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COVER
Eroded landscape of Yellowknife Bay, Gale crater on Mars.
Sheepbed mudstone is seen in the foreground, ~4 meters distant from the Curiosity rover camera that took the photo; Gillespie sandstone is in the middle field. The foothills of Mt. Sharp (upper left), ~20 kilometers distant, are Curiosity’s ultimate destination. Exploration of this region by the Curiosity rover offers evidence of an ancient, potentially habitable environment. See the special section beginning on page 386 and at www.sciencemag.org/extra/curiosity.

Image: NASA/JPL-Caltech/Malin Space Science Systems
Strong Ground Motion Prediction Using Imaging Dynamics on the F + H Ubiquitous Interplay Between Charge Order Driven by Fermi-Arc Lifting the Fog of Complexity Hiding in Plain View—An Ancient Dog in the Modern World

A Paleogenomic Perspective on Evolution and Gene Function: New Insights from Ancient DNA

Charge Order Driven by Fermi-Arc Instability in Bi$_2$Sr$_2$La$_x$CuO$_{6+δ}$

Ubiquitous Interplay Between Charge Ordering and High-Temperature Superconductivity in Cuprates

Surface and bulk measurements in bismuth-based cuprates agree and indicate a short-range charge order.

Imaging Dynamics on the F + HO → HF + OH Potential Energy Surfaces from Wells to Barriers

A reaction is studied in fine detail by electron removal from a charged precursor to unveil and track a neutral intermediate.

Strong Ground Motion Prediction Using Virtual Earthquakes

Ambient seismic noise helps predict the ground motion associated with future large earthquakes.

Increased Dust Deposition in the Pacific Southern Ocean During Glacial Periods

A million-year-long marine sedimentary record of dust supply to the Pacific Southern Ocean reflects global climate.

A Peptide Hormone and Its Receptor

Protein Kinase Regulate Plant Cell Expansion

A signaling system important in the regulation of plant cell size during development is identified.

A Different Form of Color Vision in Mantis Shrimp

Stomatopods use multiple photoreceptors to allow rapid color recognition rather than color discrimination.

Risky Ripples Allow Bats and Frogs to Eavesdrop on a Multisensory Sexual Display

Calling frogs incidentally produce water ripples that are targeted by rival males and frog-eating bats.

Endothelial Cell-Derived Angiopoietin-2 Controls Liver Regeneration as a Spatiotemporal Rheostat

Endothelial cells control liver regeneration through paracrine hepatotropic and autocrine endotheliotropic mechanisms.

Single β-Actin mRNA Detection in Neurons Reveals a Mechanism for Regulating Its Translatability

Imaging of β-actin messenger RNA (mRNA) in neurons reveals transient alteration of mRNA availability during synaptic plasticity.

Visualization of Dynamics of Single Endogenous mRNA Labeled in Live Mouse

A transgenic mouse with fluorescently labeled endogenous β-actin mRNA permits single-molecule analysis in live cells.

The HydG Enzyme Generates an Fe(CO)$_2$(CN)$_2$ Synthon in Assembly of the FeFe Hydrogenase H-Cluster

Vibrational spectroscopy traces the origin of carbon monoxide and cyanide ligands in the active site of di-iron hydrogenase enzymes.

IFI16 DNA Sensor Is Required for Death of Lymphoid CD4 T Cells Abnormally Infected with HIV

The intracellular sensor that triggers the death of human lymphoid CD4 T cells abnormally infected with HIV is identified.

Adaptation of Innate Lymphoid Cells to a Micronutrient Deficiency Promotes Type 2 Barrier Immunity

Vitamin A deficiency alters the balance of innate immune cells in the gut, promoting resistance to nematode infection.

Transmissible Dog Cancer Genome Reveals the Origin and History of an Ancient Cell Lineage

An unusual tumor in dogs arose more than 10,000 years ago, and despite a huge mutational burden, its genome has remained stable.