

# MRS BULLETIN

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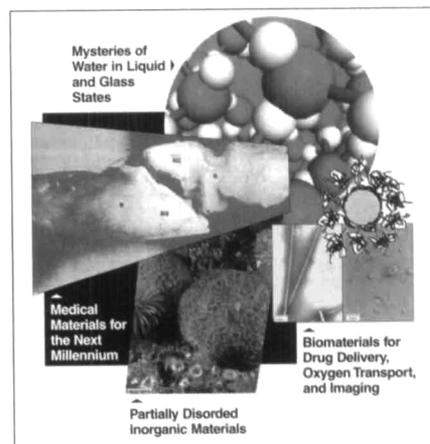
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**ON THE COVER: Mysteries of Water in Liquid and Glass States:** Perspective view of the disordered tetrahedral network formed by hydrogen bonds linking water molecules in the supercooled and glass states of H<sub>2</sub>O. Computer simulations carried out using the simple point charge (SPC) model. Image courtesy of F.W. Starr. See article on page 22.

**Medical Materials for the Next Millennium:** Bioactive glass segmental bone replacement in monkey tested to failure in torsion. Note that the two interfaces bonded to bone did not break. B is bone; BG is Bioglass®. See article on page 13.

**Partially Disordered Inorganic Materials:** *Tethya aurantia* (orange puffball sponge) contains silica spicules (>70% dry weight) and is grown at the Marine Science Institute at the University of California—Santa Barbara in order to study the biogenesis of biosilicate composite materials. Photo courtesy of Daniel W. Gotshall, *Pacific Coast Subtidal Marine Invertebrates* (Sea Challengers, Monterey, Calif., 1979). See article on page 31.

**Biomaterials for Drug Delivery, Oxygen Transport, and Imaging:** Electron micrographs of nanotubules made from a fluorinated glucophospholipid. (Left) Negative staining. (Right) Freeze fracture. See article on page 42. (Inset) Construct showing adsorption of block copolymers to a particle and formation of a sterically stabilized layer. See article on page 49.

## About the Materials Research Society

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