

WE HEAR THAT

McKenzie Wins Crafoord Prize

The Royal Swedish Academy of Sciences does not award Nobel Prizes for geosciences, astronomy, mathematics, or biosciences, but it does recognize one of those fields each year with its Crafoord Prize. This year's prize, in geosciences, will be presented in September to **Dan P. McKenzie**, Royal Society Professor of Earth Sciences at the University of Cambridge. The prize is worth \$500 000.

The academy is honoring McKenzie "for fundamental contributions to the understanding of the dynamics of the lithosphere, particularly plate tectonics, sedimentary basin formation



DAN P. MCKENZIE

and mantle melting." During the 1960s, early in his career, McKenzie made key contributions to the authoritative theory of plate tectonics, which, until that time, was frequently viewed with skepticism by scientists.

His research during the next decade focused on the deformation that occurs in the boundary zones between the plates, especially where these boundaries cross continents. According to the academy's announcement, McKenzie's "analysis of source mechanisms of earthquakes has had profound implications [for the assessment of earthquake risk] in such areas as the Eastern Mediterranean."

More recently, McKenzie has collaborated with NASA to study the

gravity fields of Venus and Mars and analyze the geophysical evidence for their internal structure and makeup. Through a comparison of the main characteristics among those two planets and Earth, he has found remarkable differences in their origin and evolution. For example, he has explained how vulcanism melts ice beneath the surface of Mars, and so generates the huge floods that have poured out of some of the large canyons.

McKenzie's present research involves using geochemical measurements to understand how the mantle melts and how molten rock moves from its source to the surface. He has been working with geochemists from Iceland, France, and the US on volcanic rocks from Theistareykir in northeastern Iceland. Even though the source region of these rocks is part of the convecting mantle, it contains substantial isotopic heterogeneities, some of which must date from the time Earth was formed.

German Society Bestows Awards

At its annual meeting last March in Leipzig, the German Physical Society (DPG) presented its medals and prizes for 2002, including the new Hertha Sponer Prize, which recognizes young women's outstanding work in physics. **Karina Morgenstern**, who is doing her *habilitation* at the Free University of Berlin, is the first recipient of this prize. The society honored her work on the dynamics of surface phenomena. Her research focuses on nanostructures and the behavior of molecules on metallic surfaces.

The Max Planck Medal, the society's most important award for theoretical physics, went to **Jürgen Ehlers** for his contributions to the general theory of relativity, to cosmology, and to general-relativistic kinetic theory and hydrodynamics. Ehlers is an emeritus professor of physics at the Max Planck Institute for Gravitational Physics (Albert Einstein Institute) near Potsdam.

J. Peter Toennies received the society's most important award for experimental physics, the Stern-Gerlach Medal, for his contributions to surface and cluster physics, espe-

cially to helium atom scattering from surfaces and to the spectroscopy of molecules in helium nanodroplets. He is an emeritus director and administrative director of the Max Planck Institute for Fluid Dynamics in Göttingen. He also is an emeritus professor of physics at the University of Göttingen and an adjunct professor of physics at the University of Bonn.

Michael Bonitz, a privatdozent (roughly equivalent to an associate professor) at the University of Rostock, received the Gustav Hertz Prize, which is given to outstanding young physicists. Bonitz was recognized for his contributions to the nonequilibrium many-body theory of Coulomb systems in plasmas and semiconductors.

The DPG, jointly with the French Physical Society, gave **Jean-Marie Flaud** the Gentner-Kastler Prize in recognition of his contributions to high-resolution molecular spectroscopy, particularly his work on water vapor and ozone. He is a director of research at CNRS in Orsay, France.

Hanns Ruder, a professor of theoretical astrophysics at the University of Tübingen, garnered the Robert Wichard Pohl Prize for his contributions to computational physics and his dedication to visualizing complex physical phenomena using novel computer techniques.

The Walter Schottky Prize, awarded for outstanding contributions by young researchers in condensed matter physics, went to **Harald Reichert**, a senior scientist at the Max Planck Institute of Metals Research in Stuttgart. He was cited for his discovery of fivefold local symmetry in liquids near solid surfaces.

AAAS Honors Scientific Achievement

The American Association for the Advancement of Science honored scientists and engineers at its annual meeting last February in Boston.

Among the recipients was **Günther Bauer**, head of the semiconductor physics group at the University of Linz in Austria. He received the AAAS Award for International Scientific Cooperation for his "scientific accomplishments in the field of semiconductor physics, his outstanding work in institution-building and collaboration