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Simulation of the reaction of nuclear waste glass with water. As the glass reacts, actinides concentrate as a stable mineral phase (blue area) in the reacted glass and, during continued interaction with ground water, are released to solution as primary colloids. Models of nuclear repository integrity that fail to take colloid formation and transport into account may underestimate the potential for radioactivity release. See page 649. [Image: John K. Bates, Argonne National Laboratory]

**ARTICLES**

The Early Evolution of Eukaryotes: A Geological Perspective
A. H. Knoll

Mitochondrial Genetics: A Paradigm for Aging and Degenerative Diseases?
D. C. Wallace

**RESEARCH ARTICLES**

Solution Structure of a Calmodulin-Target Peptide Complex by Multidimensional NMR
M. Ikura, G. M. Clore, A. M. Gronenborn, G. Zhu, C. B. Klee, A. Bax

Modulation of an NCAM-Related Adhesion Molecule with Long-Term Synaptic Plasticity in Aplysia
M. Mayford, A. Barzilai, F. Keller, S. Schacher, E. R. Kandel

**REPORTS**

Serotonin-Mediated Endocytosis of apCAM: An Early Step of Learning-Related Synaptic Growth in Aplysia

Colloid Formation During Waste Form Reaction: Implications for Nuclear Waste Disposal
J. K. Bates, J. P. Bradley, A. Teetsow, C. R. Bradley, M. Buchholtz ten Brink

A Global Traveling Wave on Venus
M. D. Smith, P. J. Giensach, P. J. Schinder

Protein Solvation in Allosteric Regulation: A Water Effect on Hemoglobin
M. F. Colombo, D. C. Rau, V. A. Parsegian

An Origin of DNA Replication and a Transcription Silencer Require a Common Element
D. H. Rivier and J. Rine

Cloning and Expression in Yeast of a Plant Potassium Ion Transport System
H. Sentenac, N. Bonneaud, M. Minet, F. Lacroute, J.-M. Salmon, F. Gaymard, C. Grignon

DNA Hydrolyzing Autoantibodies
A. M. Shuster, G. V. Gololobov, O. A. Kvasuk, A. E. Bogomolova, I. V. Smirnov, A. G. Gabibov

Multiple Intestinal Neoplasia Caused by a Mutation in the Murine Homolog of the APC Gene

Enhanced Degradation of the Ferritin Repressor Protein During Induction of Ferritin Messenger RNA Translation
L. S. Goessling, S. Daniels-McQueen, M. Bhattacharyya-Pakrasi, J.-J. Lin, R. E. Thach

Occurrence of Sialic Acids in Drosophila melanogaster
J. Roth, A. Kempf, G. Reuter, R. Schauer, W. J. Gehring

Modality-Specific Retrograde Amnesia of Fear
J. J. Kim and M. S. Fanselow

Microdomains of High Calcium Concentration in a Presynaptic Terminal
R. Llinás, M. Sugimori, R. B. Silver

Indicates accompanying News story or Perspective
Science 256 (5057), 591-686.

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