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An image of Mare Moscoviense on the lunar farside, taken by the Terrain Camera aboard the SELENE (Kaguya) spacecraft on 17 January 2008. Crater frequency distributions derived from such images yield ages of about 2.5 billion years for several volcanic deposits in this mare, indicating that volcanism on the lunar farside lasted about 500 million years longer than previously thought. See page 905.

Image: Japan Aerospace Exploration Agency/SELENE

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Multiple recorders mounted on purple martins and wood thrushes allow mapping of migration routes between North America and the Neotropics.

Observation of Unconventional Quantum Spin Textures in Topological Insulators

Spin imaging reveals an insulating state that results from the entanglement of a macroscopic number of spins.

Coherence Factors in a High-$T_c$ Cuprate Probed by Quasi-Particle Scattering Off Vortices

The momentum-dependent coherence factors in a high-temperature superconductor are revealed by introducing magnetic vortices.

Polydnaviruses of Braconid Wasps Derive from an Ancestral Nudivirus

Virus-like particles used by parasitic wasps to manipulate host defenses are encoded by virus-related genes incorporated into the wasp genome.

Effects of Genetic Perturbation on Seasonal Life History Plasticity

Interactions among mutation, germination timing, and climate alter flowering patterns in Arabidopsis.

The Hallucinogen $N,N$-Dimethyltryptamine (DMT) Is an Endogenous Sigma-1 Receptor Regulator

An endogenous compound is a ligand for a ubiquitously expressed receptor that binds many synthetic drugs and has been implicated in psychiatric disease.

When Your Gain Is My Pain and Your Pain Is My Gain: Neural Correlates of Envy and Schadenfreude

Envy is strongest against those with similar attributes, and the most joy is gained from the pain of those envied the most.

The Orphan G Protein–Coupled Receptor 3 Modulates Amyloid-Beta Peptide Generation in Neurons

A neuronal G protein–coupled receptor can stimulate the generation of the $\beta$ peptide implicated in Alzheimer’s disease.

Differences in Early Gesture Explain SES Disparities in Child Vocabulary Size at School Entry

Pre-verbal communication through gestures can improve a child’s vocabulary.

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Sequencing and Analyses of All Known Human Rhinovirus Genomes Reveals Structure and Evolution

One Giant Leap for Robot-Kind

Flu: It’s the Humidity. Absolutely

Study suggests that absolute, not relative, humidity explains why influenza is seasonal.

Synthetic Nanoparticles Can Be Paired with Any Material of Choice

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Any Bases on a Nanoparticle

SCIENCE Xpress

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Sequencing and Analyses of All Known Human Rhinovirus Genomes Reveals Structure and Evolution

A C. Palmenberg et al.

Rhinoviruses, which are a common cause of colds, fall into three or possibly four major clades and can undergo strain recombination.

10.1126/science.1165557

The Dynamic Control of Kiss-And-Run and Vesicular Reuse Probed with Single Nanoparticles

Q. Zhang et al.

A transient form of vesicle fusion that allows vesicle reuse is more prevalent early during synaptic response to a train of stimuli.

10.1126/science.1167373

Genome-Wide Analysis in Vivo of Translation with Nucleotide Resolution Using Ribosome Profiling

N. T. Ingolia et al.

Profiling the position of ribosomes on messenger RNA allows rapid, high-precision investigation of cellular protein translation.

10.1126/science.1168978

Omnidirectional Printing of Flexible, Stretchable, and Spanning Silver Microelectrodes

B. Y. Ahn et al.

Colloidal silver particles can be formed into flexible electrodes of arbitrary shape in three dimensions.

10.1126/science.1168375

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The Signal Transduction Knowledge Environment

RESEARCH ARTICLE: Bxq Mediates the Response of Lymphocytes to Osmotic Stress Through the Activation of NFAT5

T. Kino et al.

The guanine nucleotide exchange factor Bxq is essential for osmotic stress-mediated expression of nfat5 in lymphocytes.

MEETING REPORT: Emerging Roles of NAD+ and Its Metabolites in Cell Signaling

F. Koch-Nolte et al.

Scientists discussed the molecular aspects of NAD+ metabolism and signaling at a conference in Hamburg, Germany.

NETWATCH: Simmune Project

Build models, run simulations, and explore the dynamics of signaling pathways; in Modeling Tools.

NETWATCH: American Physiological Society Archive

Browse or search an index of peer-reviewed science education materials; in Educator Sites.

SCIENCE CAREERS

www.sciencemag.org/career_magazine

Free Career Resources for Scientists

The Man Who Wasn’t There

B. L. Benderly

Douglas Prasher’s story reveals a lot about the scientific labor market.

Discouraging Days for Job-Seekers

S. Carpenter

Many universities and colleges have canceled faculty searches or imposed hiring freezes.

SCIENCE PODCAST

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Free Weekly Show

Download the 13 February Science Podcast to hear about how toddler gesturing may improve children’s vocabulary, a new global view of the Moon, an update on the Neandertal genome, and more.

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A History of Beginnings

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