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Making gels by adding water

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Small Clusters Hit the Big Time
Ordering Nanoclusters Around Clusters Whip Light Atomic Nuclei Into Shape
Structure, Dynamics, and Thermodynamics of Clusters: Tales from Topographic Potential Surfaces

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Do Big and Little Earthquakes Start Differently
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RESEARCH ARTICLE
A Lower Limit on the Age of the Universe
B. Chaboyer, P. Demarque, P. J. Kernan, L. M. Krauss
The isolated water pentamer adopts a ring structure, with each molecule acting as a single donor and single acceptor of a hydrogen bond. The average separation between oxygen atoms (red spheres) is 2.76 angstroms. Similar water pentagons are prominent structures in the dynamic hydrogen-bonding network revealed in computer simulations of liquid water, like that depicted in the background. See page 929 in the Special Section on clusters beginning on page 920, and a related Report (page 963). [Image: Tim Robinson, Chemistry Graphics Facility, University of California, Berkeley]

**Reports**

**Dust: A Diagnostic of the Hydrologic Cycle During the Last Glacial Maximum**
Y. L. Yung, T. Lee, C.-H. Wang, Y.-T. Shieh

**From Topographies to Dynamics on Multidimensional Potential Energy Surfaces of Atomic Clusters**
K. D. Ball, R. S. Berry, R. E. Kunz, F.-Y. Li, A. Proykova, D. J. Wals

**Catalytic Cleavage of the C–H and C–C Bonds of Alkanes by Surface Organometallic Chemistry: An EXAFS and IR Characterization of a Zr–H Catalyst**
J. Corker, F. Lefebvre, C. Lécuyer, V. Dufaud, F. Quignard, A. Chaplin, J. Evans, J.-M. Basset

**Lamellar Biogels: Fluid-Membrane-Based Hydrogels Containing Polymer Lipids**
H. E. Warriner, S. H. J. Idziak, N. L. Slack, P. Davidson, C. R. Safinya

**Were Thick Galactic Disks Made by Levitation?**
S. Sridhar and J. Tumza

**Complex Phase Behavior in Solvent-Free Nonionic Surfactants**

**Chain Migration of Neuronal Precursors**
C. Lois, J.-M. García-Verdugo, A. Alvarez-Buylla

**Role of Rho in Chemotactant-Activated Leukocyte Adhesion Through Integrins**
C. Laudanna, J. J. Campbell, E. C. Butcher

**Genetic Susceptibility to Leishmania: IL-12 Responsiveness in T11 Cell Development**

**Susceptibility to Leishmania major Infection in Interleukin-4–Deficient Mice**
N. Noben-Trauth, P. Kroepf, I. Müller

**Role of a Peptide Tagging System in Degradation of Proteins Synthesized from Damaged Messenger RNA**
K. C. Keiler, P. R. H. Waller, R. T. Sauer

**Phenotypes of Mouse diabetes and Rat fatty Due to Mutations in the OB (Leptin) Receptor**

**Ligand Binding: Molecular Mechanics Calculation of the Streptavidin-Biotin Rupture Force**
H. Grubmüller, B. Heymann, P. Tavan

**Direct Visualization of A-, P-, and E-Site Transfer RNAs in the Escherichia coli Ribosome**