

## Jean H. Futrell

### **Battelle Fellow, Science Advisor, Office of the Chief Research Officer**

Jean Futrell is internationally recognized for his pioneering research in fundamental aspects of mass spectrometry. A principal focus is reaction kinetics and reaction dynamics of ions, initially emphasizing ion-molecule reactions and extending more recently to high energy ion-neutral and ion-surface collisions. Dr. Futrell has a particular interest in the development or significant modification of mass spectroscopy instrumentation for specialized research purposes. These have included high-pressure chemical-ionization mass spectrometers, tandem, triple-quadrupole instruments ion-cyclotron resonance mass spectrometers, and molecular beam instruments. Collision-induced dissociation of polyatomic ions and electron-transfer reaction dynamics (including dissociative charge-transfer reactions) are topics of special interest. Current research extends these concepts to ion-surface collisions and to complex ions, especially peptides.

**Education**—B.S. in Chemical Engineering at Louisiana Polytechnic Institute; M.S. and Ph.D. degrees in Physical Chemistry, University of California (Berkeley).

**History**—Joined PNNL as the first Director of DOE's Environmental Molecular Sciences Laboratory (1998–2002) and in 2002 was appointed to his present position. From 1986–1997 he was chairman and Willis F. Harrington Professor of Chemistry, Biochemistry and Chemical Engineering at the University of Delaware. Professor of Chemistry, University of Utah, 1967–1986. Air Force officer and civilian scientist, Aerospace Research Laboratories, Wright-Patterson Air Force Base, 1959–1967.

Dr. Futrell has served in many different venues in the science world. In 1976, he was named David P. Gardner Research Fellow at the University of Utah and was Visiting Fellow at the Joint Institute for Laboratory Astrophysics of the University of Colorado, Boulder. He was Fulbright Professor of Physics at the University of Innsbruck, Austria, for the 1980 to 1981 academic year and Scientific Exchange Visitor at the Heyrovsky Institute of Physical Chemistry, Prague, Czechoslovakia, in 1981. He was

Von Humboldt scholar at the Hahn-Meitner Institute in Berlin, Professor Associe at the University of Paris, the Albright and Wilson Lecturer at the University of Warwick (England), and Max Cade Visiting Professor in the Department of Physics, University of Innsbruck, Austria. Adjunct Professor of Chemistry at University of Delaware, University of Utah, University of Idaho, Washington State University and Adjunct Professor of Physics at the University of Innsbruck.

**Recognition**—Awarded FH Field and JL Franklin Award for Outstanding Achievement In Mass Spectrometry by the American Chemical Society in Mass Spectrometry in 2007. Honor issue of International Journal of Mass Spectrometry and Ion Physics 2007. Wolfgang Paul Lecturer of German Mass Spectrometry Society for 2007. PNNL Director's Award for Lifetime Achievement in Science and Technology 2006. Fellow of the World Innovation Foundation. First American honored by special issue of the European Journal of Mass Spectrometry and Honor Symposium in Konstanz, Germany, in 2004. In 2000, received the Erwin Schrodinger Gold Medal awarded by the International Symposium on Atomic and Surface Physics for his research. In 1995, received the American Chemical Society Delaware Section Research Award and the College of Arts and Science Distinguished Scholar Award in 1997. Alfred P. Sloan Fellow from 1968 to 1972 and held an NIH Career Development Award from 1969 to 1974.

**Publications**—Author of more than 600 publications, including approximately 300 refereed journal articles.

**Professional Societies**—Past chairperson of the American Society for Testing Materials Subcommittee II (Fundamental Studies in Mass Spectrometry), Past President of the American Society for Mass Spectrometry, Past President of the Council for Chemical Research, Member, American Physical Society, American Institute of Physics, and Sigma Xi, Fellow of the American Physical Society and of the American Society for Advancement of Science, Member of Editorial Board of the European Journal of Mass Spectrometry, Member of key advisory committees of the National Science Foundation, the National High Magnetic Field Laboratory, The University of California at Irvine, and Washington State University.