2015 Honoree
Highly Accomplished Asian American Professional

Dr. Yimei Zhu
Senior Physicist & Program Director of the Institute of Advance Electron Microscopy
Brookhaven National Laboratory

Yimei Zhu is a Senior Physicist and Group Leader at the Department of Condensed Matter Physics and Materials Science and Program Director of the Institute of Advanced Electron Microscopy at the US Department of Energy's Brookhaven National Laboratory (BNL). He is also an adjunct professor at the Department of Applied Physics and Mathematics at Columbia University, and the Department of Physics and Astronomy at Stony Brook University.

His current research focus is on understanding nanoscale structure-property of strongly correlated electron systems, multiferroics and energy materials as well as developing electron scattering techniques for structural characterization including advanced electron microscopy. Zhu's work assesses the properties of materials that may lead to magneto-electronic devices on the scale of billionths of a meter for use in applications ranging from digital communication to data storage. His group performs this research using state-of-the-art electron microscopes that can magnify a sample up to 50 million times its size.

Dr. Zhu has made major contributions to a number of areas in condensed matter physics, materials science, and chemistry. He is responsible for numerous seminal scientific results using experimental techniques to reveal electronic structure and valence electron distribution in superconductors and functional oxides; to visualize spin configuration and precession orbit in nanomagnetic devices; and to understand the structure and property relation of catalysts, batteries and thermoelectric materials. His work has involved developing and implementing advanced atomic imaging, diffraction, and spectroscopy using high energy and ultrafast electrons. He has spearheaded the nanoscience research at Brookhaven National Laboratory.

Zhu earned a B.S. in materials physics from Jiao Tong University, Shanghai, in 1982, and was one of the first few students selected in China to pursue graduate study abroad after the country opened its doors to the West. He received his M.S. and Ph.D., also in materials physics, from Nagoya University, Japan, in 1985 and 1987, respectively. After working as a Research Associate at the University of Virginia, he joined Brookhaven as Assistant Scientist in 1988 where he was awarded tenure in 1997 and rose through the ranks to become Senior Scientist in 2002 continuing his research on studies of nanoscale phenomena that control materials' functionality, such as superconductivity and magnetism.

Dr. Zhu has co-authored one book, and edited and co-edited six books. He has written more than a dozen book chapters and review articles, and published over 350 articles in refereed journals and 200 in conference proceedings. He also delivered over 150 invited talks at major international conferences, including seminars and lectures at universities and research institutions.

During his career, he has served on various academic committees, and received many honors and awards including those from US and foreign governments, scientific societies, and from Brookhaven National Laboratory such as the International Federation of Societies for Electron Microscopy's Kazuo Award in 1986, the American Ceramic Society's Roland B. Snow Award in 1988, the U.S. Department of Energy's Chunky Bullet Award in 2001, and Brookhaven Lab's Distinguished Science and Technology Award in 2003. Dr. Zhu is an Inaugural Fellow of Microscopy Society of America and a Fellow of the American Physical Society.