RESEARCH ARTICLES

710  Mechanism of Activation of Protein Kinase JAK2 by the Growth Hormone Receptor
A. J. Brooks et al.
A molecular mechanism for transmembrane signaling by the growth hormone receptor is elucidated.
Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1249783
>> Perspective p. 703

711  Border Control—A Membrane-Linked Interactome of Arabidopsis
A. M. Jones et al.
A membrane and signaling protein interaction network for gene discovery and hypothesis generation is identified in Arabidopsis.

717  Oxidation Products of Biogenic Emissions Contribute to Nucleation of Atmospheric Particles
F. Riccobono et al.
Experiments in the CLOUD chamber at CERN reproduce particle nucleation rates observed in the lower atmosphere.

REPORTS

722  Transverse Demagnetization Dynamics of a Unitary Fermi Gas
A. B. Bardon et al.
The diffusion of spin orientation is observed in a gas of potassium atoms in a magnetic field gradient.

725  Electrically Switchable Chiral Light-Emitting Transistor
Y. J. Zhang et al.
The valley degree of freedom in WSe₂ is used to realize an electrically switchable, circularly polarized light source.
>> Perspective p. 702

729  In Situ Imaging of Silicalite-1 Surface Growth Reveals the Mechanism of Crystallization
A. I. Lupulescu and J. D. Rimer
Silicalite-1 growth occurs via the addition of silica molecules and precursors, confirming both main theories.
>> Perspective p. 705

732  Recyclable, Strong Thermosets and Organogels via Paraformaldehyde Condensation with Diamines
J. M. García et al.
A strong polymer formed by heating can be digested with strong acid to recover and recycle its bisaniline monomers.
>> Perspective p. 706

735  Marine Ice Sheet Collapse Potentially Under Way for the Thwaites Glacier Basin, West Antarctica
J. Joughin et al.
The onset of rapid collapse of the Thwaites Glacier in West Antarctica is likely within the next 200 to 1000 years.
>> News story p. 683

738  Stick Insect Genomes Reveal Natural Selection’s Role in Parallel Speciation
V. Soria-Carrasco et al.
Parallel speciation in insects shows both convergent and divergent selection after one generation.

742  NMR Spectroscopy of Native and in Vitro Tissues Implicates PolyADP Ribose in Osteoarthritis
W. Y. Chow et al.
An in vitro model of developing bone from a mouse model is amenable to nuclear magnetic resonance analysis.

747  Genomic Diversity and Admixture Differences for Stone-Age Scandinavian Foragers and Farmers
P. Skoglund et al.
Population dynamics of Scandinavian Mesolithic and Neolithic hunter-gatherers differ from those of early farmers.

750  Late Pleistocene Human Skeleton and mtDNA Link Paleoamericans and Modern Native Americans
J. C. Chatters et al.
The differences between Paleoamericans and Native Americans likely resulted from local evolution.
>> News story p. 680

754  Neurosensorial Perception of Environmental Cues Modulates Sperm Motility Critical for Fertilization
K. McKnight et al.
Nematode pheromones modulate a neuroendocrine pathway that converts dietary fats into sperm-attracting prostaglandins.

757  Sulfur Oxidation Genes in Diverse Deep-Sea Viruses
K. Anantharaman et al.
Host-derived viral auxiliary metabolic genes for sulfur oxidation play a key biogeochemical role in the dark ocean.

760  Positive Feedback Within a Kinase Signaling Complex Functions as a Switch Mechanism for NF-κB Activation
H. Shinoara et al.
The molecular basis of an all-or-none response in B cells is revealed.
Editor's Summary

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