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Mapping mantle flow
Cliffs of the Miocene Monterey Formation, Naples Beach, California. These finely laminated sedimentary rocks rich in organic matter were deposited during a period of worldwide cooling about 14 million years ago. A record of this climate change is revealed by the carbon isotopic signatures of certain molecules synthesized by organisms, such as marine algae and bacteria, and subsequently fossilized after the sediments were deposited. See page 1122. [Photo: Kevin Irwin, Chevron Petroleum Technology Company]

REPORTS

Spatially Resolved Observation of Static Magnetic Flux States in YBa2Cu3O7-δ Grain Boundary Josephson Junctions
G. M. Fischer, B. Mayer, R. Gross, T. Nissel, K.-D. Husemann, R. P. Huebener, T. Freitolf, Y. Shen, P. Vase

Double Seismic Zone for Deep Earthquakes in the Izu-Bonin Subduction Zone
T. Iida and Y. Furukawa

Molecular Organic Carbon Isotope Record of Miocene Climate Changes
M. Schoell, S. Schouten, J. S. Sinninghe Damsté, J. W. de Leeuw, R. E. Summons

Deep, Zonal Subequatorial Currents
L. D. Talley and G. C. Johnson

Extension of Life-Span by Overexpression of Superoxide Dismutase and Catalase in Drosophila melanogaster
W. C. Orr and R. S. Sohal

Requirement for CD8 β Chain in Positive Selection of CD8 Lineage T Cells

Persistence of Transients in Spatially Structured Ecological Models
A. Hastings and K. Higgins

Sequential Interactions of the TCR with Two Distinct Cytoplasmic Tyrosine Kinases
M. Ishiwashi, B. A. Irving, N. S. C. van Oers, A. C. Chan, A. Weiss

T Cell Deletion in High Antigen Dose Therapy of Autoimmune Encephalomyelitis

Premature p34cdc2 Activation Required for Apoptosis

Protein-Protein Interactions Contributing to the Specificity of Intracellular Vesicular Trafficking
N. Calakos, M. K. Bennet, K. E. Peterson, R. H. Scheller

Replacement of Diseased Mouse Liver by Hepatic Cell Transplantation

Phosphorylation of the Transcription Factor PHO4 by a Cyclin-CDK Complex
A. Kaffman, I. Herskowitz, R. Tjian, E. K. O'Shea

TECHNICAL COMMENTS

Gene Flow or Heterozygote Advantage?

Examining Langmuir-Blodgett Films with Atomic Force Microscopy
D. K. Schwartz, R. Viswanathan, J. A. Zasadzinski, L. Bourdieu, O. Ronsin, D. Chatenay
Science 263 (5150), 1069-1172.