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J. Murray Gibson, Ph.D.

Associate Laboratory Director, Argonne National Laboratory

J. Murray Gibson is the associate laboratory director responsible for Photon Sciences. He is responsible for efficient, effective and productive operation of the Advanced Photon Source (APS). He also serves as the Director of the Advanced Photon Source.

The APS is the brightest source of X-rays in the western hemisphere and is used to study the structures of materials and processes at the atomic scale. It is also the largest scientific user facility in the North America, with 3,500 users visiting each year.

Gibson earned his B.Sc. with first class honors in natural philosophy (physics) from the University of Aberdeen, Scotland, in 1975 and his Ph.D. in physics from the Cavendish Laboratory at Cambridge in 1978. After two years as a postdoctoral fellow at IBM Yorktown Heights, he joined the Physics Division of Bell Laboratories in Murray Hill, NJ. He became head of the Electronics and Photonics Materials Research Department there in 1987. In 1991, Dr. Gibson moved to the University of Illinois at Urbana-Champaign as a professor in the departments of Physics and of Materials Science and Engineering. In 1997, he served as a visiting professor at the Centre d'Etudes de Chimie Metalurgie in Vitry, France. After five years as associate director of the Frederick Seitz Materials Research Laboratory in Urbana, in 1998 he moved to Argonne as Director of the Materials Science Division. He led Argonne's initial efforts in nanoscience, which eventually led to the establishment of the Center for Nanoscale Materials. He was appointed to his current position in 2001.

Gibson's research, focused on the use of innovative electron diffraction techniques in the study of materials physics in thin films, has resulted in more than 180 journal papers and 120 invited presentations at conferences. He holds seven patents, and has received the Burton Medal of the Microscopy Society of America, the Distinguished Lecturer award of the American Vacuum Society, and the Greig Prize from the University of Aberdeen. He is a Fellow of the American Association for the Advancement of Science, the American Physical Society and the Royal Microscopical Society, and has been a Councilor of the Materials Research Society, a director of the Microscopy Society of America, chair of the Materials Physics Division of the American Physical Society, and a member of the National Research Council's Solid-State Sciences Committee.

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December 2008

U.S. DEPARTMENT OF ENERGY

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