

WE HEAR THAT

Shechtman to Receive 1999 Wolf Prize in Physics

The Wolf Foundation, headquartered in Herzlia, Israel, has announced that **Dan Shechtman** will be awarded the 1999 Wolf Prize in Physics. A professor of materials engineering at the Technion—Israel Institute of Technology in Haifa, Israel, Shecht-



DAN SHECHTMAN

man is being honored “for the experimental discovery of quasicrystals, non-periodic solids having long-range order, which inspired the exploration of a new fundamental state of matter.” The prize, which includes \$100 000, will be conferred by the president of Israel in a ceremony in May.

Contrary to the long- and deeply held belief that all ordered three-dimensional arrangements of atoms have either two-, three-, four- or sixfold symmetry, Shechtman discovered macroscopic alloys possessing fivefold symmetry. His claim was initially received with disbelief, and the citation praises Shechtman for “[having] the courage to defend his experimental results in the face of severe adverse criticism.” The discovery has had a profound influence on the course of research in materials and crystallography, creating an interdisciplinary wave of studies worldwide. Among the novel practical uses of quasicrystalline materials being developed are additives for strengthening steel and aluminum

composites and surface coatings for turbine engines and reduced-stick cookware.

National Academy of Sciences to Present 1999 Awards

At its annual meeting in Washington, DC, next month, the National Academy of Sciences will honor 17 individuals for their contributions to science, including 7 for work in the physical sciences.

The academy’s highest honor, the Public Welfare Medal, will be presented this year to **Arnold O. Beckman**, the founder and retired chairman of Beckman Instruments Inc. Beckman will be recognized “for his leadership in the development of analytical instrumentation and for his deep and abiding concern for the vitality of the nation’s scientific enterprise.”

John Clarke, who holds the Luis W. Alvarez Memorial Chair for Experimental Physics at the University of California, Berkeley, will be the recipient of the Comstock Prize in Physics, awarded approximately every five years. Clarke was chosen “for his major contributions to the development of superconducting quantum interference devices (SQUIDS) and their use for scientific measurements, especially involving electricity, magnetism, and electromagnetic waves.”

The Arctowski Metal, awarded every three years to further research in solar physics and solar–terrestrial relationships, will be given to **Arthur J. Hundhausen**, a senior scientist emeritus at the National Center for Atmospheric Research’s High Altitude Observatory in Boulder, Colorado. Hundhausen is being cited for “his exceptional research in solar and solar-wind physics, particularly in the area of coronal and solar-wind disturbances.”

Awarded approximately every three years, the Robertson Memorial Lecture will be given this year to **Akkihebal R. Ravishankara**, the program leader for atmospheric chemical kinetics at the National Oceanic and Atmospheric Administration’s Aeronomy Laboratory. Ravishankara will be honored “for his fundamental contributions to quantifying atmospheric chemical processes, which have led to dramatic improvements in our understanding of

global chemical changes.”

John D. Roberts, the Institute Professor of Chemistry, Emeritus and a lecturer at Caltech, will receive the annual NAS Award in Chemical Sciences. Roberts is being recognized for “defining modern physical organic chemistry—the integration of physical chemistry and organic synthesis applied to the study of the relations between the structure and reactivity of organic molecules.”

Jan Smit, a professor of sedimentary geology at the Free University in Amsterdam, The Netherlands, will receive the Mary Clark Thompson Medal “for establishing the sequence of impact-generated events that occurred 65 million years ago, including ejecta fallout, tsunami propagation, geochemical disturbances, and extinction in foraminifera and dinosaurs.” The medal is presented every three to five years.

The Arthur L. Day Prize and Lectureship, awarded approximately every three years, will go to **Sean C. Solomon**, the director of the department of terrestrial magnetism at the Carnegie Institution of Washington. Solomon will be recognized “for his analysis of seismological data constraining the tectonics of the Earth’s lithosphere, and for his development of global tectonic models of the moon and terrestrial planets.”

The NAS Award for Chemistry in Service to Society, presented every two years, will go to **C. Grant Willson** for “his fundamental contributions to the chemistry of materials that produce micropatterns in semiconductors and for its widespread application in the microelectronics industry for the benefit of society.” Now retired from IBM’s Almaden Research Laboratory, Willson holds the Rashid Engineering Regents Chair in the department of chemical engineering and is a professor of chemistry and biochemistry at the University of Texas at Austin.

AAAS Honors Scientific Achievement

The American Association for the Advancement of Science presented its 1998–1999 awards in January at its annual meeting in Anaheim, California. Among the scientists and engineers honored was **Mary Lowe Good**, the association’s new president-elect. She was awarded the 1998