Reagan Awards Science, Technology Medals

On 15 July, President Reagan awarded the National Medal of Science and the National Medal of Technology to 30 scientists and industrialists.

Recipients of the National Medal of Science are:

William O. Baker, Bell Telephone Laboratories, Murray Hill, New Jersey. For pioneering studies of the complex relationships between the molecular structures and physical properties of polymers, for a distinguished record of leadership in science and engineering, and for distinguished service to government and education.

Konrad E. Bloch, Harvard University. For his discovery of the principle of suicide inhibitors for enzymes and for an example of that principle. His discovery points the way to the rational design of therapeutic agents.

D. Allan Bromley, Yale University. For seminal work on nuclear molecules, for development of tandem accelerators, and semiconductor detectors for charged particles, for his contributions to particle-gamma correlation studies, and for his role in founding the field of precision heavy-ion physics.

Michael S. Brown and **Joseph L. Goldstein**, University of Texas Southwestern Medical Center. For their historic discovery of the basic mechanisms controlling cholesterol metabolism, opening the way to a new treatment of cardiovascular disease.

Paul C. W. Chu, University of Houston. For his wide-ranging contributions in achieving stable superconductivity at −290°F, above the critical temperature of liquid nitrogen (−321°F), and for his participation in the discovery of another superconducting compound, stable at −243°F and not using rare-earth elements.

Stanley N. Cohen, Stanford University. For his discovery of methods for propagating and expressing the hereditary information of DNA introduced into living cells, thereby enabling the cloning of individual genes and the study of their structure and function.

Elias J. Corey, Harvard University. For his strikingly original contributions to organic synthesis, which have brought the science of organic chemistry to a new level of power and precision.

Daniel C. Drucker, University of Florida. For pioneering contributions to the development of the theory of plasticity and of limit design, for leadership in engineering education and in engineering societies promoting excellence, and for his influential advisory service to the nation.

Milton Friedman, The Hoover Institution, Stanford University. For his theoretical contributions, and for application of the principles of scientific, empirical, and statistical methods to economics and the social sciences, and to problems critical to the nation.

Ralph E. Gomory, IBM Corporation, Armonk, New York. For his scientific contributions to the mathematics of discrete optimization and its far-reaching influence on information processing; for bringing to a leading position one of industry's most significant research establishments; and for his contributions to public and private scientific enterprise.

Willis M. Hawkins, Lockheed Corporation, Calabasas, California. For his contributions—through invention, development, management, and advice—to the technical health and competitive status of U.S. aeronautical products, sound deterrent weapons systems, and space prowess.

Maurice R. Hilleman, Merck Institute for Therapeutic Research, West Point, Pennsylvania. For his brilliant discoveries in basic research and ingenious inventiveness in creating vaccines that are the foundation for control of infectious diseases through immunologic intervention, preventing death and disability in millions worldwide.

George W. Housner, California Institute of Technology. For his profound and decisive influence on the development of earthquake engineering worldwide. His research contributions have guided the development of earthquake engineering and have had important impacts on other disciplines.

Eric R. Kandel, Columbia University; Howard Hughes Medical Institute; and New York State Psychiatric Institute. For discovering the first cell and molecular mechanisms contributing to our understanding of simple learning and memory and providing a stimulus to research which promises to lead to dramatic advances in our understanding of mental processes.

Joseph B. Keller, Stanford University. For his outstanding contribution to the geometrical theory of diffraction. This is a major extension of geometrical optics which succeeds, after many centuries, in adding the physics of diffraction to the simple ray concepts of optics and of other wave motions.

Walter Kohn, University of California, Santa Barbara. For his pioneering fundamental contributions to the theory of the electronic structure of solids, including the effective mass approach to defects in semiconductors, the so-called KKR method of band structure, and, most importantly, the density functional approach to the many-electron problem.

Norman F. Ramsey, Harvard University. For his seminal investigations in broad areas of atomic, molecular, and nuclear physics, and for his dedicated service to the nation and to the scientific community.

Jack Steinberger, CERN, Geneva, Switzerland. For his incisive illumination of the properties of subnuclear particles, including exhaustive measurements of strange particles, neutral kaons, and high energy neutrino interactions.

Rosalyn S. Yalow, Mount Sinai School of Medicine; Albert Einstein College of Medicine; and Veterans Administration Hospital, New York City. For her historic contributions to the discovery and development of radioimmunoassay, a technique that employs radioactive isotopes to measure the levels of insulin and hormones in the blood and body tissues.

Recipients of the National Medal of Technology are:

John L. Atwood, Rockwell International Corporation, El Segundo, California. For distinguished leadership, technical competence, and integrity in the technological advancement of aviation and space travel.

Arnold O. Beckman, SmithKline Beckman Corporation, Irvine, California. For exceptional creativity in designing analytical instruments that are recognized as the best in the world and for developing a successful business whose products have helped to keep the United States in the forefront of chemistry, chemical engineering, and biotechnology.

Paul M. Cook, Raychem Corporation, Menlo Park, California. For his vision and entrepreneurial efforts, his technical accomplishments, and his business and technical leadership as the key contributor in creating a worldwide chemically based industry.

Robert H. Dennard, IBM T. J. Watson Research Center, Yorktown Heights, New York. For invention of the basic, one-transistor dynamic memory cell used in virtually all modern computers.

Harold E. Edgerton, EG&G Corporation, Cambridge, Massachusetts. For the invention of the electronic stroboscopic flash and for finding a multitude of applications for it within science, technology, and industry.

Clarence L. (Kelly) Johnson, Lockheed Corporation, Burbank, California. For his outstanding achievements in the design of a series of commercial, military, and reconnaissance aircraft that incorporated a wide range of technological advancements, and for his innovative management techniques.

Edwin H. Land, Polaroid Corporation, Cambridge, Massachusetts. For the invention, development, and marketing of instant photography.

David Packard, Hewlett-Packard Company, Palo Alto, California. For extraordinary and unselfish leadership in both industry and government, particularly in widely diversified technological fields which strengthened U.S. competitiveness and defense capabilities.

Raymond Damadian, FONAR Corporation, Melville, New York, and **Paul C. Lauterbur,** University of Illinois at Urbana. For their independent contributions in conceiving and developing the application of magnetic resonance technology to medical applications including whole body scanning and diagnostic imaging.