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J. Martin Bollinger, professor of chemistry and biochemistry and molecular biology, received the Physical Sciences Medal for his world-class research program in which he utilizes a wide range of kinetic and spectroscopic methods to investigate enzyme reactions. Over the last five years, he and his collaborators, including Penn State associate professor Carsten Krebs, have made three seminal discoveries in the field of bioinorganic chemistry, including the first, and to date only, examples of a particular type of non-heme iron intermediate that is common to the reactions of a number of biomedically important enzymes. These three major discoveries have added new insights into our understanding of enzyme reactions, in particular the physical principles underlying C-H bond activation, which is central to the development of alternative energy such as solar cells.

Velvet M. Brown, professor of music, received the Arts and Humanities Medal. Brown is an acknowledged leader in the field of tuba and euphonium performance, with an extraordinary international and national record of guest solo, solo recital, and featured soloist performance. She has been an invited soloist at every International Tuba and Euphonium Conference, the primary professional conference in her field, since 1988. She also is active as a collaborative performer with Pennsylvania Brassworks, the Penn State Faculty Brass Quintet, Monarch Brass, an international "all-star" brass ensemble, JUNCTION, an all-female tuba-euphonium quartet, and Gravity, a jazz tuba ensemble. A highly sought-after conductor of master classes, both in the United States and abroad, she has developed a large and devoted tuba/euphonium studio in the School of Music.

D. Wayne Osgood, professor of crime, law, and justice and sociology, received the Social and Behavioral Sciences Medal as one of the most influential scholars in criminology, he is nationally recognized for his statistical expertise on the analysis of longitudinal data. As a member of the MacArthur Research Network on Transitions to Adulthood, he is noted for his cutting-edge research in life-course studies and overall expertise on the transitions to adulthood. His articles and books regularly appear in prestigious journals and academic presses. He was one of 75 eminent scholars who comprised the National Consortium on Violence Research. At Penn State, Professor Osgood researches a broad range of topics concerning delinquency and other problem behaviors during adolescence and early adulthood. He is a Fellow of the American Society of Criminology and currently serves as vice president of the organization.

Clive A. Randall, professor of materials science and engineering, received the engineering medal. He is honored for his creative and scholarly contributions and leadership in the field of dielectrics, particularly for his contributions to the science and engineering of reliability of dielectric oxides. The focus of his research is in process development, new material design, characterization, material physics, and applications of functional oxides. He has developed a number of revolutionary approaches to improving the reliability of multilayer dielectric and piezoelectric devices based on fundamental thermodynamics and defect chemistry. Professor Randall also serves as director of the Center for Dielectric Studies, which has more than 25 member companies and supports more than 20 graduate students. He is a Fellow of the American Ceramic Society and an Academician of the World Academy of Ceramics.

Vladmir M. Zatsiorsky, professor of kinesiology, received the medal in life and health sciences. He has had two academic careers, with the first in the Soviet Union where he built his international reputation as a biomechanist, and developed the Russian School of Biomechanics. In his second career at Penn State, he has focused on the mechanics of motor control, with the recent development of a model of hand function as the centerpiece of a significant research agenda. His research has focused on the problems of redundancy in motor control through investigating the complexity of the neural and mechanical influences on movement organization in human grasping. His studies have been published in leading journals and have advanced current thinking on torque and force control in hand function. He is the recipient of the 2008 Jim Hay Memorial Award of the American Society of Biomechanics.