SPECIAL SECTION

Curiosity at Gale Crater

INTRODUCTION
1475  Analysis of Surface Materials by the Curiosity Mars Rover
   J. P. Grotzinger

RESEARCH ARTICLE ABSTRACTS
1476  The Petrochemistry of Jake_M: A Martian Mugearite
   E. M. Stolper et al.
   Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars
   P.-Y. Meslin et al.
   X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater
   D. L. Bish et al.
   Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow
   D. F. Blake et al.
   Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover
   L. A. Lesher et al.
   >> Science Podcast

NEWS FOCUS
1442  Taming a Mercurial Element
1443  With Pac’s Completion, the Real Work Begins
1446  In Minamata, Mercury Still Divides
1448  Gold’s Dark Side
   >> Editorial p. 1430; Perspective p. 1457

LETTERS
1451  L’Aquila’s Aftershocks Shake Scientists
   E. Boschi
   Low Marks for Education Funding Priorities
   J. D. McInerney
   Bayes’ Confidence
   D. S. Fraser
   Research Funders Should Take the Field
   E. Allen et al.
   >> Science Express Report by S. Qu et al.

CORRECTIONS AND CLARIFICATIONS
1452

BOOKS ET AL.
1453  Experiencing Art
   A. P. Shimamura, reviewed by N. Hutton and L. Kelly
1454  Behind the Shock Machine
   G. Perry, reviewed by R. Abma

EDUCATION FORUM
1455  Increasing Persistence of College Students in STEM
   M. J. Graham et al.

PERSPECTIVES
1457  Global Change and Mercury
   D. P. Krabbenhoft and E. M. Sunderland
   >> Editorial p. 1430; News package p. 1442
1458  A Coat of Many Functions
   D. Shchukin and H. Möhwald
1460  Sources of Antimicrobial Resistance
   M. E. J. Woolhouse and M. J. Ward
   >> Report p. 1514

CONTENTS continued >>

ON THE WEB THIS WEEK

>> Science Podcast
Listen to stories on monitoring mercury in the environment, news from the Curiosity rover, codon bias in bacterial genes, and more.

>> Find More Online
Check out Science Express, our podcast, videos, daily news, our research journals, and Science Careers at www.sciencemag.org.
1461 A New Route for Growing Large Grains in Metals
E. M. Taleff and N. A. Pedrazas
>> Report p. 1500

1462 Some Monocytes Got Rhythm
D. Druzd and C. Scheiermann
>> Research Article p. 1483

1464 Small Volumes Create Super(elastic) Effects
K. T. Faber
>> Report p. 1505

1465 Stalemate in the Golgi Battle
B. Morriswood and G. Warren

SCIENCE PRIZE ESSAY
1467 Students Propose Genetic Solutions to Societal Problems
S. Wick et al.

RESEARCH ARTICLES
1478 Electromagnetic Energy Conversion at Reconnection Fronts
V. Angelopoulos et al.
Data from various satellites in Earth’s magnetotail clarify where and how electromagnetic energy conversion occurs.

1483 Circadian Gene Bmal1 Regulates Diurnal Oscillations of Ly6C\(^+\) Inflammatory Monocytes
K. D. Nguyen et al.
The clock protein Bmal1 regulates daily changes in white blood cell trafficking and susceptibility to inflammation in mice.
>> Perspective p. 1462

REPORTS
1489 In Situ Observations of Interstellar Plasma with Voyager 1
D. A. Garnett et al.
Electron densities detected by Voyager 1 show that the spacecraft is in the interstellar plasma.

1492 Distances, Luminosities, and Temperatures of the Coldest Known Substellar Objects
T. J. Dupuy and A. L. Kraus
Observations with the Spitzer Space Telescope strengthen the link between the coolest brown dwarfs and gas-giant exoplanets.

1496 Observation of Dirac Node Formation and Mass Acquisition in a Topological Crystalline Insulator
Y. Okada et al.
Scanning tunneling spectroscopy of Pb\(_1-x\)Sn\(_x\)Se in a magnetic field reveals two types of Dirac fermions.

1500 Abnormal Grain Growth Induced by Cyclic Heat Treatment
T. Omori et al.
Thermal cycling of a copper-based shape-memory alloy leads to abnormal grain growth and very large grains.
>> Perspective p. 1461

1502 Cation Intercalation and High Volumetric Capacitance of Two-Dimensional Titanium Carbide
M. R. Lukatskaya et al.
The layered material Ti\(_x\)C\(_{1-x}\) can intercalate much larger cations than Li\(^+\), allowing for energy storage applications.

1505 Shape Memory and Superelastic Ceramics at Small Scales
A. Lai et al.
Fine-scale shape memory ceramics are capable of many actuation cycles to strains up to 7%.
>> Perspective p. 1464

1508 Near-Complete Extinction of Native Small Mammal Fauna 25 Years After Forest Fragmentation
L. Gibson et al.
The rapid loss of native mammals from isolated Thai forests suggests that forest fragments cannot maintain biodiversity.

1511 Safeguards for Cell Cooperation in Mouse Embryogenesis Shown by Genome-Wide Cheater Screen
M. Depoiz et al.
During embryogenesis, a network of genes centered on p53, topoisomerase 1, and olfactory receptors helps to ensure cell cooperation.

1514 Distinguishable Epidemics of Multidrug-Resistant Salmonella Typhimurium DT104 in Different Hosts
A. E. Mother et al.
Antibiotic resistance travels in independent epidemics in humans and their livestock.
>> Perspective p. 1460

1517 The Inhibitory Circuit Architecture of the Lateral Hypothalamus Orchestrates Feeding
J. H. Jennings et al.
A specific brain circuit drives the consumption of highly palatable food, even when energy needs are satisfied.

1521 Cocaine Disinhibits Dopamine Neurons by Potentiation of GABA Transmission in the Ventral Tegmental Area
C. Beckisch et al.
Changes in specific neuronal circuits suggest that drug-evoked synaptic plasticity facilitates drug-adaptive behavior.