Sherman (1932–2013)
S. W. Liebman and J. E. Haber

SCIENCE PRIZE ESSAY
1060 Exploring the Evolution of Human Mate Preference
V. Foster

CONTENTS continued >>

ON THE WEB THIS WEEK
>> Science Podcast
Listen to stories on the top children’s books of 2013, what newlyweds know about their prospects for happiness, authorship for sale in China, and more.
>> Find More Online
Check out Science Express, our podcast, videos, daily news, our research journals, and Science Careers at www.sciencemag.org.

DEPARTMENTS
1018 This Week in Science
1020 Editors’ Choice
1022 Science Staff
1062 AAAS News & Notes
1121 New Products
1122 Science Careers

COVER
Color-enhanced scanning electron micrograph of rust (iron oxide) on painted sheet metal (width of image field: 41.3 micrometers). When activated by a thin carbon layer doped with nitrogen atoms, iron oxide proves to be an efficient catalyst for selective hydrogenation of nitroarenes to anilines, a process that previously required noble metals. See pages 1054 and 1073.

Image: Eye of Science/Science Source
RESEARCH ARTICLES
1068 The Innate Growth Bistability and Fitness Landscapes of Antibiotic-Resistant Bacteria
J. B. Deris et al.
Identical bacteria can have low-level resistance to low concentrations of drugs that can flip subpopulations into dormancy. Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1237435

1069 Chelyabinsk Airburst, Damage Assessment, Meteorite Recovery, and Characterization
O. P. Popova et al.
A detailed study of a recent asteroid impact provides an opportunity to calibrate the damage caused by these rare events. >> Perspective p. 1051

REPORTS
1073 Nanoscale Fe₃O₄-Based Catalysts for Selective Hydrogenation of Nitroarenes to Anilines
R. V. Jagadeesh et al.
An iron oxide catalyst selects nitro groups for reduction in the presence of many other sensitive chemical substituents.

1076 Cobalt Precursors for High-Throughput Discovery of Base Metal Asymmetric Alkene Hydrogenation Catalysts
M. R. Friedfeld et al.
High-throughput screening furnishes surprisingly effective cobalt catalysts from versatile precursors.

1080 Amine(imine)diphosphine Iron Catalysts for Asymmetric Transfer Hydrogenation of Ketones and Imines
W. Zuo et al.
Ligand design based on mechanistic insight enables highly efficient iron catalysis. >> Perspective p. 1054

1084 Imaging the Absolute Configuration of a Chiral Epoxide in the Gas Phase
P. Herwig et al.
Ultrafast electron stripping by a carbon foil enables precise elucidation of molecular geometries as the nuclei fly apart.

1086 Regular Patterns in Frictional Resistance of Ice-Stream Beds Seen by Surface Data Inversion
O. V. Sergienko and R. C. A. Hindmarsh
Sheer stress between the ice and the underlying bedrock of Pine Island and Thwaites Glaciers is concentrated into bands.

1090 Hepatitis C Virus E2 Envelope Glycoprotein Core Structure
L. Kong et al.
The structure of a key viral surface protein provides insight for drug and vaccine development.

1094 27-Hydroxysterol Links Hypercholesterolemia and Breast Cancer Pathophysiology
E. R. Nelson et al.
The activity of a specific metabolite of cholesterol may help explain why obesity is a risk factor for breast cancer. >> News story p. 1028

1098 Nonenzymatic Template-Directed RNA Synthesis Inside Model Protocells
K. Adamala and J. W. Szostak
Citrate can act as a partial magnesium chelator to facilitate the synthesis of RNA within a protocell-like vesicle. >> News story p. 1032

1100 Primate Transcript and Protein Expression Levels Evolve Under Compensatory Selection Pressures
Z. Khan et al.
In humans, chimpanzees, and macaques, protein expression levels evolve under stronger evolutionary constraint than messenger RNA levels. >> Perspective p. 1052

1104 Phycobilisomes Supply Excitations to Both Photosystems in a Megacomplex in Cyanobacteria
H. Liu et al.
The organization of several protein complexes involved in photosynthesis elucidates their energy transfer mechanisms.

1107 Long-Distance Integration of Nuclear ERK Signaling Triggered by Activation of a Few Dendritic Spines
S. Zhai et al.
Induction of long-term potentiation in a few dendritic spines signals to the nucleus to activate transcription factors.

1111 Neural Activity in Human Hippocampal Formation Reveals the Spatial Context of Retrieved Memories
J. F. Miller et al.
Place cells in the human brain that fired at an object’s location are reactivated during spontaneous recall.

1114 BTBD3 Controls Dendrite Orientation Toward Active Axons in Mammalian Neocortex
A. Matsui et al.
High-acuity sensory function may be achieved by the tuning of subcellular polarity to sources of high sensory activity.

1119 Though They May Be Unaware, Newlyweds Implicitly Know Whether Their Marriage Will Be Satisfying
J. K. McNulty et al.
Relationship satisfaction is captured by implicit measures of spousal attitudes. >> Science Podcast